FOUND IN TRANSLATION: STRUCTURAL AND COGNITIVE ASPECTS
OF THE ADAPTATION OF COMIC ART TO FILM

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ABSTRACT

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This dissertation seeks to answer questions concerning how film adaptations of comic art are constructed and received. Through investigating several bodies of literature, including work on literary adaptation, telepresence theory, comic art and cognitive film theory, the following primary questions are arrived at: (1) What are the different types of comic art to film adaptations that exist based on the devices and strategies used in adapting the content of comic artwork to film? (2) How is the film viewer’s experience of telepresence influenced by prior experience with the comic art source material of the film adaptation? (3) Which medium produces a stronger sense of telepresence?

Two studies that were developed to answer these questions are reported. Through a textual analysis comparing different types of comic-to-film adaptations selected from a nearly comprehensive list (Jones, 2008), a set of adaptive operations was discovered based upon the narrative and stylistic relationships between film adaptations and the comic art source materials from which they derive. Depending upon which operations are used, adaptations may be classified as predominately structural or thematic. At one extreme there are purely structural adaptations that feature an almost precise
correspondence of narrative events between comic source and film adaptation. At the other extreme, thematic adaptations have no relationship of narrative structure to the comic source being adapted, but retain thematic elements in the form of key conflicts and characters.

Having established this opposition, a second study was performed to determine the differential effect of reading and viewing a structural versus a thematic adaptation on the experience of telepresence. The following hypotheses are asserted: (1) viewers of film adaptations of comic art will experience higher levels of telepresence if they have prior experience reading the comic art source material than if they do not, (2) viewers of film adaptations of comic art will experience higher levels of telepresence if the film is adapted structurally from the comic than if the film is adapted thematically, (3) viewers with a higher level of preexisting interest in the priming stimulus will report higher telepresence scores in response to viewing the film adaptation than participants who have less preexisting interest, (4) the medium of film will produce a stronger sense of telepresence than the medium of comics when content is held constant across media forms.

Of the four main hypotheses, evidence was found to support the first one: the general priming hypothesis that individuals who are primed by comic art source material prior to seeing the film adaptation experience higher levels of telepresence than those who are not. Marginal support was found for the second hypothesis (structural priming produces more telepresence than thematic priming), but this should be interpreted critically because of mixed results. Similarly, conclusions for the third hypothesis (preexisting interest in the comic art priming stimulus will produce higher telepresence
scores in response to the film adaptation) should be cautiously interpreted for the same reason. Finally, results obtained for the fourth hypothesis (film viewers will report higher telepresence than readers of comic art) went in the opposite direction of what was expected. Interestingly, these findings were also the most decisive in terms of statistical significance.

Implications for telepresence theory and cultural transmission of experience are discussed.
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CHAPTER ONE
INTRODUCTION

Background

Much theoretical and critical consideration has been given to the subject of cinematic adaptation of literary texts (e.g. Andrew, 2000; Bazin, 2000; Bluestone, 1957; Boyum, 1985; Cartmell, 1999; Elliott, 2003; Hark, 1999; Marcus, 1977; McDougal, 1985; McFarlane, 1996; Stam, 2000, 2005a, 2005b; Wells, 1999; Whelehan, 1999). By contrast, relatively little serious consideration has been dedicated to cinematic adaptation of comic artwork despite the fact that such adaptations are commonplace. Consideration of this topic is called for in part because film and comic art, two forms of visual media that emerged rather close in historical proximity, use different strategies of transmission in order to achieve the same goal: transportation of their respective audiences into the narrative content of the story. To understand how media that employ different structural components have a similar potential to transport the individual will provide insight into both the media themselves and the operation of the human cognitive and perceptual systems.

In The Encyclopedia of Superheroes on Film and Television, John Muir (2004) presents a review of Superhero comics that have been adapted to film such as Superman (Donner, 1978) and Batman (Burton, 1989). These superhero adaptations, along with other genres that are represented in works including Ghost World (Zwigoff, 2001) Sin City (Miller & Rodriguez, 2005), and V for Vendetta (McTiegue, 2005) provide audiences with two distinct yet compatible ways to engage with the story. The goal of this dissertation is to illuminate the structural elements of comic art and film, as well as
the cognitive mechanisms of the audience, that are responsible for this complementary engagement. It is important to understand early on, however, that the process of adaptation is not a standard operation. This is evidenced in the fact that there exist multiple categories of adaptation, which distinguish themselves from one another through the characteristics of narrative and stylistic fidelity that result from the choices made in translating content from one medium to another.

Initial Research Questions

Three research questions are at the core of this inquiry. The first involves the consideration of the physical texts (comic art and film) as artifacts and questions what devices, conventions, and techniques are used to accomplish the adaptation of a story from comic art to film: *What are the different types of comic art to film adaptations that exist based on the devices and strategies used in adapting the content of comic artwork to film?* The second involves the potential impact on the reader/viewer’s sense of telepresence\(^1\) given the condition of having read the source material before viewing the film adaptation – in other words, the effect of content familiarity across media forms on the sense of telepresence: *How is the film viewer’s experience of telepresence influenced by prior experience with the comic art source material of the film adaptation?* The third addresses the telepresence “book problem” by seeking comparison of reader/viewer telepresence experiences between a medium that is read (comics) and one that is seen and heard (film): *Which medium produces a stronger sense of telepresence?*

To investigate these questions, two studies were undertaken. The first of these is a qualitative textual analysis aimed at distinguishing between the broad categories of

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\(^1\) Telepresence refers to the sense of being in a mediated environment and is commonly defined as “the perceptual illusion of nonmediation” (Lombard & Ditton, 1997). See chapter three for further details of its specific meaning.
adaptations based upon the characteristics of narrative and stylistic fidelity. Although theorists of literary adaptations have dismissed fidelity criticism as a misguided trope (e.g. McFarlane, 1996; Stam, 2000), it has value when applied to adaptations of comic art, since comics and film share many of the same narrative devices, such as image-based storytelling, optical point-of-view, and emphasis on dramatic action. These similarities will be explained in further detail in chapter two.

The second study experimentally tested two theoretical issues: (1) the effect of previous exposure to comic art source material on the experience of telepresence during the viewing of the film adaptation (i.e. cognitive priming) and (2) the question of which medium (comic art or film) produces a higher level of telepresence (i.e. the book problem).

The Value of Studying Film Adaptations of Comic Art

These studies will illuminate two theoretical issues relevant to the experience of telepresence through narrative media. First, the impact of cognitive priming in determining levels of telepresence experienced through the narrative will be tested across media forms. Second, the role of cognitive construction in determining the telepresence experience (referred to as “the book problem”) will be examined by comparing an immersive medium (film) to a more iconic medium (comic art) while controlling for variations in content.

On a larger scale these studies, taken together, will also provide insight into the process of cinematic adaptation of comic artwork that neither could provide alone. By first establishing the broad categories of adaptation and then comparing their effectiveness as priming stimuli, it is possible to learn what roles the narrative and
Stylistic techniques employed by adaptations play in their ability to engage viewers in a telepresence experience. This insight is valuable inasmuch as understanding the process through which cultural products are transformed by media structure, and how individuals make sense of that structure, is valuable. Since one of the most important functions of adaptations is to reinterpret and disseminate cultural and social knowledge (Stam, 2005a), a thorough and systematic understanding of their characteristics is called for. Further, the importance of the current work derives from the fact that it investigates factors that impact the experience of telepresence in two popular narrative media forms (comic art and film). Although it is important to understand the way telepresence experiences are manifested in all media forms, understanding those that lend themselves to the construction of narrative are of particular social and cultural value because it is through narrative that culture is transmitted.

Studying adaptive processes also takes on a special importance when considering how the preferred methods of expression evolve from medium to medium over time. If we are to achieve the goal of making the stories of the past accessible to people in the present, we must be able to effectively express both the form and content of the old medium through the form and content of the new medium.

Finally, comic art, as a narrative form, has been adapted to a vast array of other media, including radio and film serials; feature, short, animated, and made-for-television films; live-action and animated television programs; videogames; prose novels; and theatre presentations (including drama, musical, opera and ballet). A regularly updated list has been developed (Jones, 2008) that attempts to keep track of the proliferation of stories and characters that originated in the form of comic art. To date, there are 163
entries for “theatrical feature-length live-action films” alone, and many of these titles have sequels and/or have been re-adapted a number of times. For example, the entry for *Blondie* has seventeen different adaptations listed. The length and scope of this list demonstrates the extent to which comic art has proliferated into other forms of cultural expression and is evidence of why comic art adaptations demand serious scholarly attention. I begin here with film adaptations of comic art because, as the list shows, they are the most common type of adaptation.

**Outline of Dissertation**

Pursuant to the goal of addressing the preliminary questions raised in this Introduction, chapter two will provide a context for understanding film adaptations of comic art through consideration of previously established definitions, conceptualizations, and categorizations, as well as comparisons of structural, perceptual, and narrative features that derive from the study of films that have been adapted from literature. Following this, chapter three explores the major perspectives associated with Presence Theory and highlights two aspects (the “book problem” and cognitive priming) that have special relevance to the study of film adaptations of comic art. Chapter four concludes the literature review by describing how the experience of telepresence is constituted through comic art and film.

Chapter five offers a formal statement of research questions as well as a set of conceptual hypotheses. Following this, the method, results, and discussion of Study One (a textual analysis and categorization of film adaptations of comic art) are presented in chapter six. Based on these findings and the categories they produce, chapter seven details the method, results and discussion of Study Two (an experiment that tested the
effects of previous exposure to comic art source material on the experience of
telepresence during the viewing of the film adaptation).

Lastly, chapter eight provides an overall discussion of the studies and articulates a
theory of adaptation that includes the role of telepresence and cognitive priming.
CHAPTER TWO

ADAPTATION THEORY

Although there has been some work published that deals with the adaptation of comic art to film (see Brooker, 1999; Christiansen, 2000; Daeuber, 2002; Krevolin, 2003; Lacassin, 1992) the preponderance of theoretical investigation into adaptation has regarded primarily the adaptation of literary texts to film (see Andrew, 2000; Bazin, 2000; Bluestone, 1957; Boyum, 1985; Cartmell, 1999; Elliot, 2003; Hark, 1999; Marcus, 1977; McDougal, 1985; McFarlane, 1996; Stam, 2000, 2005a, 2005b; Wells, 1999; Whelehan, 1999). Therefore, I will begin establishing the grounds for a discussion of comic art adaptations by investigating literary adaptations.

Definitions of Adaptation

As Daeuber (2002) observes, a concise and succinct definition of textual adaptation is hard to come by and, in most cases, authors simply assume that the reader knows what is being referred to by the term “adaptation.” Despite this, however, there are general trends among some of the loose descriptions posited for adaptation. In the most general sense, adaptation has been defined as “a transition, a conversion, from one medium to another” (Seger, 1992, p. 2). Other theorists have been more specific in terms of identifying film as the adaptive medium (see Andrew, 1984; Jenkins, 1997; Wells, 1999), although novels, television programs and comics have all obviously adapted content that originated in other media.

More specific than noting the conversion or translation from some other medium to film, however, is the assertion that in the process of adaptation, some form of

2 Portions of this chapter are based on a revision of the article titled “Fiend on film: Edwin S. Porter's adaptation of Dreams of a Rarebit Fiend” (Jones, 2006) published in The International Journal of Comic Art.
transformation occurs through interpretation (McDougal, 1985; Stam, 2000; 2005b).

Guided by Genette’s (1982) concept of “hypertextuality” (in which the adaptive text – called the “hypertext” – transforms, modifies or extends the source text or “hypotext”) Stam explains that “[f]ilmic adaptations…are hypertexts derived from preexisting hypotexts that have been transformed by operations of selection, amplification, concretization, and actualization” (2000, p. 66; 2005b, p. 5).

Conceptualizations of Adaptation

Deeper than a brief summative definition, however, there are a number of wide-ranging conceptualizations that seek to capture the essential nature of adaptation. Six specific concepts of adaptation are discussed by Elliot (2003), but most of these have also been articulated in various ways by other theorists, providing considerable validation to some of her concepts, which are: “the psychic concept,” “the ventriloquist concept,” “the genetic concept,” “the de(re)composing concept,” “the incarnational concept,” and “the trumping concept.” For reasons described below, I have combined the ventriloquist and incarnational concepts, and, additionally, done away completely with the trumping concept because it makes a value judgment between media forms that is not relevant to the current project.

Starting with the psychic concept, which might be considered the most foundational, Elliot (2003) suggests that there is something essential about the source text that exists outside of its original form. Although this is sometimes referred to as “the spirit” of the text (see Seger, 1992; Sinyard, 1986), there is nothing ghostly or paranormal about it. All that is being asserted is that there is a commonality which survives beyond individual interpretation.
Extending the psychic concept, in a certain regard, the genetic concept delves into the mechanics of precisely how essential elements from the source text are brought into the film adaptation. Here Elliot (2003) refers to a deep structure of narrative that is capable of transferring from one medium to another. Based on a nearly identical point, McFarlane (1996) draws from the narratology of Barthes (1977) to construct a scheme that distinguishes between those elements of an essential text which can be transferred outright and those which require the more complex and nuanced approach inherent to adaptation that are found in the manipulation of the enunciative apparatus of the adaptive medium.

According to McFarlane’s model, a distinction must be drawn between “distributional functions” and “integrational functions”: distributional functions are concerned with the action and events of the narrative and integrational functions are concerned with the psychological aspects of the narrative including atmosphere and character state of mind. Divided further, distributional functions include “cardinal functions” that comprise major events or turning points in the narrative and “catalysers,” which are supportive actions that facilitate the flow of the narrative. According to the argument, these are directly transferable from medium to medium because they represent external events. In opposition, integrational functions, for the most part, cannot be directly transferred and must undergo adaptation because they represent internal states. Information such as character names, however, fall under the subcategory of “informants” and are considered transferable because they are external verbal expressions.
Put differently, distributional functions (i.e., the set of events that compose the narrative) are what constitute the common ground that makes adaptation possible. McFarlane (1996), and Ray (2000) each make this point explicitly. Citing Chatman (1980) and Scholes (1982), Ray comments that “as a means of organizing information, narrative is not specific to any one medium” (p. 39).

To most effectively discuss the next concept of adaptation, which I will term embodiment, it is necessary to collapse three similar concepts into one. Elliot (2003) makes a clear distinction between the “ventriloquist” concept and the “incarnational” concept, based on Saussure’s (1986/1916) terminology, specifically that ventriloqual refers to the novel’s signifiers being attached to the film’s signifieds to create the signs of the adaptation through a composite of novel and film, while the incarnational refers to the film’s signifiers transcending the novel’s signifiers. For our purposes, these are best considered together with Stam’s “pygmalion” concept (Stam, 2005a, p. 24) because, as I will later discuss in more detail, the transition from comic art to film is more of a filling-in or fleshing-out of the iconic sign than a transcendence of that sign.

Thus, for the present purposes, the incarnational, the ventriloqual, and the pygmalion concepts all represent the embodiment of the source text through the corporeal presence of the film’s characters, objects, locations and actions. Specifically, filmic embodiment of the source text functions to bring it to life for the audience in such a way that their symbolic imaginings of characters and situations are brought to life onscreen through detail and motion (Boyum, 1985; Burgess, 1975; Cartmell, 1999).

Finally, what Elliot labels the “de(re)composing” concept of adaptation is useful in investigating reception and cognition. Under this model, the adaptation becomes “a
A composite of textual and filmic signs merging in audience consciousness together with other cultural narratives and often leads to confusion as to which is novel and which is film” (p. 157). Boyum (1985) and Stam (2005a; 2005b) similarly discuss the entangling of textual and filmic signifiers to the extent that recall of the narrative by readers/viewers can no longer be ascribed specifically to its filmic or textual source. Boyum goes so far as to describe a “fusion” that occurs when the scene from the film augments our memory of the book in such a way that one is not distinguishable from the other. Film, in particular, has a strong tendency to retrospectively impose itself on the text because of the comparatively rich detail present in the rendering of scenes. It is conceivable that this imposition occurs to the extent that one cannot revisit the source text without reconstructing the experience of the film in the process (Elliot, 2003; Stam 2005b).

Categorizations of Adaptation

These four conceptualizations (psychic, genetic, embodiment, de(re)composing) offer valuable insight into the ways that adaptations can relate to their source material, but they are not mutually exclusive and, therefore, do not provide a categorization of the different classes of adaptations. Dudley Andrew (2000/1984) and Geoffrey Wagner (1975) are two theorists who have asserted similar sets of categories that have rendered a strong influence on subsequent understandings of the distinction between different types of adaptation (e.g. Cartmell, 1999; McFarlane, 1996; Whelehan, 1999). The “borrowing,” “intersecting,” and “transforming” categories described by Andrew roughly correspond to the “analogy,” “commentary,” and “transposition” categories described by Wagner. For this reason they will be considered together in terms of what they provide to an understanding of the distinctions among adaptations.
Adaptations that fall into the third category: “transforming” (Andrew) or “transposition” (Wagner) are those most faithful to the original text; they seek to represent the original text as closely as possible through a cinematic translation that embodies the text without altering its underlying thematic or narrative structure. It is an arguable point as to whether this can be accomplished because of the changes inherent to translation across media form (Stam, 2000). Nevertheless, this is what the adaptation strives for and may achieve to a greater or lesser extent.

At the opposite end of the spectrum lies the “analogy” category put forth by Wagner. In such adaptations, the source material is taken as a point of departure toward the purpose of creating a different narrative. Although neither of the remaining two classifications presented by Andrew mesh perfectly with this category, the class of adaptations he refers to as “intersecting” comes closest because it accounts for an adaptive text that takes on some aspects of the original but routes it in a new direction, refusing to directly confront the source.

Finally, the middle ground between these extremes is occupied by Wagner’s “commentary” category, which defines adaptations that differ in some way from the source for the sake of a modified narrative goal. Clearly distinct from this, though also occupying a middle ground between “transforming/transposition” and “analogy,” Andrew’s “borrowing” category accounts for the many adaptations that draw their power from the prestige of the source and seek to apply the archetypal meaning of the text to the modern context.
The Issue of Fidelity

Another way of classifying adaptations is with regard to the level of fidelity between adaptation and source. Viewing adaptations from the trope of fidelity, “it is assumed that the task of adaptation is the reproduction in cinema of something essential about an original text” (Andrew, 2000, p. 31). Such a perspective relegates to the film the task of bringing the source material to life in such a way that it does not abridge, extend or depart from the original. Theorists of literary adaptation have attacked fidelity as a standard for evaluating adaptations, doubting its usefulness as a perspective and even the possibility of its attainment when moving from the written word to the motion picture (see McDougal 1985; McFarlane, 1996; Stam, 2000, 2005a). Stam (2000) casts doubt upon the likelihood and desirability of fidelity, claiming that moving from a monosensory medium (the novel) to a multisensory medium (film) prohibits the achievement of literal fidelity. Further, and in contrast to McFarlane’s (1996) distinction between transferable and nontransferable elements, Stam argues, “there is no transferable core” (p. 57) because the text is capable of generating numerous potential readings.

Aside from the obstacles to fidelity relating to the potential incompatibility between literary and audiovisual media, fidelity is often thwarted by the cultural context of the adaptation (McFarlane, 1996; Stam, 2005a). The passing of time as well as the existence of prior adaptations draws the current adaptation further away from the source by reducing the need to conform to the original material and the social atmosphere that surrounded it. An excellent example of the role of cultural context in adaptation is found in Batman, which has been adapted dozens of times in multiple media forms ranging from radio serials and films to television programs and videogames (Jones, 2008).
Brooker (1999) confirms the influence of culture and prior adaptation on current adaptations of *Batman*, noting that “Batman has proved himself infinitely adaptable, retaining only minimal identifying traits of appearance and personality through every incarnation as he transforms according to the needs and moods of each new period” (p. 197).

Still another challenge that often faces film adaptations of comics is the longevity and serialization of the source material. Both Daeuber (2002) and Krevolin (2003) point out the overwhelming scope and ongoing evolution of many stories and characters derived from comic books. Krevolin specifically makes the point that “[t]here may be hundreds of issues of the same title and a multitude of spinoffs, dozens of characters, and countless story lines to take into consideration” (p. 155). This leads to the question of exactly what aspects of the source the film is meant to be adapting. In cases like this, the goal of adapting a specific plotline may be relinquished in favor of capturing the general theme of the work. Referring back to the psychic concept of adaptation, *theme* might be said to refer to the commonality that survives beyond the individual manifestations of a text. This being the case, theme is likely most present in particular dramatic conflicts and character behaviors because, although these conflicts and behaviors may not be executed in quite the same way, they have the potential to refer to many similar conflicts and behaviors that previously took place in the original source.

Of course, not every film adaptation of comic art faces these dilemmas. Works with a finite length and scope, such as can be found in “graphic novels,” do not pose the problem of an overwhelming amount of source material to choose from. As a result, such finite works may be adapted *structurally*, taking the entire set of distributional functions,
in their proper order, and moving them from the source into the adaptive medium. Also, because film and comic art resemble one another in terms of their emphasis on action and visual point of view, a readymade template exists for the film whether it is faithfully followed or not. In fact, the common pre-production technique of storyboarding is, in many respects, equivalent to comic art in appearance and storytelling conventions. Thus, in some sense, every film that has relied upon a storyboard during production is an adaptation of comic art. Evidence of this is present in instructional texts on film production that rely enormously upon storyboards which strongly resemble comic art (e.g. Katz, 1991). The point is that film adaptations of comic art occupy a lengthy continuum that is anchored between examples of nearly absolute fidelity to the source material (e.g. *Sin City* (Miller & Rodriguez, 2005)) and examples of nearly complete disregard for the source material (e.g. *Batman* (Burton, 1989)). This distinction will be further explored in chapter five through a detailed categorization of existing film adaptations of comic art.

**Similarities and Differences Between Media**

**Structural Differences**

Thus far, I have discussed the various ways that adaptations can be conceptualized and categorized. However, the actual transforming of the product from print to screen is not a simple or uniform process. A director cannot just “film the book” (or comic) because the structural and perceptual aspects of the divergent media (whether they be novel and film or graphic novel and film) are not directly compatible.

Several noteworthy distinctions emerge from observations regarding structural differences between text and film. Right from the start, it is plain that film is a primarily
visual medium while text is linguistic (Bluestone, 1957) and that this key distinction is the reason for a number of default structural differences between them (Stam, 2005a).

One difference is that film is structured in such a way as to provide an abundance of detail to the spectator through subtle variations of light, inflections of color, and nuances of physical expression that are available through photorealistic rendering. This capacity lends itself well to maintaining a focus on specific details as opposed to larger concepts and themes that might be more central to the novel. Several theorists have observed, along these lines, that film requires a “unity of action, not just of theme” (McCaffery, 1967, p. 14), and that, for the most part, action takes precedence over theme (Jenkins, 1997; Seger, 1992). It might be suggested, based on this, that film’s structural demand for action is what makes it an ideal medium for adaptation, since, as previously discussed, the distributional (i.e. action) functions are most easily transferred from one medium to another.

A second crucial structural difference between film and text has to do with linear experience versus simultaneous experience. Whereas text must unfold word by word through a single channel that gradually constructs scenarios through description, film is able to simultaneously reveal the immediate appearance of characters, settings, objects and actions while at the same time presenting dialog, sound effects and intoning music (Bluestone, 1957; Marcus, 1977; Mendilow, 1952; Seger, 1992). One important byproduct of film’s capacity to weave various tracks together into a collage of real-time sensory experience is the ability to inflict dissonance through channels that present contradictory information (Stam, 2000; 2005a). By making use of multimodal sensory information in this way, film can offer an immediate experience that is rich in visual,
aural and linguistic complexity. An example of this occurs in the adaptation *V for Vendetta* (McTiege, 2005), when Tchaikovsky’s *1812 Overture* combines with the visual imagery of explosions and fireworks as the British Parliament is destroyed. This differs drastically from the sequential and hierarchical structures of text, which, although nuanced and complex, are far less immediate because they are not simultaneous.

A final difference in structure that warrants mention is the way the medium is engaged by the consumer. When reading a novel, for instance, the reader holds the book in hand, turns pages, perhaps marks sections, and starts/stops reading at will. In this sense, the reader has far more control over the text than the viewer does over the screen (Marcus, 1977; Richardson, 1971). Although DVDs and certain digital cable services have placed a greater degree of agency in the hands of the viewer in terms of the capacity to make closer inspection of particular segments of the film, it is still by and large a product to be experienced in an uninterrupted fashion under conditions where the flow of its barrage of simultaneous experiences is not interrupted. Therefore, due to the higher level of agency, one might consider the act of reading as inherently more private and intimate compared to the relatively public and spectacular act of viewing a film. What follows will suggest that this is because film spectatorship is largely an external/perceptual experience while reading is an internal/conceptual experience.

*Perceptual Differences*

Because of the differences between how text and film are structured, there are accompanying perceptual differences between them which affect the way they are ultimately experienced by the reader/viewer. Probably the most basic issue here is that it is debatable as to whether text is “perceived” at all. Bluestone (1957) and McFarlane
(1996) each make specific references to the perceptual quality of film as opposed to the conceptual quality of text. Similarly, Stam (2005a) observes that “[w]hile novels are absorbed through the mind’s eye during reading, films directly engage the various senses” (p. 6). What is common to these observations is that the film is experienced directly and viscerally through physical response whereas text requires an additional cognitive step. Even though, in a literal sense, text is consumed visually, what is consumed must be subsequently constructed in the mind of the reader.

Due to this distinction between perceptual and conceptual processing (Boyum, 1985; Marcus, 1977), there is an additional shift between media with regard to subjectivity. Because the novel tells the reader, it communicates through the relay of subjective experience. Conversely, because the film shows the viewer, it presents an objective experience (Seger, 1992). This difference in perceptual bias gives readers of text one sort of direct experience from the material that viewers of film do not receive: human thought. Bluestone (1957) and Seger (1992) make the point very clear that film cannot give access to a character’s feelings and psychology the same way that text can. For example, “stream-of-consciousness” thought can be used by writers in such a way as to give the reader the impression of experiencing the writer’s thoughts directly (McDougal, 1985). Because thoughts tend to exist as abstractions, the reading of a flow of thoughts as they connect spontaneously to one another comes very close to the experience of the thoughts as they initially occurred to the writer (and character).

These perceptual biases, however, do not mean that text and film are incommensurate. They do, though, move in opposite directions in terms of cognition and perception. Film tends to be inductive in the sense that the spectator moves from specific
imagery to general thoughts and feelings – “from the givenness of a world to the meaning of a story cut out of that world” (Andrew, 2000, p. 32). What strikes the spectator first is always the sensual perception, which is only later contextualized and processed through additional, higher-level cognition. Conversely, text has a tendency to work deductively, coming to life through the reader’s cognitive construction of specific imagery based on the semantic codes of language. Viewed this way, film begins with the percept and gives way to the concept, whereas text begins with the concept and gives way to the percept (Boyum, 1985; Levinson, 1960; Linden, 1970; Marcus, 1977; Stam, 2005a).

**Narrative Differences**

The differing structural and perceptual qualities of text and film allow for different sets of options with regard to the transmission of narrative. Point of view and time, two crucial elements of narrative, can be used quite differently in each case.

Three discreet types of duration occur across literature and film: duration of the reading/viewing, duration of the narrator’s telling, and duration of the narrative events (Bluestone, 1957). The first of these is important for adaptations, since it occurs very differently for prose and comics as opposed to film. The elapsing of time in text is under the control of the reader since it is the reader who determines the pace and interval of reading (Bluestone, 1957; McDougal, 1985; Seger, 1992). This makes the experience of time abstract since the reader must piece it together and imagine a continuous flow that is uninterrupted by the temporal irregularities of the reading process. Conversely, film, bound as it is in the present tense (Bluestone, 1957; Seger, 1992; Whelehan, 1999), grants not only a sense of immediacy to the experience of watching, but allows the creator to exercise a considerable degree of control over the spectator’s sense of time through
manipulations in frame rate (McDougal, 1985), as well as soundtrack, image focal length, and camera movement.

Similar to these different levels of time, point of view is an important aspect of narrative, perhaps even more important because it determines the avenue through which the reader or viewer is accessing the story. While there are a variety of ways that point of view can be expressed in both film and text (e.g. omniscient, third person, first person, etc.), film has the capacity, if not the necessity, to present more than one. On one level there is the psychological point of view that belongs to the narrator, and on the other, the literal point of view that the camera provides (Marcus, 1977; Stam, 2005a). Most often, however, the point of view of the camera takes priority, since it permits the spectator to observe first-hand and rely to some limited extent upon his/her own perceptions. Concurrently, text can position the reader either through the perspective of the character or through the perspective of the omniscient narrator.

Perceptual Similarities

On the most basic level, cognition is defined as “All the mental activities associated with thinking, knowing, remembering, and communicating information” (Myers, 1996, p. 76) and perception is defined as “The process of organizing and interpreting sensory information, enabling us to recognize meaningful objects and events” (Myers, 1996, p. 117). Although any process of organizing and interpreting sensory information is never completely independent of cognition, the point is that perception facilitates cognition just as cognition facilitates perception. As mentioned earlier, cognition occurs as the first step for text (moving from cognition to perception), and as the second step for film (moving from perception to cognition) (Bluestone, 1957;
Boyum, 1985). Discussing the capacity for both low-immersion (e.g. text) and high-immersion (e.g. film) media to allow an experience of being in a mediated environment, Schubert (2002) explains that “[t]he content presented in the media is only the raw source of the mental model building” (p. 3). Along these same lines, Boyum (1985) notes that “just as we have to make sense of the little black marks that make up letters and words, we also have to organize the lines, the shapes, the colors, and the optical patterns that make up any cinematic image” (p. 24). Here specifically, comic art’s relationship to both literature and film becomes clear as it appears to mark a half-way point between the divergent media, hybridizing conventions and making especially suitable material for adaptation to film.

**Comic Art and Adaptation**

Thus far, the major points of adaptation studies have been covered with respect to literature and film due to the fact that the overwhelming quantity of adaptation studies deals with literature to film adaptation. And while the previous discussion is applicable in many ways to the issues that confront film adaptation of comic art, there are also some differences owing to comics’ special status as a hybrid medium composed of words and drawings.

**Similarities Between Comic Art and Film**

Comics have been defined as “[j]uxtaposed pictorial and other images in deliberate sequence, intended to convey information and/or to produce an aesthetic response in the viewer” (McCloud, 1993, p. 9) and, as such, include comic strips, comic books, and graphic novels. Although accurately described as a half-way point between literature and film, comics are much more than this since they have the plasticity to
achieve narrative tasks that are both literary and filmic. More specifically, comics share with film the ability to maintain an external “pro-filmic” point of view through drawings that use perspective and capture a visual scene that is complete with depth of field and aspect ratio. In addition, comics are similar to film in their emphasis on distributional functions (i.e. action) as a means of telling the story. In a chapter instructing students how best to adapt comics to film, Krevolin (2003) writes “Compared to other genres, comics may be the most similar to screenplays” (p. 156), and that “[t]he comic book industry [like the film industry] is one that relies on a clear and creative presentation of action” (p. 159). On the most basic level, though, they “both employ sequentially arranged elements for narrative purposes” (Coleman, 1985, p. 90).

Differences Between Comic Art and Film

On the other hand, however, comics have a great deal in common with literature in the sense that they are read and, thus, deemphasize external/perceptual tasks and enter straight into cognition. Carrier (2000) observes the importance of the word balloon, noting that, “by externalizing thoughts, [it] makes visible the inner world of represented figures, externalizing their inner lives, making them transparent to readers” (p. 73).

However, in spite of (or perhaps because of) comics’ plasticity, there are some fundamental ways in which they differ from film, making adaptation an exercise in translating one set of conventions into another.

One of the primary concerns in adapting comics to film is their typical lack of photorealism. Even though some comic art has made use of computer imaging, airbrush techniques and even digital photography to achieve a realistic look, most use iconic caricatures to convey reality and emotion simultaneously (Eisner, 1985; McCloud, 1993).
Following from this point, Christiansen (2000) suggests that film’s “invisible control of enunciation maintains the audience’s impression that it is actually entering the diegesis: so here, at the enunciative level, the kinship with the graphic art [comics] is lost” (p. 114). But, while it is true that when we look at an expressionistic caricature we are not convinced of its reality in the same way as we are when we look at film, the caricature conveys the gravity of an emotional tone through exaggeration that would be almost impossible in the strictly photorealistic format. Thus, to capture the often exaggerated and expressionistic characteristics of comic art on film, resort to some modified enunciative strategy is often used. As a “synthetic art,” film has the capacity to be molded to incorporate or fit the appearance of other graphic arts, including comics.

A second critical, and perhaps even more obvious, way in which comic art differs from film is found in how motion is depicted. While it is obviously the case that no true motion exists in the “motion picture” – only a series of static frames being run through a projector – it is also clear that film comes much closer to empirically capturing the illusion of motion than do comics. Whereas film provides an illusion of true motion capable of fooling the eye, comics can only imply or suggest motion through graphic techniques and transitions. This illusion is generally accomplished in one of two ways. First, motion can be described within the panel of the comic text through the use of what has been termed “motion lines” or “zip ribbons” (lines drawn on the page to represent movement). Second, motion can be described through incremental changes that occur between successive drawings. McCloud (1993) identifies six types of transitions, of which two (“moment-to-moment” and “action-to-action”) are capable of suggesting motion in such a way.
Both photorealism and (implied versus apparent) motion, however, are aspects of enunciation and, as such, are not capable of being transferred between media the way that narrative is. In the words of Brian McFarlane (1996): “In considering what can be transferred from novel to film [there must be] a distinction between narrative (which can be transferred) and enunciation (which cannot, involving as it does quite separate systems of signification)” (p. 23).

Summary/Synthesis

The preceding synthesis of theoretical propositions that have been applied to adaptations reveals several potential avenues to be pursued toward the goal of answering the questions initiated in chapter one.

Providing a preliminary response to question one (What are the different types of comic art to film adaptations that exist based on the devices and strategies used in adapting the content of comic artwork to film?), Stam asserts that filmic adaptations transform their source material through “selection, amplification, concretization, and actualization” (2000, p. 66; 2005b, p. 5). Although he never formally defines each of these, I will define them and expand upon them as part of the analysis presented in chapter six. This list of operations, though useful to start with, reveals little about when, how, or why each might be used. Elliot’s (2003) genetic concept of adaptation, supplemented by McFarlane’s (1996) categorization of narrative functions, provides insight that may lead to a more complete answer. Specifically, if distributional functions (the actions of the narrative that can be directly transferred between media forms) are separated from integrational functions (psychological aspects of the story that cannot be
transferred and require adaptive techniques), it is easier to focus on the latter to observe when, how, and why adaptive techniques are used.

Shifting gears from how adaptations are constructed to how they are received, Elliot’s (2003) de(re)composing concept of adaptation implies that experiencing the source material previous to the adaptation will effect how the story is mentally constructed and recalled by the viewer. To specify more directly, Boyum (1985), referring to a similar phenomenon, notes that there is a “fusion” that occurs between source text and film adaptation to the extent that both versions form a composite in the mind of the reader/viewer. By acknowledging the potential for prior experience with the source material to influence how the adaptation is received, the de(re)composing concept lends an initial direction toward approaching the second preliminary research question (How is the film spectator’s experience of telepresence influenced by prior experience with the comic art source material of the film adaptation?) which will be explored further in chapter three.

A central part of understanding the adaptive process is acknowledging the diversity of forms that adaptations may take. To summarize the range of possibilities offered by Andrew (2000/1984) and Wagner (1975), transforming or transposition is the category that attempts the most thorough and literal translation from text to film. Various other categories are offered as well, based upon the particular way in which each departs from the original source. Another way to structure a categorization is with regard to the extent of the adaptation’s fidelity to the thematic and/or structural elements of the source material.
To explore the obstacles faced in adapting content from one medium to another, structural, perceptual and narrative aspects of text and film were compared. In general, it was argued that film provides a rich, simultaneous experience that is external and perceptual while text provides a relatively lean, linear experience that is internal and conceptual.

Lastly, qualities unique to the task of adapting comics to film were explored. Because comics share with film the potential to present an external “pro-filmic” point of view as well as an emphasis on storytelling through action (i.e. distributional functions), they might be considered similar to film with respect to the psychological effects they produce in the reader. If this is true, there is warrant to investigate the third research question which seeks to compare levels of telepresence experienced between comics and film. Adaptations provide a unique testbed for this phenomenon (known in the presence community as the “book problem”) since media form changes while content, for the most part, remains the same.

Additional aspects relating to questions two and three are explored in the next chapter where the focus moves from the construction of the comic to film adaptation as an artifact to the processes involved in experiencing media as a user. Telepresence theory will be employed to illuminate how the subjective experiences of narrative worlds take shape.
CHAPTER THREE
THE PRESENCE CONNECTION

Common to both adaptations of comic art and their source material is their shared objective of transporting the reader/viewer into the narrative. As previously discussed, this is accomplished in various ways as a result of the structural and perceptual differences between comic art and film. The goal of this chapter is to consider this transportation and how it occurs from the perspective of telepresence – a program of theory and research in which scholars seek to explore aspects of media experiences that involve users experiencing the “illusion of nonmediation” (Lombard & Ditton, 1997, Presence Explicated, ¶ 1).

Presence has been defined in a number of diverse ways (see Lombard & Jones, 2006) that reflect the particular implicit or explicit conceptualizations that scholars attribute to the term. I refer to the concept for the purposes of this dissertation as telepresence – an “inaccurate perception of technology” that includes dimensions of spatial telepresence, social telepresence, and engagement (for further elaboration, see the “embodiment in narrative media” section near the end of chapter four). The prefix “tele” is added because this form of presence relies on technology in order to be experienced. In instances where I refer to the overall phenomenon (including or excluding technology) or the body of literature, the more general term “presence” is used. For an overview of the landscape of presence definitions visit:


One major distinction among presence definitions concerns whether presence is seen as an exclusively external/perceptual phenomenon or an internal/conceptual
phenomenon that is based on perception. For example, Waterworth and Waterworth’s (2001) definition of presence as “a conscious emphasis on direct perception of currently present stimuli rather than on conceptual processing” (p. 211) takes a clear stance on the side of external perception, whereas Biocca, Harms, and Burgoon’s (2003) definition of presence as “the phenomenal sense of ‘being there’ including automatic responses to spatial cues and the mental models of mediated spaces that create the illusion of place” (p. 459) takes the opposing internal/conceptual view.

In this chapter, I proceed by first describing *The Book Problem*, which is a primary source of contention between these opposing perspectives. From there, a detailed description and criticism is given of the external/perceptual view of presence. This is followed by a thorough explanation of the internal/conceptual view, which includes a description of mental model creation and mental simulation as well as cognitive structures and processes such as umwelt, schema, and closure. Once these foundational concepts and processes are fully explained, the content knowledge, thematic inertia and cognitive priming phenomena are introduced and discussed insofar as they relate to the facilitation of the telepresence experience.

The Book Problem

Within the presence research community, the subject commonly referred to as “the book problem” encapsulates these opposing perspectives (external/perceptual vs. internal/conceptual). At the heart of the debate is the question of whether less immersive media (such as comic art) are capable of providing a telepresence experience. Biocca (2003) articulates the book problem in the following way:
If sensorimotor immersion is the key variable that causes presence, then how do we explain the high levels of presence people report when reading books? Books are very low fidelity, non-iconic media and are extremely low on all sensorimotor variables identified as causing presence: extent of sensory data, control of sensors, and ability to modify the environment. (p. 4)

A number of other theorists and researchers also recognize this incongruity (e.g. Banos, Botella, Guerrero, Liano, Alcaniz & Rey, 2005; Gysbers, Klimmt, Hartmann, Nosper & Vorderer, 2004; O’Neill & Benyon, 2003; Pinchbeck & Stevens, 2005; Schubert & Crusius, 2002), and Biocca (1997) has observed that “[m]ost [theorists] see the illusion of presence as a product of all media” (Why a Theory of Presence Has Become Necessary, ¶ 1). Even outside the domain of presence research, Phillips (2000) has argued that “[l]ow resolution media does not mean a low-resolution experience” (p. 82).

In an initial effort to supply a resolution to the paradox, Schubert and Crusius (2002) propose a theory that acknowledges a “cognitive layer” to the experience of presence wherein all incoming perceptual stimuli do not give way directly to the sense of presence, but rather apply toward the construction of a mental model which may or may not induce presence depending upon its level of detail.

Expanding beyond this root concept, Biocca (2003) points out that the heart of the book problem rests with the “sensorimotor immersion assumption” which posits a direct correlation between the level of immersion of the medium and the level of telepresence experienced by the user. He goes on to detail a “three pole model” which accounts for the role of mental imagery space in addition to physical and virtual space. This mental imagery space, central to mental model development, explains why media of low
immersion are capable of fostering a sense of telepresence in users. The reason is that a mental model can be constructed based on cues from media (e.g. comic books, novels, etc.) that depend upon the user’s imagination.

Supporting this internal/conceptual view of the book problem, Pinchbeck and Stevens (2005) claim “the book problem should come as no surprise and rather than being an issue, should be taken as demonstrating that virtual environments and other media share the capacity to influence an organism’s representation of its surroundings” (p. 223). In stark contrast to this, Waterworth and Waterworth (2003b) strongly assert the external/perceptual view by completely dismissing the book problem as “a confusion between sense of presence and emotional and/or intellectual engagement in internal, imagined space” (Introduction, ¶ 5).

The oppositional quality that these definitions of presence and perspectives on “the book problem” have with respect to each other reflects a fundamental difference in the understanding of what presence is and how it is constituted.

The External/Perceptual View of Presence

Describing the philosophical roots of the external/perceptual view of presence, Biocca (1997) has observed that “[m]any immersive virtual reality designers tend to be implicitly or explicitly Gibsonian” (The Senses as Channels to the Mind, ¶ 2) in the sense that they start from the assumption that no preexisting knowledge of the world is necessary in order to make sense of it because presence within the environment is constituted through direct perception. In the words of James J. Gibson himself, “The young child does not need to have ideas of space in order to see the surfaces around him” (1979, p. 304). This assertion follows from his argument that human visual perception
evolved based upon the extraction of invariants from the flux of the environment. In other words, to think of visual perception as requiring predetermined, static concepts is incorrect because our system of visual perception evolved within perpetual flux – mobile eyes situated on a mobile head which is itself situated on a mobile body, perceiving aspects of an environment that are, themselves, mobile. According to this theory, only the extraction of the unchanging aspects of the environment (invariants) is necessary to comprehend and apprehend the world around us.

Waterworth and Waterworth (2001, 2003a, 2003b); Waterworth, Waterworth, Holmgren, Rimbark, and Lauria (2001); Riva and Waterworth (2003); and Slater (2003) have presented substantial theoretical and empirical evidence that supports a view of presence that is based exclusively on external/perceptual phenomena. The following discussion of the external/perceptual perspective is based primarily on the work of Waterworth and Waterworth (2001, 2003a, 2003b), not because they are alone in adopting this perspective, but because they have articulated the most thorough theoretical argument in favor of it. Evidence that this perspective is widely prevalent within the presence community can be found in the predominant (though not exclusive) engineering focus in the premier journal in the field: Presence: Teleoperators & Virtual Environments (Durlach & Slater, 1992).

Waterworth and Waterworth (2003a, 2003b) argue to justify the external/perceptual view by examining presence experiences as a part of human evolutionary history. They draw a distinction between “core consciousness” and “extended consciousness,” suggesting that the former is what we have in common with all conscious creatures that enables understanding of our immediate concrete
environment and the latter is that capability, unique to humans, which allows us to imagine possibilities and consequences as well as to plan for the future. Essential to this talent of extended consciousness, they argue, is the ability to discriminate between the domains of the core consciousness (i.e. perception of the immediate physical environment) and extended consciousness (i.e. imagination), since to confuse the two would obviously be dangerous to the individual and maladaptive in terms of evolution. Glenberg (1997) makes a similar point in taking up an embodied approach to the function of memory, noting that “clamping” is the function we perform to separate our memory of previous encounters with the environment from our current experience of it.

Waterworth and Waterworth (2003a) maintain that it is the sense of presence that distinguishes for us the difference between extended consciousness and core consciousness. Presence, they say, is in the domain of the core consciousness.

To support their strictly perceptual understanding of presence, Waterworth and Waterworth (2001) counterpose the term “absence” to describe cognitive activities such as thinking and imagining. Absence, they explain, “is characterized as a psychological focus on … conceptual processing, and presence as a psychological focus on direct perceptual processing” (2001, p. 203). The metaphor of the “mind as a two-room apartment” (Waterworth & Waterworth, 2001, p. 205) sets up presence and absence in an oppositional and mutually exclusive arrangement. Using the imagery of a cross-section of two adjacent rooms with a hanging light situated at the top of the doorframe between the rooms, it is explained that the room on the left represents concrete processing (presence) while the room on the right represents abstract processing (absence). The

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3 Riva, Waterworth, & Waterworth (2004) have since substantially clarified their position, noting that presence occurs when proto, core, and extended consciousness are all focused on the same external content.
lamp between them, which represents conscious thought, can be shined into one room or
the other, but not both simultaneously, suggesting that consciousness is a zero sum game
that the concrete and abstract realms of thought compete for – “Put simply, you cannot
feel present in a virtual world, or in the real one, while also being lost in thoughts,
dreams, or fantasies” (p. 207). Following through with this line of reasoning, if we are
conscious of the immediate world outside of our bodies we are present and if we are
mostly conscious of our own thoughts we are absent.

Of the three dimensions of presence that Waterworth and Waterworth (2001)
identify (focus, locus, sensus), it is apparent that only two (focus and sensus) can enhance
or detract from the presence experience. Locus only distinguishes whether attention is
directed at the physical (“real”) or virtual (“artificial”) external worlds, which are both,
according to this model, capable of producing a sense of presence. Focus is the variable
that distinguishes concrete processing (i.e. presence) from abstract processing (i.e.
absence), as previously explained, and sensus refers to a level of consciousness ranging
from unconscious or asleep (i.e. absent) to fully alert (i.e. present).

*External/Perceptual Experimental Validation*

Some experimental research might be seen as providing evidence for this
perspective on the presence/absence distinction as well as the inability of low-immersion
media to provoke a telepresence experience.

In an attempt to validate the focus, locus, and sensus model (Waterworth and
Waterworth, 2001), Waterworth et al. (2001) measured the levels of telepresence
experienced by participants in an “interactive tent” that displayed films varying in their
level of abstraction. Based on a comparison of scores gathered with the Igroup Presence
Questionnaire (Schubert, Friedmann & Regenbrecht, 2001), it was determined that “The average presence ratings for the 3D and Camera films [concrete films] were significantly higher than the ratings for the two abstract films [Text and Wireframe]” (p. 6). Based on this it was concluded that “[w]hen the abstraction level of an experience increases, the feeling of presence decreases” (p. 10). This, of course, is suggestive of one of the basic tenets of the presence/absence distinction: that when abstraction is involved presence is not.

Testing an even more drastic distinction between abstract and concrete processing in the (tele)presence experience, Banos et al. (2005) measured the (tele)presence levels of participants at various points as they explored either a virtual park or a park that they were asked to imagine. Data gathered using the UCL Presence Questionnaire (Slater, Usoh, & Steed, 1994) indicated that although initial levels of presence in the imagination condition were higher than in the virtual condition, this trend reversed as the simulation played out.

Evidence exists even outside of the domain of presence research that indicates less immersive media offer less telepresence. In an experiment testing male sexual arousal across five modes (media forms) of erotic stimulation, Julien and Over (1988) found that “the differences between modes related primarily to level of response. The highest level of physiological and subjective arousal was generated by film, while fantasy produced the lowest level of arousal. Slides, spoken-text, and written-text were equally potent, and these three modes had intermediate influence on arousal” (p. 139). Here, once again, the general association between increased abstraction and decreased telepresence holds.
Coming from this perspective, one enduring criticism leveled against the internal/conceptual view of presence is that the term becomes conflated with the more general and already well-studied area of conscious attention. Waterworth and Waterworth (2003b) note that “[i]n trying to solve the so-called book and dream-state problems the baby of presence has been thrown out with the bathwater of conscious attention: there is nothing left for the concept of presence to do” (Introduction, ¶ 4). However, a closer look at the relationship between presence and conscious attention may reveal a more complex equation.

**Criticisms of the External/Perceptual View of Presence**

Although the external/perceptual view endorsed by the Waterworths and others sets up a logical criterion for discriminating between experiences of presence and “absence” and for understanding the factors and contexts which lead to and detract from presence, it also contains a number of implicit assumptions that neatly avoid the more complex examination of cognition that would be prompted if they were made explicit.

To start with, it is tacitly assumed in the critique of Biocca’s (2003) “three pole model” (Waterworth & Waterworth, 2003b) that the only role conscious attention has to play is as a necessary precondition of the presence experience. In other words, in the terms of their sensus dimension, conscious attention serves solely to permit the prerequisite perceptual resources to be allocated to the immediate surrounding environment. The hidden assumption is that conscious attention occurs independently of cognition, which, according to this view, is not a determinant of presence, but of the opposing condition referred to as “absence.” The problem is that it is difficult to define conscious attention without referring in some way to cognition. For example, Hu, Janse
and Kong (2005) provide a typical definition of attention as “a cognitive process of selectively concentrating on one thing while deliberately ignoring other things” (p. 4). Of course, deliberate ignoring and selective concentration are activities that would require some cognitive effort.

The issue of conscious attention stems from a larger problem with the external/perceptual view: its denial of the role that cognition plays in perception. It is possible for the presence experience to rely upon cognition and conscious attention without being confused with them. The distinction that determines the presence experience should not be made between cognition and perception, but among the contents of cognition. As Ryan (2001) has observed, “It [the mimetic concept of immersion, i.e. telepresence] applies to novels, movies, drama, representational paintings, and those computer games that cast the user in the role of a character in a story, but not to philosophical works, music, and purely abstract games such as bridge, chess, and Tetris, no matter how absorbing these experiences can be” (p. 14-15). In the first set of examples, content tends to be narrative and to portray natural environments, whereas, in the second set, it is abstract and symbolic, but all involve both cognition and perception.

Also stemming from this denial of the role cognition plays in perception, it is claimed that a major criterion for the sense of presence is the experience of an external, sharable world that yields the same perceptions among different individuals (Waterworth & Waterworth, 2003a). In attempting to emphasize the distinction between the clarity and accessibility of the virtual and real worlds (as opposed to the internally generated mental world), Waterworth and Waterworth (2003a) note that “[t]he virtual world is the same for everyone who acts in it, just as the real world is,” but find themselves backtracking
immediately afterward, qualifying parenthetically that “our experiences and reactions differ” (Presence and Media Form, ¶ 4). Of course, anyone who has played the childhood game of “telephone” (where a simple verbal message travels through a number of people) knows that our perceptions tend to combine with our cognitions even as they are being formed.

A second point of contention lies with the use of the term “absence” that describes the state of non-presence resulting from conceptual processing. Although labeling conceptual space as “absence” maximizes the distinction of the presence concept and simplifies what it is through a reduction in the application of the term, there is a danger that the deeper underlying phenomenon will be missed for the sake of simplicity. Especially within the realms of memory and dream, where previously experienced physical locations can be recalled to mind, it would seem that an argument for the presence-invoking capacity of cognition could be made. Most of us have probably had the experience of having a dream that, at the time it was dreamt, seemed absolutely real. A sizable minority of undergraduate students has even reported the experience of false memories based on the inability to discriminate between perceptually realistic dreams and waking reality (Rassin, Merkelbach & Spaan, 2001). If phenomena such as this are examples of absence, based upon their conceptual nature, then it would seem that an understanding of presence as a subjective psychological state is no longer salient because it is now determined based on objective location of the body, regardless of where the mind is focused.

A third criticism of the external/perceptual view rests with how the experimental data are interpreted. At first glance, the experimental evidence described above appears
to favor the exclusively external/perceptual view of presence, but, in actuality, it serves to support the conceptual model for two reasons.

First, results from each experiment indicate that media which require internal/conceptual processing, such as imagery instructions, fantasy (Banos et al. 2005; Julien & Over, 1988) and abstract content (Waterworth et al. 2001), while providing a lower level of experienced telepresence, still elicit some form of the telepresence experience that is presumably commensurate with individual imaginative capabilities. If it were true that media requiring conceptual processing did not produce telepresence, but instead produced “absence” because of the conceptual component involved, then levels of reported telepresence should not simply be lower than immersive media, they should be zero. By definition, one cannot read or engage in imaginative activities without entering the space that Waterworth and Waterworth (2001) have designated as “absence” to indicate, not only its lack of similarity, but mutually exclusive opposition to presence. In light of this, Pinchbeck and Stevens (2005) are correct when they point out that “[s]imply stating that reported presence from media with low immersive capabilities is not presence but something fundamentally different, if indistinguishable when using existing measures, is an unacceptable theoretical stance” (p. 222).

Second, the fact that more immersive forms of media produce a more intense feeling of telepresence does not mean that cognition has no role to play. If it is true that incoming stimuli, regardless of the level of their immersive quality, serve only as the raw material out of which a mental model is constructed (Biocca, 2003; Schubert & Crusius, 2002; Schubert, Friedmann & Regenbrecht, 2001), then an initially more complete
environment would naturally be easier to process, reducing (but not eliminating) conceptual tasks and providing a more intense presence experience.

A related criticism of the external model involves the methods of determining whether a sense of presence has been achieved. Adopting what Nunez and Blake (2001) refer to as “behavioral presence” or the “postural or movement approach” (p. 115), Waterworth and Waterworth (2001) distinguish presence from mere conscious attention in the following statement: “The reader of a novel may become deeply engrossed in the lives of the characters and the action that is described, but they are unlikely to move their bodies unconsciously to avoid a hazard that is only described in text” (p. 204-205). While there seems to be little disagreement that some level of physical response to the medium (given circumstances that would elicit physical response) is prerequisite for telepresence, the precise level of response that is required is debatable. For example, citing Cuthbert, Vrana and Bradley (1991), Glenberg explains that “although overt responding is inhibited during an imagery task, there may well be ‘efferent leakage’ that can be measured using psychophysiological techniques” (1997, p. 5). Indeed, change in galvanic skin response (GSR) as a result of exposure to a non-immersive mediated stimulus (one that depends upon conceptual processing) requires efferent leakage for measurement to take place. Examples in which GSR has been successfully used to evaluate responses to low-immersive media such as text and television include Clariana (1992) and Osborn and Endsley (1971).

I turn now to the internal/conceptual view of presence to explore in depth the cognitive processes involved in producing the mental model to which the individual
responds. An investigation of this model and how it is constructed provides insight into the processes by which telepresence occurs in media ranging from comic art to film.

The Internal/Conceptual View of Presence

What is now referred to as presence (or telepresence) theory/research emerged from a telerobotics engineering perspective and has changed substantially to recognize the capacity of other media forms to provoke the same underlying experience. In what is commonly regarded as the seminal article in the field, Marvin Minsky (founder of the artificial intelligence laboratory at MIT) coined the term “telepresence” on the suggestion of his friend Pat Gunkel and referred to it strictly in terms of telerobotics. For example, he notes, “Telepresence emphasizes the importance of high-quality sensory feedback and suggests future instruments that will feel and work so much like our own hands that we won’t notice any significant difference” (1980, p. 47).

Biocca (2003) calls attention to the telerobotic origin of telepresence explicitly and further concludes that, as a result, much current research is guided by what he refers to as the “two pole model”: “Inherited from early telerobotics and telepresence research, the two pole model of presence posits that presence shifts back and forth from physical space to virtual space” (p. 1). The problem with this model is its implicit acceptance of the previously defined “sensorimotor immersion assumption” which fails to explain instances of high telepresence in media of low immersion, such as when one experiences telepresence while reading a novel or comic book (“the book problem”), as well as instances of low presence in physical reality, such as when one is present in a physical place but is relatively unaware of the place because they are mentally focused on
something other than the immediate environment ("the real world problem") (Biocca, 2003).

The solution to the inconsistencies in the two pole model, according to Biocca (2003), is to add an additional pole that accounts for “mental imagery space.” As described previously, the addition of this third pole allows spatial cues, which contribute to the mental model that facilitates presence, to be generated by mental imagery in addition to virtual or physical imagery. Looking at things this way, there no longer is a direct relationship between level of immersion and level of telepresence experienced because mental imagery is seen as having the potential to fill in the gaps of low immersion media. Thus, regardless of how immersive or impoverished the medium is, the experience of telepresence is determined by the quality of the physical, virtual, and/or mental spatial cues and the individual’s awareness of them (Biocca, 2003).

**The Mental Model**

Schubert, Friedmann, and Regenbrecht (2001), Schubert and Crusius (2002), and Biocca (1997, 2003) have advocated an understanding of presence that conceives of the experience as deriving from interaction with a mental model of the surrounding environment. Similar theories concerning mental models have been applied to the process of reading. Oatley (1999), for example, argues from a similar stance when he writes “Human mental life depends strongly on constructive abilities. What human minds do generally is to make models that parallel the workings of the world” (p. 105). The important point in terms of presence, however, is the individual’s interpretation of their mental model, for it is within this internal conceptual act that a sense of presence is felt (Schubert et al., 2001).
It is also important to recognize that the mental model does not only apply to situations where technological mediation is involved. When Schubert and Crusius (2002) refer to “cognitive representations as another theoretical layer” (Five Theses), they are implying that all perceptual cues, whether originating in the physical, virtual, or imaginary environment, serve to construct an internal representation that we react to – i.e. they are all filtered through cognitive representations. A sense of presence then may result from a distal attribution of that internal model (Biocca, 1997). Loomis (1992) defines distal attribution as a phenomenon in which “most of our perceptual experience, though originating with stimulation of our sense organs, is referred to external space beyond the limits of the sensory organs” (p. 113). A similar point has been made in relation to the theory of embodied cognition (e.g. Beer, 1995; Clark, 1998; Greeno & Moore, 1993; Thelen & Smith, 1994; Wertsch, 1998). These theorists regard the environment as part of the cognitive system and note that “[t]he forces that drive cognitive activity do not reside solely inside the head of the individual, but instead are distributed across the individual and the situation as they interact” (Wilson, in press, The Environment is Part of the Cognitive System, ¶ 2). Put simply, the model we have constructed from within becomes mapped onto or attributed to the external environment.

Arguing that the experience of telepresence in text, film and virtual reality originate from the same cognitive process, Schubert et al. (2001) explain the mental model using the “potential action coding theory of presence,” which they describe in terms of construction (of the model itself) and suppression (of irrelevant information). The MEC Model of Spatial Presence (Vorderer, Wirth, Saari, Gouveia, Biocca, Jancke, Bocking, Hartmann, Klimmt, Schramm, Laarni, Ravaja, Gouveia, Rebeiro, Sacau,
Baumgartner & Jancke, 2003) similarly stresses the importance of the mental model in the constitution of presence. According to this model, an SSM (spatial situation model) is formed based upon two components of information: a “bottom-up component” which constructs the mental model based upon descriptive information, and a “top-down component” which relies on the implementation of preexisting knowledge to construct the model. The central elements of each of these models (top-down/bottom-up construction and suppression of irrelevant information) will form the basis for discussion in the following sections that describe the details of how the mental model functions to promote a sense of presence.

*Mental Simulation*

Mental simulation plays a central role in bottom-up processing and is the functional act that produces the structure of the mental model. Biocca (1997) sees dreams, hallucinations, and daydreams as evidence that the mind is able to produce “compelling spatial environments” (The Imaginal Environment, ¶ 2), and Schubert et al. (2001) compare mental model construction to language comprehension and memory. In a similar vein, episodic memory may be contingent upon the same process as mental simulation. Tulving (2002) describes “autonoetic consciousness” (the subjective representation of a progression of events through time) as basic to episodic memory, and Mar, Oatley and Eng (2003) point out the commonality between autonoetic consciousness and the process of mental simulation in general. The relatedness of these processes is especially evident in Tulving’s realization that “mental time travel involves awareness not only of what has been but also of what may come” (2002, p. 20). Thus, if
autonoetic consciousness is not bound to the service of memory, it may be instrumental in constructing simulations of the present and future as called for by acts of imagination. 

Suspension of Disbelief

One function that would appear integral to the act of mental simulation is what has commonly been referred to in the literature on fiction, film, and presence as the “suspension of disbelief.” Because engaging in a narrative requires some effort, willingness and motivation on the part of the individual (Gerrig, 1993; Gysbers et al., 2004; Ryan, 2001), that initial step toward receptivity to the narrative requires explanation.

Biocca (1997) defines the experience of presence in the imaginal environment in terms that seem very similar to suspension of disbelief, noting that diminished attention and responsiveness to sensory cues in the immediate environment (versus the virtual one) is a prerequisite to telepresence. In a similar capacity, suppression of the physical environment is a task that is essential to involvement (Schubert, 2003; Schubert et al., 2001), memory, and language comprehension (Glenberg, 1997). Such suppression, it might be argued, is accomplished through suspension of disbelief on the part of the individual. Further pursuing Glenberg’s (1997) example involving language comprehension, he points out that suspension of disbelief (though he does not refer to it as such) is accomplished through suppression of the physical environment and the structure of the language itself. Thus, to run a mental simulation, the physical world must be left behind and the tokens (i.e. the physical symbols that signify the mediated world) must fall away to reveal the connotations they were crafted to produce.
From the perspective of the previously described external/perceptual view, suspension of disbelief is insufficient to invoke telepresence:

The root of the problem with many existing models of presence is perhaps confusion between presence and suspension of disbelief. Suspension of disbelief is the result of conceptual processing which then leads to a secondary sense of involvement – as when we read a gripping novel in which we become engrossed. On the other hand, we see presence as that which arises in situations where no belief suspension is needed, because the display is immediately perceptually engaging…” (Waterworth & Waterworth, 2001, p. 204).

One potential problem with this perspective is its neglect of the suspension of disbelief required for certain highly immersive virtual experiences. For example, it could be convincingly argued that the disbelief stemming from the sensation of additional weight or haptic pressure from a head mounted display must be suspended in order to feel telepresence in the virtual environment. Put differently, devices employed to create a display, which somehow themselves impinge on the senses in a way that does not correspond to the content of that display, serve as constant reminders of the mediated nature of the experience. Examples of this problem can be found in nearly any technology intended to foster telepresence.

Anomalous Suspense

Gerrig’s (1993) notion of “anomalous suspense” does not rely on suspension of disbelief to explain mental simulation as it occurs in the experience of narratives. He suggests that something deeper than intentional ignorance is at work:
I reject simple ‘toggle’ theories of fiction which have suggested that readers perform some mental act called ‘the willing suspension of disbelief’ that eviscerates the effects of fiction. Whatever the effects of narrative worlds may be, they will arise because of strategic actions that experiences do and do not perform with respect to those worlds. (p. 17)

In place of suspension of disbelief, Gerrig suggests that anomalous suspense explains how the narrative world comes to take precedence over the individual’s immediate surroundings. Anomalous suspense describes the phenomenon of reader suspense under conditions in which their real-world knowledge should prevent the sensation of suspense.

To test this concept and demonstrate its salience, Gerrig set up two conditions in which experimental participants must read a story and respond to questions. In one condition, the story is written in such a way as to inspire suspense in the reader while, in the other condition, the story is not written to inspire suspense. It was found that, on average, participants in the suspense condition took significantly longer to determine the truth of actual outcomes (that they had knowledge of beforehand) than participants in the non-suspense condition (Gerrig, 1993). Gerrig attributes this intriguing finding to the reader’s propensity to consider the potential conclusions insinuated by the text. In other words, when a set of hypothetical circumstances or conditions is presented that provides a congruent internal framework, alternative scenarios are entertained in spite of real-world awareness. Gerrig further argues that this occurs because of an “expectation of uniqueness” (1993, p. 170) that we experience while progressing through the event structure of a narrative. Such an expectation, he suggests, derives from an “optimization of cognitive resources” (p. 170) that evolved from our interactions with physical reality,
which never quite repeats itself the way our own manufactured narratives do. This is a reasonable conclusion considering that throughout the majority of our development as a species the precise repetition of an event (or even a story that is told orally) has rarely, if ever, been encountered. With the advent of recorded narrative, details are held standard even though, on some primitive level, we never expect to encounter the identical set of details when revisiting the same narrative despite the fact that, logically, we should. In this sense, mental simulation should be viewed as an active process that does not run a standard program of simulation the way, for instance, a compact disk played in a stereo might simulate the sound of an orchestra; it is an active process of creation and recreation that takes on its character at the moment of inception.

A similar form of improvised creativity is also at play in children’s imaginative games. Harris, Brown, Marriott, Whittall and Harmer (1991) found that children who were asked to pretend that a particular box (out of a set of two) contained either a monster or a rabbit interacted with that box differently (approaching and touching it), once the experimenter had left, even though they had verified and acknowledged that the suspect box was empty. Gerrig interprets this in terms of his anomalous suspense theory: “When subjects become immersed in a narrative world in which the box is occupied, they might find that because attention is so thoroughly captured, knowledge of the box’s real-world emptiness is momentarily crowded out of consciousness” (1993, p. 194).

Emotion

Emotion, which is another factor that often enters into the equation of mental simulation, is not simulated at all (Mar, Oatley & Eng, 2003; Oatley, 1999; Ryan, 2001). This means that when an individual is said to have experienced a certain emotion, that
experience is real regardless of whether the event that produced it is fictional or real, mediated or nonmediated. This subjective reality of emotion may be said to result in what Gerrig has called “nonpenetration of belief into emotional experience” (1993, p. 181) – that is, our awareness of the falsity of an emotional stimulus does not stem the tide of the emotion itself. On one level we can be aware that the event that prompted the emotion never really happened, but on another level we experience the emotion that would correspond if it actually had happened.

Therefore, although it should not be confused with presence, emotion does play an important role in activities of mental simulation that produce a presence experience. Slater (2003) has taken issue with this stance, noting that “[p]resence is separable from emotion. The first is form. The second is content” (Presence, Involvement and Emotion, ¶2). I would respond that, although emotion may be part of the content of experience and presence may be a response to the form of the experience, emotion could not be the content of the form. Just as coffee is not the content of a cup unless it has been poured inside of it, emotion is not (and could never be) poured into media form because it exists only within us and is inseparable from us! Thus because presence and emotion both take up residence within the individual, it makes little sense to refer to one as form and the other as content. As previously noted regarding conscious attention, emotion and presence are neither synonymous nor are they mutually exclusive.

Facilitating Mental Simulation

Shifting the focus from user characteristics to medium characteristics, there are some structural features of low-immersion media (such as text and comic art) that may be manipulated to ease the process of mental simulation and create a stronger mental model
that is more capable of producing telepresence. Media requiring much mental imagery and conceptual processing often use strategies to transcend the medium. The often cited quotation from Joseph Conrad: “My task which I am trying to achieve is, by the power of the written word, to make you hear, to make you feel – it is, before all, to make you see” (1974, p. xxvi) reveals the author’s intention to use language in such a way as to access the perceptual senses of the reader through the written word.

Low fidelity iconic and text-based media are, to some extent, designed to be transcended. The connotative and denotative capacity of words and symbols allow abstract codes to be processed in such a way as to draw attention to what they signify rather than their own particular characteristics as signifiers (Birkerts, 1994; Ryan, 2001). This quality is most obvious and apparent in the ability of a single word to conjure to mind a specific place. Gerrig (1993) makes this point with the word “Texas” and Glenberg (1997) does the same with the word “Amazon.” While it is, of course, possible to focus on the spelling of the word, the shape of its letters, the particular font used, etc., it is also possible to look past the formal characteristics and into the environments they are meant to invoke. It is this latter possibility that Birkerts is referring to when he writes, “reading is a conversion, a turning of codes into contents” (1994, p. 97). Ryan makes a similar point when she describes a text as realistic when it creates a “language-independent reality” (2001, p. 158). Most explicitly, however, Glenberg notes, “we understand language by creating embodied conceptualizations of situations the language is describing” (1997, p. 12). The formation of these embodied conceptualizations is at the heart of the process of mental simulation that is responsible for the experience of presence.
Flow, Trajectory, and Distillation

Beyond the fundamental representational attributes of the medium, much of mental simulation in low immersion media depends upon how words or other symbols are combined. To this point, O’Neill and Benyon (2003) remind us, with respect to the book problem, that “[t]he mistake, of course, is to think that the book is the medium. It is the words and skills of the storyteller that is the medium through which we interact with the significances that the story has for us” (p. 84).

There are three related qualities that emerge from word or symbol combination, which are important to facilitating the process of mental simulation, especially in media of low immersion. Flow, the first of these qualities, was initially explored by Csikszentmihalyi (1991) and has since been applied to presence in a number of ways (e.g. Klimmt & Vorderer, 2003; Retaux, 2003; Partanen, 2003; Takatalo, 2002). In this context, flow will refer to the level of continuity in the progression of symbols. Drawing from McCullogh (1996), O’Neill and Benyon (2003) note, “an engaging medium allows for continuity and variety, for ‘flow’ and movement between many subtle differentiations of conditions” (p. 81). Similarly, Ryan (2001) asserts that “fluidity, wholeness, and a space-time continuum” (p. 352) are prerequisites for immersion in the textual world. Flow is what allows the individual to experience the world depicted through the medium as a coherent whole rather than as a meaningless assemblage of significances.

Flow is closely related to trajectory, which might be thought of as the force or set of forces that guide the flow of events in the mediated world. Trajectory is the force that shapes the flow of events through “physical and cultural constraints” (Glenberg, 1997, p.
Ryan (2001) defines mental simulation in terms of trajectory, writing that it involves placing oneself in a concrete imaginary situation, living its evolution moment by moment, trying to anticipate possible developments, experiencing the disappearance of possibilities that comes with the passing of time but remaining steadily focused on the hatching of the future. (p. 113)

The reason flow and trajectory are important to mental simulation (and presence) is because they are important to physical experience as well. Glenberg (1997) emphasizes this point in distinguishing between a recording and the act of perception:

> Details of the physical environment, except as affecting the particular experiencer’s actions in a particular situation, are irrelevant. The same is true for understanding a situation described in a narrative. As we read, we develop an action-based understanding of the situation described by the text. (p. 42)

A fitting metaphor to further illustrate this point might be the economical design of a movie set. Backdrops may be hollow or one dimensional, props may be artificial, and the space to the left or right of the set may be cluttered with lights and equipment, but the aspects that we actually attend to are convincing for the moment that they need to be within the continuum of action.

Another way to consider how flow and trajectory work to close textual gaps is by looking at what is included versus what is excluded. Because our mental simulations are action-based and every detail need not be included to enable the simulation and a corresponding level of telepresence to take place, the question of which details are included comes to the fore. The most immersive and involving discourse structures
include only those aspects that are vital to the flow of action in the mediated world. The included details cohere with previous details but push further through the action, connecting past, present and future in a way that does not depend upon the inclusion of the minutia of details that would be present in a perfectly faithful recording of reality. Such a structure can be compared to distillation – the process by which a liquid is purified through evaporation and subsequent condensation. Adhering to this metaphor, the most essential or “pure” aspects of the mediated world are retained while the excess of details is left behind.

In their exploration of “the book problem,” Gysbers et al. (2004) discovered that, in terms of spatial telepresence, text that includes an abundance of details relating to spatial information actually yielded less telepresence experience in participants than text that included few details. The authors note that “the precise description of space forces the readers to adjust their mental representation to many details, which would hinder them from generating the illusion to be located within the described space” (Gysbers et al., 2004, p. 18). Along these same lines, Ryan concludes “[a] description that merely accumulates details lets its object run through the reader’s mind like grains of sand through the fingers, thus creating the sense of being lost in a clutter of data” (2001, p. 123). Overall, this finding supports the contention that a distilled narrative, one that makes use of details economically and on the basis of action, better facilitates mental simulation and telepresence. As will be discovered in chapter four, this is also true of cinematic narratives.
Umwelt, Schema, and Closure

What has been described thus far is only half of the equation. The construction and elaboration of the mental model through the active process of simulation cannot be performed when it is based exclusively upon cues from the medium (the bottom-up component). Media, especially non-immersive media, must rely upon the psychological warehouse of previous experience and memory in order to give shape to the objects and events suggested by the symbols in the text. This second aspect is referred to as the top-down component (see Biocca, 2003; Gysbers et al., 2004). In what follows, I propose a connection between three concepts that are relevant to the top-down component: the umwelt, the schema, and the activity of closure.

The term umwelt originated in the work of Jakob von Uexkull (1909, 1913, 1920) and is used to describe “the mass of knowledge that we carry around with us into every interaction, which has been formed and continues to form as a result of those interactions” (O’Neill & Benyon, 2003, p. 82). The umwelt is the source of our internal models that are called upon when we interact with abstract or non-immersive media. In other words, when we read the word “chair” or see an iconic image of a chair, we draw from our internal mass of knowledge (umwelt) to gain the embodied experience of a chair.

A related, though more specific, term is schema, which refers to the way experience is organized cognitively within the umwelt. Deriving an understanding of the schema from Rumelhart and Ortony (1977), Nunez and Blake (2003a) describe it as a cognitive structure that “encodes complex concepts by means of associations between simpler ideas” (p. 102). Schemata become active through this association when simpler
ideas are attended to cognitively or perceptually. In simpler terms, the activation of a particular idea (either internally or externally) serves as a trigger to all of the related concepts that compose the particular schema the idea is associated with. Just as a set of ideas compose the schema, a set of schemata might be said to compose the umwelt. For example, thinking about or handling an agricultural implement such as a pitchfork or a hoe may trigger schemata related to farming, rural environments, particular ideological values, etc.. In turn, those schemata fit into the broader knowledge-base of the umwelt which is modified based upon the outcomes of interactions between stimuli and active schemata.

Pinchbeck and Stevens (2005) indicate that presence is determined, at least to some extent, by the interaction between stimuli and the individual’s schemata. They argue that, rather than being defined as a state, presence should be seen as “an indicator of the ongoing development of relationships of significance between the user and the perceived environmental stimuli (i.e. schemata)” (p. 221). This suggestion is not unreasonable considering that schemata have a great deal to do with the ease of processing of incoming stimuli. If incoming stimuli are inconsistent with currently activated schemata, they will delay processing and interrupt mental simulation and model construction. It is perhaps this phenomenon that is responsible for what has been referred to as a “break” in presence (Slater & Steed, 2000).

Umwelt and schema are two strongly related concepts that come into play during the act of mental simulation. They serve as the cognitive “spackle” used to fill in the gaps within and between the signs and symbols of the mediated message. McCloud (1993) refers to this process of “filling in” as closure, the “phenomenon of observing the
parts but perceiving the whole” (p. 63). The original use of the term is in reference to comic art and will be discussed in greater detail in chapter four; however, in principle, it can apply to any situation in which previous knowledge and experience is used to connect or elaborate upon the signs and symbols of a mediated message. In terms of the written word, personal experiences and memories play a critical role in bringing the text to life (Gerrig, 1993; Gysbers et al., 2004; Mar et al., 2003; Oatley, 1999; Ryan, 2001).

Gysbers et al. (2004) and Oatley (1999) even suggest that the text serves primarily as a program that designates which memories to retrieve in order to complete the scenario – “Textual spatial cues do not provide direct information on the spatial attributes of the portrayed environment, but inform the readers about which (class of) spatial cognitions they should retrieve from their memory to complete their SSM [spatial situation model]” (Gysbers et al., 2004, p. 14). Thus, when we consider imagery or spatial location in non-immersive media, we are considering our own memories and experiences that have been conjured to mind based on the needs of the text. It should be noted also, though, that closure does not apply exclusively to non-immersive media. When viewing a film, for instance, we are not presented with perfect continuity from beginning to end. The flow of action is divided up by shots, sequences and scenes that we must piece together cognitively (see chapter four). In immersive virtual reality systems, there are still inconsistencies and aspects that are lean in detail. Even the physical environment is broken up to some extent by saccadic eye movement and blinking. Flow and trajectory actually help to facilitate closure by de-emphasizing the salience of the missing information.
Perhaps the best explanation of how much we rely on our preexisting mass of knowledge in order to decode texts comes from Ryan’s (1980) “principle of minimal departure” which proposes that we experience a fictional world as being the same as our own except for those changes actually stipulated by the text. This principle also bears similarity to her later concept of “recentering” in which “consciousness relocates itself to another world and, taking advantage of the indexical definition of actuality, reorganizes the entire universe of being around this virtual reality” (Ryan, 2001, p. 103). The point in common between both of these ideas is that we subconsciously and automatically fill in the unanswered questions and missing pieces of experience with our own knowledge of the world; we close gaps in both mediated and nonmediated experience with our own physical and cultural knowledge.

Although they disagree with this internal/conceptual view of presence, Waterworth and Waterworth (2003a) are correct when they observe, “Our internal worlds and their meanings are built on the foundation of what it feels like to be consciously in a concrete world, on what it means to be present” (Summary, ¶ 5). What we learn and experience in the physical world contributes to the umwelt and is applied according to the needs of the medium. This logic, however, can be extended to include not only the physical world, but other mediated worlds as well. As previously described in chapter one, the term “hypertextuality” refers to how one text (the hypertext) “transforms, modifies, elaborates or extends” another text (the hypotext), and has been used to describe the relationship between film adaptation and source material (Stam, 2000, p. 66). It is not unreasonable to suggest, based on this, that viewing a source (“hypotext”) prior to viewing the adaptation (“hypertext”) will alter the experience to the extent that
schemata have been added to the existing umwelt of knowledge regarding the text. One does not know what to expect of an adaptation to begin with if one has no experience with the source material. This relationship between source and adaptation in the mind of the reader/viewer will now be explored from the perspective of cognitive priming.

Cognitive Priming

Nunez and Blake (2006) present evidence that content knowledge, thematic inertia, and cognitive priming effect presence experiences in users of flight simulator games. Their findings suggest that specific content knowledge – “knowledge of the actual content being simulated” (p. 42) – reduces presence by establishing more specific expectations in the user which lead to greater likelihood for noticing inconsistencies in the simulation. Conversely, thematic inertia – “the tendency to engage in thematically related activities” (p. 41) – was a powerful predictor of presence, indicating that preexisting interest in content has a positive influence on presence. Finally, cognitive priming – “cognitively preparing users for a VE [virtual environment] experience by presenting them with materials thematically related to the VE’s content … prior to their experience” (Ladeira Nunez & Blake, 2005, p. 227) – was found to have almost no effect on presence. However, closer examination reveals that this likely resulted from a covariation between priming and thematic inertia which caused a drowning out of the priming effect in the initially performed multiple regression.

Aside from this, priming has an extensive history in cognitive psychology (e.g. McKoon & Radcliff, 1980; Barsalou, 1982) both in and out of mediated contexts. The preceding discussion concerning schemata is relevant to this concept because it is the individual schema (or set of schemata) that is activated through cognitive priming.
Considering the umwelt as a collection of many different schemata, it is logical to suppose that, unless a particular schema (or set of related schemata) is active prior to exposure to media content, these schemata will initially compete with each other in the processing of incoming stimuli. As Nunez and Blake (2003a) observe, “The activation of schemata will pre-allocate processing resources, facilitating the processing of related perceptions. Simultaneously, the processing of unrelated perceptions will occur with more difficulty, due to the reduction in cognitive resources available” (p. 106). This difficulty results from the fact that cognitive energy that is devoted to selecting from among schemata detracts from the seamless experience of presence that would result from an already active schema set that produced closure based on the related accumulation of cognitions gathered from previous experience with similar content.

A suitable example that describes the general effect that cognitive priming has on cognition is the rereading of a piece of literature. It is often the case that, upon the second reading of a text, the message is clearer and easier to decipher (Gerrig, 1993; Iser, 1989; Nell, 1988; Ryan, 2001). The reason for this, according to the explanation just asserted, is that the appropriate schemata have already been activated. Citing Nell (1988, p. 77), Ryan (2001) writes, “Immersion is hampered by difficult materials because ‘consciousness is a processing bottleneck, and it is the already comprehended messages…that fully engage the receiver’s conscious attention.’ The most immersive texts are therefore often the most familiar ones…” (p. 96). Nunez and Blake (2001) similarly note the detrimental effect that frustrating interfaces have on our ability to experience telepresence. They attribute this to a reduction of cognitive resources.
available to establish the “cognitive dominance” of the virtual environment over the physical one.

Within the presence literature there are at least two additional studies that examine the phenomenon of cognitive priming as a determinant of the presence experience. The first of these (Nunez & Blake, 2003a) begins with two hypotheses: (1) “If a user has active schemata which are related to the virtual environment which the user is experiencing, then the user will experience more presence” (p. 102) and (2) “If the virtual environment is rendered on a higher fidelity display system, the user will experience more presence” (p. 102). To test these assertions, the experimenters introduced participants to high and low quality versions of two environments, a medieval monastery and a hospital. In addition, before interacting with these environments, participants were primed with either relevant or irrelevant materials (printed booklets with text and pictures). For example, in “relevant” conditions, participants who were to experience the monastery were primed with printed booklets that contained content on medieval monasteries. Although no main effect was found for priming, results indicated an interaction between priming and stimulus quality, which revealed that the priming manipulation facilitated the stimulus quality effect. Thus, at the very least, priming should be considered as a mediating variable in determining the experience of presence.

A second experiment has been conducted to determine the effects of content preference on the cognitive priming manipulation. Ladeira, Nunez and Blake (2005) asked participants to interact with a virtual environment (VE) in which San people, “a nomadic hunter-gatherer group indigenous to southern Africa,” (p. 227) sit around a fire and tell a story. In one condition, participants experienced the San VE directly without
any introduction. In another condition, participants were first exposed to an introductory VE in which a rap artist in a modern “hip-hop” environment performs a rap/monolog about the San people. In the evaluative stage of the experiment, in addition to measuring the level of telepresence experienced in the San environment using the Igroup presence questionnaire (Schubert et al., 2001), participants were asked to rate their level of interest in “hip-hop” culture. Results indicated a significant difference in telepresence scores between participants who chose “hip-hop” as their favorite music genre (higher scores) and those who did not (lower scores). Thematic priming turned out to be a factor in constituting telepresence only if participants had a pre-established preference for the theme present in the priming condition. These findings seem to indicate that, if user content preference is taken into account, priming can serve as a determinant of the telepresence experience rather than just a mediating variable.

Both of these experiments operationalize the priming stimulus in terms of content, meaning that the priming manipulation shares in common the same subject as the virtual environment. Ladeira et al. (2005) make use of an additional theme in the priming manipulation, but in neither case do priming manipulations have a step-by-step structural resemblance to the virtual environment that the participants are being primed for. In other words, there is no direct structural correlation between the series of events depicted in the priming manipulation and the series of events depicted in the virtual environment. In short, priming is accomplished thematically and not structurally. Would a closer structural relationship between priming manipulation and virtual environment further establish the effect of cognitive priming on experience of telepresence?
Film adaptations of comic art present a context that is relevant to the distinction between thematic priming and structural priming. If a film adaptation based upon comic art source material is thought of as the virtual environment and the source material itself is used as a priming manipulation, the question of how previous experience of source material affects processing of an adaptation can be addressed. Various theorists of literary adaptation have come close to suggesting the existence of such a priming effect between source text and adaptation (e.g. Boyum, 1985; Burgess, 1975; Whelehan, 1999). Boyum (1985) elaborates on this idea particularly, pointing out that “adaptations excite an extreme degree of participation from those familiar with the source” (p. 53).

Furthermore, because some adaptations share only a theme in common with their source material and others have a more direct structural correspondence (see chapter six), a comparison can be made, in terms of telepresence experience, between adaptations that are primed thematically and those that are primed structurally.

One reason to believe that closer structural correspondence between priming manipulation and virtual environment might yield higher levels of telepresence comes from Glenberg’s (1997) notion of “mesh.” Posing the question of what memory is for, Glenberg asserts: “[i]t’s primary function is to mesh the embodied conceptualizations of projectable properties of the environment…with embodied experiences that provide nonprojectable properties” (p. 4). What this means, essentially, is that when we interact with an environment (mediated or nonmediated) our actions and expectations are guided by two things: (1) conceptualizations of what we experience with our senses (projectable properties) and (2) our previous experience, knowledge, and memory of the environment (nonprojectable properties).
Further emphasizing this point, Glenberg writes, “[A]n organism is better prepared to act when changes in the situation easily mesh with the conceptualization than when changes do not easily mesh (i.e. we are surprised). This notion of preparedness underlies priming phenomena” (p. 8). Considering this statement in terms of film adaptations and their comic art source material, it can be said that adaptations which mesh with their source material structurally and thematically (or, to a lesser extent, only thematically) provide a suitable environment to meet expectations and provoke a sense of telepresence. If the film adaptation is conceived of as the current environment that is providing projectable properties, and the source material provides the set of memories and expectations that make up nonprojectable properties, then it is likely that viewing a film adaptation after being primed by the comic art source material will provide an experience conducive to telepresence. Again, it is logical to assume that this would be the case in either a structural or thematic adaptation, but more so in a structural adaptation.

Nunez and Blake (2006) similarly point out that virtual environments, which effectively match a user’s expectations, provide increased experiences of telepresence. However, they also provide evidence that the more specific a user’s expectations are concerning the virtual environment, the more difficult it will be to experience a high degree of telepresence. In a survey of flight simulation hobbyists, increased specific content knowledge served as a predictor of decreased telepresence experiences in flight simulators. This result is explained as follows:

[T]he more specific content knowledge the user has, the more detailed and specific the expectation will be. Given that the simulation is giving a set degree
of fidelity, users with more specific knowledge should notice more mismatches between their expectations and the display, leading to a reduction in presence. (p. 46)

If this evidence and explanation is accurate, structural priming should result in a reduced (rather than increased) sense of telepresence because more specific expectations are provided in the priming manipulation.

Despite this evidence, though, differences do not necessarily add up to contradictions. If an adaptation is distinct from its source in ways that do not contradict expectations, but rather expand upon them through incarnation in a more immersive medium, an increased telepresence experience should be expected. To illustrate this point, consider the consonant elaborations that the film *Sin City* (Miller & Rodriguez, 2005) made upon the original series of comics. While characters, settings, and events remain the same in the film, modifications such as audible sound and dialogue, realistic movement, and the addition of music enriched but did not transgress the original text.

On the other hand, the elaboration of details provided through performing “closure” while reading the original text may contradict what is offered in the film adaptation, thus decreasing telepresence in the way described by Nunez and Blake (2006). Alternatively, however, it could be argued that the more structurally faithful and consistent an adaptation is (by precisely following the anchoring points detailed in the source), the more both viewer and film are guided by the inherent trajectory of the text. In other words, what comes between point A and point B is severely constrained by the characteristics of point A and B.
Summary/Synthesis

I began this chapter by defining the book problem as a debate that centers upon the question of whether less immersive media are capable of providing a telepresence experience. From there, two major theoretical approaches to presence were discussed. The external/perceptual view, adopting a Gibsonian perspective, considers the potential for presence to occur only in situations where our sensory organs are responding directly to an external stimulus (as in a real or virtual environment). Due to the fact that this perspective dismisses the role of conceptualization in producing presence experiences, it is rejected in favor of an internal/conceptual view of presence.

Proponents of the internal/conceptual view of presence understand it as a response to a mental model of an environment that takes shape in the mind of the individual based upon a combination of cues that originate both externally and internally. This mental model is then attributed to the surrounding world.

The central function responsible for the construction of the mental model is the act of mental simulation, which is facilitated in part by information presented through the medium that is organized in such a way as to produce a stable and cohesive environment via the effective manipulation of flow, trajectory, and distillation. Complementing the external cues generated by the medium, the individual’s personal knowledge and experience (umwelt) plays a vital role in completing the mediated world that the individual feels present within. Toward this end, various schemata become activated and bring to consciousness certain expectations that serve as cognitive filler used to bridge the gaps within and between the mediated patterns of information. Because relevant schemata may be activated prior to the individual’s experience of the mediated world, a
cognitive priming effect is possible in circumstances where previous exposure to content has occurred. This informs an interesting insight into the second research question (How is the film viewer’s experience of telepresence influenced by prior experience with the comic art source material?). Previous research on cognitive priming (Nunez & Blake, 2003a; Ladiera, Nunez & Blake, 2005) has initiated the priming effect using content and theme; however, there has been no inquiry or comparison concerning the structural correspondence that the priming materials have with the mediated environment. A distinction is made between thematic and structural priming, and it is suggested, based upon Glenberg’s (1997) concept of mesh, that priming materials that bear a structural resemblance to the mediated environment will illicit a stronger sense of telepresence than priming materials that are related thematically. Therefore, if the film adaptation is understood as the mediated environment and the comic art source material acts as the prime, an adaptation which is structurally closer to the source should produce more telepresence in the viewer.

In the next chapter, the telepresence-evoking capacity of comic art and film are compared in terms of their structural and perceptual features.
CHAPTER FOUR
TELEPRESENCE IN COMIC ART AND FILM

Having expounded upon the general role that cognition plays in the presence experience, it is now appropriate to direct attention more specifically to how these principles of cognition function in the media that are of specific concern to this project: comic art and film.

The Language of Comic Art

In this section the relationship between words and images, their combination and their synthesis will be discussed insofar as they constitute the language of comics.

Eisner (1985) explains the emergence of the language of comics through repetition: “In its most economical state, comics employ a series of repetitive images and recognizable symbols. When these are used again and again to convey similar ideas, they become a language” (p. 8). What is unique about the language of comics, however, is that it brings together two seemingly disparate forms of communication: the written word and the iconic image.

Eisner further points out that words and images “are derivatives of a single origin” (p. 13) and McCloud (1993) explains their relationship within the context of a triangular continuum which locates realistic representations in the lower left corner, written language in the lower right corner and abstraction at the top. With the help of this model, I turn to the question of where comic art is located on this continuum since it makes use of both realistic representation and written language.

In considering the puzzle of how images and words combine to affect meaning, Barthes (1977) develops the terms anchorage and relay. Anchorage refers to a denotative
relationship between word and image where the text serves to describe or explain the image. He further observes that anchorage is frequently found in press photographs and advertisements. In opposition to anchorage is relay:

The function of relay is less common (at least as far as the fixed image is concerned); it can be seen particularly in cartoons and comic strips. Here text (most often a snatch of dialogue) and image stand in a complementary relationship; the words, in the same way as the images, are fragments of a more general syntagm and the unity of the message is realized at a higher level, that of the story, the anecdote, the diegesis (which is ample confirmation that the diegesis must be treated as an autonomous system). (Barthes, 1977, p. 41)

In explaining how relay functions, Barthes makes the preliminary case for comics as its own language. This seems to come about as a result of the union between written words and images as separate means of communication. The resultant intermingling between word and image makes it difficult to consider either outside the context of this “complementary relationship” (Barthes, 1977, p. 41).

Along the same lines as Barthes’ assertion, Eisner (1985) compares comics to “the act of weaving a fabric” (p. 122). If a comic text were a fabric being weaved, certainly the threads would consist of words and images.

In an in-depth analytic examination of word/image combinations in comics, McCloud (1993) locates seven specific styles of union. McCloud’s word specific, picture specific and duo-specific styles function much in the same way as Barthes’ notion of anchorage in the sense that words and images, although combined, still function as discreet systems. McCloud’s additive, parallel, montage and interdependent styles, on
the other hand, are more exemplary of what Barthes would call relay. The reason for this is that these styles form meaning out of word/image interplay. In other words, if either words or image were removed from the panel, meaning would be changed or lost. In the
case of the montage style, word and image are combined so thoroughly (because each form takes on the characteristics of the other) that they, in fact, could not be separated from one another systematically.

In a descriptive content analysis, Duncan (2002) found that the method of production used in creating a comic story was related to which one of McCloud’s styles was used. In fragmented writing (writing which employs a separate artist and author), word specific panels were used more frequently than in unified writing (writing which is done by a single artist/author). This seems to suggest that unified writing would go further toward establishing comics as a unique language because it does not treat the process of drawing and writing as two separate forms, but as a single form consisting of two symbol systems.

Taking this into consideration, it would seem that the language of comics is most effective when it is located somewhere in the center of McCloud’s triangular continuum where image, word, and the union of both in the form of abstract representation serve to create meaning within the constantly evolving lexicon of comics.

It should not be forgotten that comics are read and that reading of any sort requires some degree of consistency within a symbol system. The medium of comics becomes more involving and effective the less that the reader is aware of the word image distinction. When comics function successfully, the reader is not looking at images and reading words or vice versa, he or she is experiencing the story. The idea that words and
images should become one has been stated repeatedly throughout the scholarship and criticism of comics (Carrier, 2000; Harvey, 1996; Eisner, 1996). Carrier (2000) epitomizes this by writing that what “the ideal comic should provide is precisely such a contact between image and word, to the point that the two form an ideal unity” (p. 67).

Taking things a step further, Magnussen (2000), dissatisfied with the inadequacy of a simple division between iconic and symbolic signs to describe comics, suggests that the semiotic framework of Pierce be employed to understand the role of context within the signification process of comics. Magnussen explains:

When the Peircean sign is used in the study of communication, the existence of the interpretant as an integral part of the sign means that a sign is to be considered always in the context of an act of communication. (p. 195)

In considering this, we are asked not only to recognize the iconic and symbolic signs interacting within the frame, but also the interaction between the larger signs of the frame, the page, and the entire work within the context of “social reality” (Magnussen, 2000, p. 195).

Now that the construction of the language of comics has been elaborated upon, some discussion of transmission is in order. McCloud (1993) states that the transmission of meaning in comics “follows a path from mind to hand to paper to eye to mind” (p. 195). In this way, comics function very much like a code. Reflecting this relationship between comics and codification, Carrier (2000) observes the following about reading comics:

We seek consistency, aiming to interpret all the elements in the visual field in some way that makes sense of them; and we are remarkably adaptable, willing to
overlook minor inconsistencies so long as the words in the balloon can be attached to the image and the sequence of images constitutes a meaningful narrative. (p.5)

Spiegelman (1997) writes: “The essential magic of comics is that a few simple words and marks can conjure up an entire world for a reader to enter and believe in” (p. 9). This is an important observation about how the language of comics is received by the reader. If Barthes’ notion of anchorage is denotative in the sense that words serve to anchor or define an image, then the most effective comics are almost certainly connotative in the sense that words and images work together to evoke signifieds within the reader. The question remains, though, as to how this connotative code of comics is capable of provoking a sense of telepresence in the reader.

Telepresence in Comics: The Code Comes Alive

One of the unique aspects of the comic text is the capacity it has for reality approximation. As previously mentioned, Lombard and Ditton (1997) define telepresence as the “illusion of nonmediation” (Presence Explicated, ¶ 1). One of several ways this illusion can occur is through realism or the “the degree to which a medium can produce seemingly accurate representations of objects, events, and people” (Lombard & Ditton, 1997, Presence as Realism, ¶ 1).

Eisner (1985) asserts, “comics are a representational art form devoted to the emulation of real experience” (p. 91). Delving deeper into the specifics of how reality is constituted in the comic text, Lefèvre (1999) writes: “Paraphrasing Grodal, we can argue that comics readers use exactly the same constructive procedures in reading a comic as in constructing reality out of real-life perceptions” (p. 142). This comment is especially
interesting when considered in light of Gibson’s (1979) theory of visual perception.

Gibson states, “The information in a line drawing is evidently carried by the connections of the lines, not by lines as such” (p. 288). For Gibson, visual perception occurs through our ability to extract meaningful information about the unchanging aspects of our environment from within the flux of perception. If those unchanging aspects, or invariants, are depicted on a surface, it makes sense that we should be able to recognize them as reality approximations. Although Gibson would stop short of suggesting that such a representation might be mistaken for reality (as in the telepresence experience), this is still an important initial observation.

In light of this, is it possible, through reality approximation, for comics to achieve the “illusion of nonmediation” known as telepresence? An investigation into comic art’s vocabulary of visual iconography should provide some understanding of its potential to approximate reality.

Spiegelman (1997) asserts, “Cartoons have a way of crawling past our critical radar and getting right into the id. It may be that their reductive diagrammatic qualities echo the way the brain sorts information” (p. 5). Eisner (1985) also notes “The cartoon is the result of exaggeration and simplification” (p. 151). Similarly, McCloud (1993) refers to the cartoon as “a form of amplification through simplification” (p. 30).

Perhaps the most useful definition of a cartoon, though, comes from Carrier (2000), who states that “Representation making itself is emotionally neutral; caricature is essentially aggressive in its distortions” (p. 6). Based on such distortions, McCloud (1993) believes comics to be capable of evoking “emotional or sensual” (p. 121) reactions from the reader. Eisner (1996) also explains the reader’s response to the
caricature as one that relies on empathy. Taken together, this would seem to indicate that readers respond emotionally to the images of comics and that this may have an influence on how real the depictions seem.

Eisner (1985) suggests that we respond to comics based on anatomy, specifically posture and gesture. He explains that “The human body, and the stylization of its shape, and the codifying of its emotionally produced gestures and expressive postures are accumulated and stored in the memory, forming a non-verbal vocabulary of gesture” (p. 100). In applying this to the situation of comics, he writes, “when a skillfully limned image is presented it can trigger a recall that evokes recognition and the collateral effects on the emotion” (p. 100).

The special role of emotion in the constitution of reality in the comic text calls into question how we define reality. As previously mentioned, Lombard and Ditton (1997) refer to realism as “the degree to which a medium can produce seemingly accurate representations of objects, events, and people” (Presence as Realism, ¶ 1). But can reality, on some level, be formed out of emotional engagement and still factor into the creation of a sense of telepresence through realism? Reality in terms of telepresence may not be constituted solely through faithful and accurate representation. The experience of emotions does play some role in our perception of what is real and what is present. As argued in chapter two, although an emotional stimulus may be fictional, the emotions experienced by the individual are genuine.

*Disguising Conventions*

The use of conventions in any medium may serve as a barrier to the experience of telepresence because they take on forms that have no grounding in real life experience.
In comics, when considering the potential barriers that exist to the capacity to foster a sense of reality and telepresence, two familiar conventions come to mind: the word balloon and the panel. In reality, when people speak, balloons do not appear above their heads. Neither are the events of life framed in small boxes that are nested in a sequence on a page. How do comics overcome these seemingly difficult obstacles to enable the reader to engage in a realistic and provocative experience? It appears that comics employ a variety of tactics intended to disguise or naturalize these apparently unrealistic conventions in order to maximize the experience of telepresence through realism.

Eisner (1985) believes “The word balloon is a desperation device. It attempts to capture and make visible an ethereal element: sound” (p. 26). But in addition to attempting to make comics audible, the word balloon also lends a quality to comics that no other form of still imagery has – time. Again, Eisner notes that “A comic becomes ‘real’ when time and timing is factored into the creation” (p. 26). The words in word balloons take time to read and are often structured in a fashion that mimics conversational give and take. This gradual elapsing of time that occurs as the reader’s eyes sweep the word balloons serves as a point of reference for the time that would naturally be elapsing during the events of the story (McCloud, 1993). Time spent reading the word balloon is like a thread uniting all elements of the comic text into realistic intervals. This is what makes the medium of comics (like film) unfold in the present tense.

In addition to providing time, both the letters within the word balloon and the shape of the word balloon itself become less obtrusive when they are used in the service of the narrative. The idea of achieving realism through emotion comes into play here as well. If the comic artist draws letters aggressively to represent anger, meekly to represent
whispers or crookedly to represent madness, then the narrative may play off the emotions that these styles connote in order to allow the comic to have a realistic effect. The same is true concerning the execution of balloon outlines. Once again, Eisner (1985) provides helpful insight on this point: “As balloons became more extensively employed their outlines were made to serve as more than simple enclosures for speech. Soon they were given the task of adding meaning and conveying the character of sound to the narrative” (p. 27).

As with balloons, the convention of panels must be used strategically if they are to convey a sense of realism. McCloud (1993) observes that “The panel acts as a sort of general indicator that time or space is being divided” (p. 99). Similarly, Eisner (1985) notes that paneling “establishes the position of the reader in relation to the scene and indicates the duration of the event” (p. 28). Eisner’s more elaborate and encompassing definition of the function of panels in comics opens the door to the consideration of a variety of avenues that are frequently taken in order to disguise their use as a convention of the medium. I will explore four of these avenues.

First of all, as previously described concerning balloons, panels have the quality of representing time, which permits for the experience of the events of the story in the present tense. By observing the static excerpts that are selected from the continuum of the action depicted in the comic, the reader is able to infer the passage of time. Since, in western culture, we perceive the transmission of time as the passing of discreet seconds, minutes, hours, etc., it is not such a far stretch to comprehend time as boxed up and sequenced.
Second, the outlines of panels “can be used as part of the non-verbal ‘language’ of sequential art” (Eisner, 1985, p. 44). Similar to the discussion concerning balloons outlines, the emotions implied in the graphic stylization of the panel outline can have an effect on the emotional realism experienced by the reader. For instance, the use of wavy panel borders may be used to simulate the emotional experience of dreaming. In a more specific example, jagged, diagonal panel borders that appear like fractured glass were used in the *American Splendor* story “American Splendor Assaults the Media” (Pekar & Crumb, 1983) in order to generate the emotion of anger.

Third, Eisner (1985) points out “The use of the panel border as a structural element, when so employed, serves to involve the reader and encompass far more than a simple container-panel” (p. 49). Perhaps the reason that the reader achieves a heightened level of involvement here is because the convention of the panel is naturalized to the point of invisibility. If the outline of the panel is also a doorframe or a window or a tunnel, it exists to a far lesser extent as an unnatural panel that interrupts the realism and telepresence experienced by the reader.

Fourth, when the panel borders are violated by the contents that they hold, the conventional aspect of the panel is undermined. That is, when the panel “invites the reader into the action or allows the action to explode toward the reader” (Eisner, 1985, p.46), it is exposed for the false construct that it is while the “real thing” confronts the reader. A similar strategy is sometimes employed in certain films when the mechanisms of production (lights, cameras, grip equipment, etc.) are made visible to the spectator for the purpose of giving the impression of access to the story on a deeper level (Ames, 1997).
Witek (1989) makes the point that “Comic books, however, have become ever more technically sophisticated: panel shapes and sizes are usually limited only by the artist’s imagination” (p. 8). In light of what has preceded, it may be suggested that comics are in a perpetual state of stylistic evolution aimed toward the goal of disguising convention for the purposes of heightening the realism and sense of telepresence for the reader. Naturally, in a medium so diverse, one cannot say that this is a universal pursuit. Art Spiegelman and Francoise Mouly’s *Raw* (1980-1991), for example, features many avant-garde comics by artists that deliberately flout formal conventions and call attention to the nature of the medium. However, other examples employ the previously described techniques for maximum effect. One widely popular title, *Batman: The Dark Knight Returns* (Miller, 2002/1986), disguises the conventions of comic art by calling direct attention to the conventions of television through panels shaped like television screens and reporters and anchors addressing the reader directly.

*Joining Panels and Experiencing the Comic Text*

Having described some primary ways in which the convention of panels function on their own to foster realism and telepresence through time, emotional tone and disguising convention, I turn to the question of how panels are brought together to form a coherent narrative space sufficiently convincing to be capable of provoking telepresence. McLuhan’s (1964/1996) concept of hot versus cool media will be discussed in conjunction with the previously described concept of “closure” (McCloud, 1993).

McLuhan writes that: “Hot media are, therefore, low in participation, and cool media are high in participation or completion by the audience” (p. 23). Comic art, because of its “low definition” (McLuhan, 1996, p. 22), would certainly be considered a
cool medium. What does this mean though, and how can something that is low in
definition, or incomplete, possibly hope to foster a sense of telepresence in the reader?
For comics, the answers to both of these questions are found in the understanding of the
concept known as closure (McCloud, 1993, p. 63).

McCloud (1993) defines closure as “the phenomenon of observing the parts but
perceiving the whole” (p. 63), but how does the reader go about closing the gap between
separate frames that contain related actions? Carrier (2000) theorizes “we understand
many caricatures by forming some hypothesis about the previous or the next scene of the
action” (p. 14). The basis for this assertion is that our own personal experience and the
cognitive schemata associated with that experience are what form the hypotheses we
make.

From the perspective of the comic artist, Eisner (1985) explains, “The task then is
to arrange the sequence of events (or pictures) so as to bridge the gaps in action. Given
these, the reader may fill in the intervening events from experience” (p. 38). Thus, as
suggested in the previous chapter, if we each have a cumulative umwelt of experience
stored within us, it is the individual sets of schemata that compose it which are
summoned to mind and used during the process of deciphering the comic text.

The notion of closure goes beyond a simple use of experience regarding one
empirical sense though. Referring to vision, McCloud (1993) asserts “we make that
process work by bringing the full power of our own experiences to bear on the world our
eyes report” (p. 136). Comprehending the reading process of the comic text from this
perspective, we recognize the individual frames of the comic sequence as mere
suggestions or connotative prods which encourage the reader to construct the narrative
internally using the pallet of experience that has been collected over a lifetime of seeing, hearing, touching, smelling and feeling. McCloud (1993) summarizes as follows: “Within these panels, we can only convey information visually. But between panels, none of our senses are required at all. Which is why all of our senses are engaged” (p. 89).

In sum, it is posited that the formation of closure between panels of the comic text, through the use of recalled experience, can produce an acute sense of realism. If our experience is comprised of the recollection of empirical/sensual events and it is these that are applied to or inserted within the text, then, logically, our experience of the comic text cannot help but achieve some measure of realism. This position is buttressed considerably by relatively recent developments in cognitive science. Barsalou (1999) has theorized about “perceptual symbols” which are schematic representations of prior sensory experience that are stored in memory and recalled based upon immediate perceptual and/or cognitive tasks.

*Comics as an Immersive Experience*

Among the most commonly cited determinants of the telepresence experience is immersion. For example, Slater (2003) defines telepresence specifically in terms of immersion – “Presence is a human reaction to immersion” (Immersion and Presence, ¶ 2). The term immersion, however, can be applied to both a perceptual and psychological response (Lombard & Ditton, 1997). Heeter (1992) deals with this concept in terms of the subjective experience of virtual worlds. Of this phenomenon, Heeter writes: “A sense of presence in a virtual world derives from feeling like you exist within but as a separate entity from a virtual world that also exists” (Heeter, 1992, p. 262). Along these same
lines, McCloud (2000), in theorizing about the union between comics and computer technology, writes that “The goal of making comics ‘come alive’ seems closer in such works where the sound, motion and images create an immersive experience” (p. 210).

Even without the influence of digital technology, however, it is possible to make the argument that reading the comic text is akin to an immersive experience. This is the result of two related behaviors that the reader must engage in to read a comic: (1) gazing with intention, and (2) turning pages with intention.

It has been noted more than once throughout comic scholarship that comics are experienced at multiple levels (Eisner, 1985; Magnussen, 2000; McCloud, 2000). By this it is meant that individual caricatures and balloons have meaning in relation to panels that, in turn, have meaning in relation to pages and beyond. However, unlike film or television, the comic text has no way of asserting control over the gaze of the reader (Eisner, 1996, 1985). With the freedom to optically roam and investigate the page, the reader experiences a consciousness that he or she is choosing which aspects of the page to look at in addition to choosing the order in which to look at those aspects (Jones, 2005). There is, of course, an order intended by the comic artist, but (as previously stated) there is no way to enforce that order.

Through the awareness of the freedom that the reader realizes he or she has over gazing, the reader is given an existence that is immersed in the virtual world of the comic text. As the reader makes the choices of what to look at, the reader is aware that it is the self that is making those choices, thus, to this extent, the reader is afforded the awareness of self being immersed in the comic text.
Miller (2002) likens this awareness of freedom over the gaze to a “strip tease.”

Drawing from Barthes (1975), he notes that:

The pleasure derived from narrative suspense, like the gradual unveiling of a striptease, is one of expectation driven by epistemophilia (the obsessive desire to know). Just as striptease holds out the promise of fulfilling ‘the schoolboy’s dream’ of seeing the sexual organ, reading habits that privilege the hermeneutic code anticipate the revelations at the end of the story. (p. 145)

What Miller is saying here is that the pleasure in reading the comic page is found in the delay of textual gratification. This is especially the case concerning comics (as opposed to books) because comics contain pictures that are immediately comprehensible and apparent long before the reader arrives at a particular point on the page. Thus the reader sees what will eventually happen but does not glance too long, instead choosing to return to the proper progression in the narrative, all the while savoring what is known to lie ahead. Of course, the metaphorical ‘striptease’ of reading comics is completely controlled by the eyes of the reader.

Strongly related to the intentionality of the gaze is the intentionality of turning the page. In the Sesame Street children’s comic titled The Monster at the End of this Book (1971), the Grover character informs the reader that there is a monster at the end of the book and that the pages should not be turned lest the monster be revealed. As each successive page is turned, Grover devises increasingly drastic methods to ensure that the reader will not turn any more pages (Stone & Smollin, 1971). The fact that the reader continues to turn pages despite Grover’s warnings and contraptions is evidence of the reader’s power over and immersion within the narrative. In addition to this single
example, there exist a whole genre of children’s picture books that actively engage the reader’s kinesthetic agency through a combination of sight, touch, and even smell. Examples include the following: *Pat the Bunny* (Kunhardt, 1981) in which the reader is able to stroke a rabbit, smell flowers, and even try on a wedding ring punched out of cardboard. *Touch and Feel Farm* (1998) in which the reader is able to feel the textures of various animals. Even *Pirates* (Matthews, 2006), a more sophisticated example intended for young adults, makes use of maps, booklets, pamphlets, and other materials that are folded, stapled, or otherwise inserted into the main page so that the reader must remove these items by hand in order to make use of them. A variety of other examples exist on topics ranging from fairies and dragons to Vikings and wizards.

Far beyond these examples of children’s books, however, turning the page is a physical realization of the reader’s own active and kinesthetic agency as it is subsumed and immersed by the comic text. As the reader turns the page, the hand is seen entering the field of view and intermingling with the icons on the page. The result of this is that the reader potentially perceives the physical self as existing “within but as a separate entity” (Heeter, 1992, p. 262) from the page and the narrative world it presents.

**Telepresence as Transportation in Comics**

In addition to realism and immersion as concepts that determine telepresence within the comic text, there is also the concept of transportation. Transportation in comics likely occurs much in the same way that Gerrig (1993) describes it in regard to literature. Specifically, there are three types of transportation defined by Lombard and Dittion (1997): “you are there” (¶ 2), “it is here” (¶ 4), and “we are together” (¶ 6) (Presence as Transportation). Telepresence as transportation in terms of “you are there”
exists to the extent that “the user is transported to another place” (Presence as Transportation). Due to the fact that the comic text presents the reader with another place (the locale of the story), the type of transported telepresence that is of interest to comics is of the “you are there” variety.

Before examining the reader’s transportation into the comic text, I should first observe that it is the comic artist who makes the initial journey into the comic text. For example, Scott McCloud in *Understanding Comics* (1993) draws himself into the pages of his book as a lecturer speaking in direct address to the reader. Perhaps an even more drastic example is Peter Kuper’s graphic novel *Comicstrips* (1992), which details his personal travels through Africa and Southeast Asia via his own comic art.

There are a number of other comic artists who transport themselves into their own stories including Robert Crumb, Art Spiegelman, Harvey Pekar, Milo Manara, Frank Thorne, Ted Rall, Giovanna Casotto, and Paolo Serpieri. Harvey (1996) writes of comic artist Robert Crumb that he “has appeared as a character in his own work ever since the first issue of Zap” (Harvey, 1996, p. 220). Harvey (1996) also reports Frank Thorne’s comment that:

In Ghita’s adventures, I have crafted Thenef the wizard in my own image. I have allowed my hair and beard to grow to flowing lengths as a device to make it easier to imagine myself as Ghita’s comrade-in-arms and ginmead-guzzling cohort.

Thus I gain entry into her world. (p. 234)

But how is it that the reader is capable of bridging the gap to obtain a sense of transported telepresence within the text? Perhaps the answer lies in the fundamental building block of all comics – the cartoon.
McLuhan (1996/1964) refers specifically to cartoons in describing cool media. He writes that “A cartoon is ‘low definition’ simply because very little visual information is provided” (p. 22). Being a cool medium, the cartoon requires input from the reader to become complete (McCloud, 1993; McLuhan, 1964/1996). McCloud (1993) observes, “The cartoon is a vacuum into which our identity and awareness are pulled…an empty shell that we inhabit which enables us to travel to another realm. We don’t just observe the cartoon, we become it” (p. 36). Looking at things in this way, if the comic text is the destination that the reader is transported to, it is the cartoon that is the vehicle that will take him or her there.

Two Kinds of Experience

Carrier (2000) writes:

[S]ince we the audience project into a comic our fantasies, fears, and hopes, analysis needs to explain what attracts us to a successful comic – its image of our shared desires, presented in ways we can adapt for our individual purposes. (p. 83)

Similarly, Eisner (1985) asserts, “the recognition by the reader of real-life people portrayed in the art and the addition of ‘in-between’ action are supplied by the reader out of his own experiences” (p. 140). These two observations, taken together, imply that readers not only transport themselves into the text, but their experiences of other people as well. For readers, the cartoon caricatures of the comic text become signifiers for people they know from their own day-to-day reality. Next-door neighbors, coworkers and acquaintances all become the material with which the reader constitutes a transported
sense of telepresence. This occurs through the reader’s depositing of their interpersonal experiences into the receptacles of caricature located in the comic text.

Some comic artists have crafted their product specifically to be compatible with reader experiences. Vergueiro (2001) observes the work of Carlos Zefiro in the following way: “Zefiro’s protagonist was not a superman, nor a person with a particular advantage in terms of physical attributes; instead, he was a rather ordinary man experiencing extraordinary circumstances” (p. 74). Vergueiro follows up by suggesting that this “was the kind of situation any Zefiro reader could presumably find himself in” (p. 74).

Beyond direct experience, the experience of other forms of media play a role in what we take with us into the comic text. Eisner (1996) observes, “While readers may adjust their expectations to the discipline and conventions of comics, there is a reflexive referral to other media just as there is to a memory of a real experience” (p. 70). Similarly Duncan (2002) notes “Intertextuality can extend this interanimation of meaning beyond a particular story” (p. 140).

Intertextuality can be used to provide a more complete conception of a character within the comic text and, especially, within a film adaptation of that text. This is accomplished by drawing from previous mediated encounters with a particular character and applying that composite understanding to the current incarnation. In this sense, intertextuality serves the same function as Elliot’s (2003) previously discussed de(re)composing concept of adaptation in which “novel and film decompose, merge, and form a new composition at ‘underground’ levels of reading” (p. 157). Through this synthesis of intermediated representations, the reader/viewer is better able to bridge gaps
in the text through the function of closure and experience a more complete sense of transportation into the world of the narrative.

Telepresence in Film

In contrast to comic art, film has a relatively established history of association with telepresence phenomena. As early as the late fifties and early sixties, the well-known theorist Andre Bazin specifically addressed “The Concept of Presence” with respect to film, noting that

Presence, naturally, is defined in terms of time and space. ‘To be in the presence of someone’ is to recognize him as existing contemporaneously with us and to note that he comes within the actual range of our senses – in the case of cinema of our sight and in radio of our hearing. (1967, p. 96)

Beyond a vague description, however, later theorists referred to the experience of telepresence through film as the “diegetic effect.” Burch (1979) defines this as the experience of the world of the story as the immediate environment. Further, though, he delves into the techniques and practices responsible for achieving such an effect. In particular, Burch calls attention to the importance of three techniques: (1) “invisible” editing, wherein discontinuities between shots are disguised through transitions which maintain the spatial and temporal consistency of the environment depicted on film, (2) composition, lighting, and depth of field used to emphasize a three-dimensional appearance, and (3) the development of synchronization between dialog on the soundtrack and the lip movements of actors. Such stylistic and technical innovation indicated to Burch that cinematic conventions were developed to actively attempt to incite the diegetic effect (i.e. telepresence).
Also seizing on this notion of diegetic effect, Tan (1996) explicitly connects the phenomenon to telepresence, observing “the feature film creates the illusion of being present in the fictional world” (p. 52, my emphasis). He attributes this in part to the more general effect that perspective has on the medium of photography: “The awareness of the picture as a two-dimensional object, or even as an artifact, may recede to the background to a considerable degree, in favor of the illusion of looking into the virtual space” (p. 52). This, of course, is much in line with Burch’s previous observations regarding the importance of composition, lighting, and depth of field.

Outside of film theory and within the realm of presence theory proper, the capacity of cinema to provoke a sense of telepresence has also been addressed. Neuendorf (2004) for example has referred to film as “the original immersive medium.” In this same vein, Ijsselsteijn (2004) has pointed out that film, along with earlier technologies that made use of similar principles, has throughout its history been innovated toward the end of attempting to foster telepresence experiences. Marsh (2004) even suggests looking at aspects of cinema as a way of informing interactive virtual environments regarding how to maintain the telepresence experience of the user – a phenomenon he terms “staying there” (playing off the common description of presence as “being there”).

In order to probe more deeply into the cognitive and perceptual mechanisms responsible for our experience of telepresence in film, it is necessary to turn to a body of literature in the domain of film theory which seeks to explain, based on the theoretical principles of cognitive science, what makes the medium of film so compelling and engaging. This body of literature, referred to as “cognitive film theory,” distinguishes
itself from the psychoanalytic and Marxist trends of the 1960s and 1970s by using concepts from classical film theory (developed by theorists such as Bazin (1967/1958-1965), Eisenstein (1942), Kracauer (1960), Munsterberg (1970/1916), Pudovkin (1968/1929), and others) and cognitive science (primarily, but not exclusively, as it derives from the constructivist ideas of Helmholtz).

The emergence and basic premises of the cognitive approach are attributable to three theorists, David Bordwell (1985), Noel Carroll (1988), and Joseph Anderson (1996). And, although they share much in common in terms of their approach (especially insofar as it diverges from psychoanalysis), there are subtle distinctions among them that return us to the external/perceptual versus internal/conceptual split among presence perspectives that was discussed in chapter two.

In his book, *The Reality of Illusion: An Ecological Approach to Cognitive Film Theory*, Anderson (1996) attempts to merge the ecological perspective of Gibson (1979) with the existing work connecting cognitive psychology to film spectatorship in order to explain why movies “seem so real” (p. 1).

He begins from the premise that the human perceptual system, through the process of natural selection, evolved to respond to the physical environment in such a way that action and behavior would be based upon information obtained through the senses that corresponded as closely as possible to the external, physical reality of the environment. “Veridical” perception of the natural environment, argues Anderson, was necessary for human survival. As a consequence, however, our perception of mediated environments (such as those depicted on film) resembles reality only to the extent that the cues we have evolved to respond to in the natural environment are able to be reproduced.
A key aspect of human perception that enables this to occur in the context of film spectatorship is the existence of illusion. Visual illusion, according to Anderson, occurs “when the visual system, following its own internal instructions, arrives at a precept that is in error if compared to physical reality” (p. 15). And, indeed, every aspect of film spectatorship is premised on the existence of illusions. From the “persistence of vision” that allows us to perceive a motion picture (as opposed to a rapid-fire progression of stills) to the depth of field and appearance of physical space that is granted by the inscription of light onto emulsion by the lens of the camera, film is the stimulus for perceptual illusion.

Anderson, however, goes further than these basic prerequisite illusions and explains, from the perspective of ecological perception, why perceivers are able to assimilate a motion picture despite its seemingly fragmented progression of shots and scenes.

At first glance, the world depicted in the onscreen image differs radically from our concept of physical reality. This seems the case primarily because our understanding of physical reality is that of a consistent, seamless whole. Of course, our understanding of reality and our perception of reality are two different things. We visually perceive physical reality through our eyes that are constantly twitching, frequently blinking and situated on our head in such a way that we can only see a slice of the surrounding environment. The physical environment seems stable, not because we perceive it that way, but because we have learned to understand that just because things fall out of the range of our senses temporarily does not mean they no longer exist. As Anderson asserts, “The ‘rule’ of continuity of existence inherent in our visual system holds that objects that
exist continue to exist until they are seen going out of existence” (p. 97). Naturally, this principle is in effect when we view a motion picture. The camera’s lens, acting as a surrogate eye, perceives aspects of the environment that we assimilate as if they were first-hand.

Bordwell (1985) and Carroll (1988) describe a slightly different, though certainly not incompatible, perspective on how viewers make sense of and become engaged with motion pictures. In fact, much in line with the emphasis that Anderson places on illusion, Bordwell notes that “[a]s a medium of illusion, cinema counts on our making ‘wrong’ inferences” (p. 32) – an observation that is very much in step with the popular Lombard and Ditton (1997) definition of telepresence as the “illusion of nonmediation” (Presence Explicated, ¶ 1). However, a distinction surfaces when the processes responsible for the act of perception are considered. While Anderson asserts, from the ecological perspective, that perception is direct and in need of neither cognitive mediation nor interpretation, Bordwell takes up a much more internal/conceptual view, writing “Sensory stimuli alone cannot determine a percept, since they are incomplete and ambiguous. The organism constructs a perceptual judgment on the basis of nonconscious inferences” (p. 31). Further articulating this constructivist stance, he also explains the “top down” and “bottom up” features of information processing described previously in conjunction with the internal/conceptual view of presence (see chapter two).

Another distinction exists, this time between Anderson and Carroll, in terms of the reason that sequences of shots are comprehensible despite the apparently disjointed nature of their presentation. As described above, Anderson explains this in terms of the resemblance that a film’s appearance bears to the natural act of perception combined with
our internalized assumption that, regardless of the choppy rendering of the environment bestowed by our eyes, we are surrounded by a stable world. In subtle contrast, Carroll views the variability of perspective from shot to shot as fostering an extreme sense of clarity that goes far beyond what would be possible in physical reality. He notes at length:

"The arresting thing about movies, \textit{contra} various realist theories, is not that they create the illusion or impression of reality, but that they reorganize and construct, through variable framing, actions and events with an economy, legibility, and coherence that are not only automatically available, but which surpass, in terms of their immediately perceptible basic structure, naturally encountered actions and events. Movie actions evince a visible order to a degree not found in everyday experience. This quality of extraordinary, uncluttered clarity gratifies the mind’s quest for order, thereby intensifying our engagement with the screen." (p. 205)

This is achieved, according to Carroll, through the use of variable framing techniques, including “indexing” (where our perspective moves forward through space, either as a result of the camera physically “trucking” forward or a zoom lens), “bracketing” (where particular objects are either included or excluded from the shot based on their salience to the action), and “scaling” (where particular aspects of the mise-en-scene are given prominence due to their dominant positioning within the shot). Through the use of these techniques, the viewers’ attention is always focused precisely where it needs to be in order to experience maximum comprehension of, and engagement with, the action (Carroll, 1988; Tan, 1996). The phenomenon that Carroll is describing here is strikingly similar to the concepts of flow, trajectory, and distillation mentioned in chapter three, and
also highly comparable to the presentation of comic art. By moving our perspective from point to point through space and time based upon what is most important to focus on, the film distills the action into its most critical features much the same way that comics progress from panel to panel, forever zeroing in on the next important action in the ongoing sequence.

Of course, the information presented through the assemblage of shots and soundtracks in the motion picture is not, alone, enough for comprehension and engagement to take place in the viewer. A central component of the more strictly cognitive stance is the role played by schemata in assisting comprehension. According to Bordwell, the juxtapositions created by the assemblage of shots that compose the film are comprehended through the application of various types of schemata. He articulates specifically that “[t]he film presents cues, patterns, and gaps that shape the viewer’s application of schemata and the testing of hypotheses” (p. 33). In particular, Bordwell discusses narrative, prototype, template, procedural, and stylistic types of schemata and explains how each plays a role in the comprehension of the motion picture. While narrative and stylistic schemata are fairly straightforward in that they refer to sets of expectations concerning the events that compose the story and the aesthetic quality of the image respectively, the other three, borrowed from Hastie (1981), require some further elaboration. Prototype schemata, according to Bordwell, guide the development of expectations related to identifying aspects of the narrative (including individuals, events, motivations, and places) through their relationship to existing social norms. Template schemata are less useful for identifying existing information than for inferring information that has been omitted. It is template schemata that fill the gaps in the film’s
assemblage. Finally, Bordwell describes procedural schemata as functioning to coordinate prototype and template schemata in a way that actively gathers, infers and classifies information.

If these sets of schemata, coupled with the clarity fostered through variable framing, indeed play an instrumental role in our comprehension of the motion picture, then, congruent with the assertions about cognitive priming in chapter three, it is not unreasonable to suggest that a particular schema or set of schemata might be primed through prior exposure to similar content (the comic source material) in order to offer a heightened experience of telepresence in the film adaptation of that source material. Especially with regard to template schemata, it seems almost intuitive that prior exposure to content will assist in smoothing over inconsistencies and supplying missing information.

Embodiment in Narrative Media

Thus far, what has been described provides a reasonable argument for how telepresence is experienced through both comic art and film. However, proponents of the previously described external/perceptual perspective may point out that there is little difference between this and an explanation of how we comprehend ordinary narratives that don’t necessarily evoke telepresence. The missing element in inherently narrative media (such as comics and film) as opposed to interactive media (such as videogames and virtual reality) is the physical body. Transportation and perceptual immersion, two key components of the telepresence experience, presume the existence of a body to be transported and immersed. In addition, telepresence has been defined in terms of how a body is capable of interacting with the virtual environment: “Environmental presence
refers to the extent to which the environment itself appears to know that you are there and to react to you” (Heeter, 1992, p. 263). This, of course, is not possible in media that do not allow the user to interact with the environment.

In his response to Glenberg’s (1997) target article evaluating the purpose of memory from the perspective of ecological perception, Graesser (1997) raises a question that addresses this dilemma directly: “Where is the body in the mental model for a story?” (p. 25). One possible response to this question is that the body is located outside of the story as a “side-participant” (Gerrig, 1993, p. 190) or “floating consciousness” (Ryan, 2001, p. 133). Side participation acknowledges the individual’s involvement and emotional response to what occurs in the story, but explains the lack of physical response to the events in the story (behavioral inhibition) in terms of the awareness of bodily location as being outside the parameters of dramatic action and, thus, unable to affect outcomes. Naturally, such an awareness of the self as being located outside of the world of the story raises serious doubt concerning the individual’s experience of telepresence to begin with. If behavioral inhibition results from the individual’s awareness that they are not “present” in the narrative, then it seems obvious that telepresence has not occurred. Although a voyeur might experience telepresence in a limited optical sense, exclusively visual access can also have the effect of distancing the voyeur and calling attention to his/her isolation and lack of presence (Jones, 2003).

An alternative way of conceptualizing telepresence in the narrative world is through a union of the perspectives of the narrator and individual experiencing the narrative (the reader or viewer). When the narrator serves as our point of access to the events of the story, we adopt his/her perspective and physical being as a surrogate for our
own in the world of the story. As Ryan (2001) observes, “[t]he virtual body whose perspective determines what is perceived belongs at the same time to the narrator and the reader” (p. 132).

This shared perspective, however, need not be confined to a specifically designated third-person narrator. We can gain a sense of embodiment in a narrative text through any character events are focalized through. Stam, Burgoyne and Flitterman-Lewis (1992) define focalization as “the activity of the character from whose perspective events are perceived” (p. 87). Thus readers/viewers of narrative media may occupy the perspective of any character through whom the events of the narrative are perceived.

Of course, such a form of embodiment, as it exists in both comic art and film, will not allow the reader/viewer to directly manipulate or influence the spatial or social environment. This has implications for the types of telepresence being investigated. It was noted at the beginning of chapter three that the types of telepresence under investigation include spatial telepresence, social telepresence, and engagement. Engagement, because it does not necessarily require interactivity, is able to be defined in the same way that it might if a virtual environment were being assessed: “The degree to which users of a virtual environment feel involved with, absorbed in, and engrossed by stimuli from the virtual environment” (Palmer, 1995). To define spatial and social telepresence as it occurs, however, it is necessary to consider only those aspects that may be experienced through narrative media.

_Spatial Telepresence in Narrative Media_

Given the constraints imposed by narrative media, spatial telepresence is defined here as the extent to which the user is able to experience a sense of orientation in the
space of the mediated environment through the experiences and actions displayed or
described through a character from within the narrative. Such a definition is consistent
with the more encompassing definitions of spatial telepresence such as Steuer (1992), but
inconsistent with more specific definitions that rely upon the user’s ability to manipulate
the virtual world (e.g. Heeter, 1992; Zahoric & Jenison, 1998).

*Social Telepresence in Narrative Media*

Just as the experience of spatial telepresence in narrative media is constrained by
the user’s inability to manipulate the physical world of the story, social telepresence in
narrative media is constrained by the user’s inability to communicate directly with the
characters in the story. One class of examples that run counter to this is media that
incorporate “parasocial interaction” (Horton & Wohl, 1956) – whereby a performer,
through use of direct address and anticipatory feedback, acknowledges the existence of
the individual audience member. In cases where these techniques are employed in
narrative media, one should expect a stronger sense of social telepresence to occur.
However, use of this technique is relatively rare, and so, for instances in which it is not
employed, further explanation is required. Thus, social telepresence in narrative media is
the experience of interaction that the user obtains through identification with a character
that is engaged in communication with one or more other characters. Similar to the case
of spatial telepresence in narrative media, definitions that hinge upon the user’s ability to
directly participate in social interactions (e.g. Sallnas, Rassmus-grohn & Sjostrom, 2000;
Savicki & Kelley, 2000) are incompatible with the constraints imposed by the narrative
format.
Summary/Synthesis

The overarching purpose of this chapter has been to demonstrate the distinctive ways that comic art and film instill a sense of telepresence in the reader or viewer. By arguing that both media forms are capable of providing a sense of telepresence, however, research question three is called to attention: If both media forms can cause telepresence experiences, then “Which medium produces a stronger sense of telepresence?” Studying this phenomenon in the context of comic to film adaptations, of course, presents a unique opportunity to test responses that occur resulting from differences in media form since content is, for the most part, held constant across media.

Because film is more immersive than comics, this qualifies as a test of the well established telepresence “book problem.” While other investigators have examined this through the use of literature (e.g., Banos et al., 2005; Gysbers et al., 2004), this would constitute, as far as I am aware, the first attempt to measure telepresence experiences provoked by comic art and compare them to a more immersive medium (film) as a way of testing the book problem.

Arguing that comic art is a medium capable of producing telepresence responses in the reader, the chapter began by describing comics as a language of mixed iconic and textual symbols before moving into an exploration of how telepresence might be evoked. It is then argued that comics create a sense of telepresence through their capacity to achieve realism, provide the sensation of immersion, and transport the reader into the world of the story. Realism is achieved through reality approximation, use of stylistic techniques which illicit emotional response, the disguising of conventions such as panels and word balloons, and a graphic layout which encourages closure. Immersion occurs as
a result of the reader’s autonomous control over his own gaze as well as the necessary activity of turning pages. Transportation is facilitated through the essentially *incomplete* nature of the cartoon and the resultant occupation of the caricature by the reader and his or her physical and intertextual experiences.

With respect to telepresence experiences in film, cognitive film theorists including Anderson (1996), Bordwell (1985), and Carroll (1988) have described our comprehension of movies by reverting to our comprehension of the natural environment. However, one key distinction between Anderson (1996) and the others is his appropriation of Gibson’s (1979) ecological approach. This difference, once again, highlights the split between external/perceptual and internal/conceptual perspectives on telepresence.

When considering how the spectator cognitively constructs the experience of a movie and how he/she feels present within it, one might notice that it is not terribly different from how this occurs in a comic, except, of course, that a film would naturally require less closure. This fact, however, may be more than enough to suggest that a movie will provide a more drastic sense of telepresence.

In addition, the suggestion that both media rely upon schematic activation for comprehension and telepresence experience to occur carries strong implications for the second research question, since viewing an adaptation subsequent to reading the source will likely make use of schemata that are already activated. Presumably, the closer the structural resemblance between source and adaptation, the more relevant the active schemata will be.
Finally, because both comic art and film are inherently narrative media (as opposed to interactive media), it is necessary to define experiences of spatial and social telepresence as occurring through an intermediary character in the narrative through whom events are focalized. There is an important distinction here between voyeurism, which tends to distance the observer from the events observed (Jones, 2003; Metz, 1982/1977), and focalization, which tends to provide a vicarious sense of participation for the spectator.
Although touching upon concepts relevant to all three of the initial research questions presented in the first chapter, chapter two provides the most insight into the various definitions, conceptualizations, and categorizations that have been developed to classify adaptations of literature. After initially defining adaptations as “hypertexts derived from preexisting hypotexts that have been transformed by operations of selection, amplification, concretization, and actualization” (Stam, 2000, p. 66; 2005b, p. 5), a series of conceptualizations was put forth that derive heavily from the work of Elliot (2003). These include the psychic, genetic, embodiment, and de(re)composing concepts of adaptation. Of particular importance among these is the genetic concept in which the deep structure of the narrative is capable of being transferred from one medium to another. McFarlane (1996) espouses a similar, though much more elaborate, understanding of adaptation which discerns between distributional functions that make up the transferable series of events within the narrative (i.e. deep structure), and integrational functions that are composed of the psychological aspects of the story that cannot be transferred and, thus, require adaptation.

Beyond conceptualizations, Andrew (2000/1984) and Wagner (1975) developed categories intended to define different types of adaptations based on their level of fidelity to the source. Following from this, a method for categorizing film adaptations of comic art is described based upon thematic versus structural fidelity. The first step toward understanding the adaptive process, insofar as it concerns film adaptations of comic art, is
to investigate and classify the different types of comic to film adaptations that exist according to the relationship between source material (original comic) and subsequent film adaptation. Thus, the first research question is:

1. *What are the different types of comic art to film adaptations that exist based on the devices and strategies used in adapting the content of comic artwork to film?*

This question is addressed in study one through a qualitative textual analysis that will categorize adaptations based on the devices and strategies used.

Shifting focus from the characteristics of adaptations to the way they are experienced by viewers, chapter three describes the major approaches to “presence” – a program of theory and research devoted to exploring aspects of media experiences that involve the “illusion of nonmediation” (Lombard & Ditton, 1997, Presence Explicated, ¶ 1).

After defining the “book problem” as an issue that centers upon the question of whether less immersive media are capable of providing a telepresence experience, two opposing perspectives are presented. First, the external/perceptual view considers the potential for presence to occur only in situations where our sensory organs are responding directly to an external stimulus. Because this perspective dismisses the role of conceptualization in producing presence experiences, it is rejected for an internal/conceptual view.

Proponents of the internal/conceptual view of presence see it as a response to a mental model that is based upon a combination of cues originating both externally and internally. Complementing external sensory cues, the individual’s personal knowledge and experience play a key role in constructing the world that the individual feels present
within. Personal knowledge and experience exist in the form of schemata, which become activated and bring to awareness certain expectations that combine with external sensations to produce a sense of presence.

Because schemata may be activated prior to the individual’s experience of an environment, a cognitive priming effect is possible in circumstances where previous exposure to content has occurred. This provides the grounding for the second research question:

2. How is the film viewer’s experience of telepresence influenced by prior experience with the comic art source material of the film adaptation?

Previous research on cognitive priming (Nunez & Blake, 2003a; Ladiera et al., 2005) has initiated the priming effect using content; however, there has been no inquiry or comparison concerning the correspondence that the priming materials have with the environment. Here a distinction is made between thematic and structural priming and it is suggested, based upon Glenberg’s (1997) concept of mesh, that priming materials which bear a structural resemblance to the mediated environment will illicit a stronger sense of telepresence than priming materials which are related thematically. Therefore, comprehending the film adaptation as the environment and the comic art source material as the prime, an adaptation which is structurally closer to the source should produce a stronger sense of telepresence in the viewer. In light of this assertion, the following hypotheses are asserted:

H1: Viewers of film adaptations of comic art will experience higher levels of telepresence if they have prior experience reading the comic art source material than if they do not.
H2: Viewers of film adaptations of comic art will experience higher levels of telepresence if the film is adapted structurally from the comic art than if the film is adapted thematically.

In light of the findings of Ladiera et al. (2005), in which a significant difference was found between telepresence scores of participants who had a preexisting interest in the theme of the priming stimulus (higher scores) and participants who did not (lower scores), I assert the following additional hypothesis:

H3: Participants with a preexisting interest in the priming stimulus (comic art source material) will report higher telepresence scores in response to viewing the film adaptation than participants who have no preexisting interest.

These hypotheses are addressed through an experiment in the second study.

The purpose of chapter four was to demonstrate the distinctive ways that comic art and film instill a sense of telepresence in the reader or viewer. Arguing that comics are capable of producing telepresence responses in the reader, the chapter begins by describing comic art as a language of mixed iconic and textual symbols before moving into an exploration of how telepresence might be evoked. It is argued that comics create a sense of telepresence through their capacity to achieve realism, provide the sensation of immersion, and transport the reader into the world of the story.

With respect to telepresence experiences in film, cognitive film theorists including Anderson (1996), Bordwell (1985), and Carroll (1988) have described our comprehension of movies as occurring based on the same processes as our comprehension of the natural environment. When considering how the viewer cognitively constructs the experience of a movie and how he/she feels present within it,
one might observe that it is not very different from how this occurs in a comic, except, of course, that a film would naturally require less cognitive participation from the individual because a more complete set of information is presented through the medium. By suggesting that both media forms are capable of providing a sense of telepresence, research question three is brought to attention:

3. *Which medium produces a stronger sense of telepresence? Comic art or film?*

The third question recognizes the potential for a telepresence experience to take place in response to both media forms (comic art and film) and seeks to empirically test the issue at the heart of the book problem by comparing two forms of media while holding constant the content of those media (a feature unique to the study of adaptations). Because film requires less cognitive participation (i.e. closure), the following hypothesis is asserted:

H4: *The medium of film will produce a stronger sense of telepresence than the medium of comics when content is held constant across media forms.*

This research question and the associated hypothesis will also be experimentally tested in the second study.
CHAPTER SIX

STUDY ONE: ANALYSIS OF COMIC TO FILM ADAPTATIONS

Method

In attempting to categorize film adaptations of comic art based upon which devices and strategies are used in the process of adapting the content, it is necessary to employ a qualitative textual analysis of the narrative and enunciative features of each medium as they are manifested in specific film adaptations and their comic art sources. Despite the obvious (statistical) limitations that such a method has, it is almost without exception that investigations into the nature of adaptation make use of a qualitative method of textual analysis. George Bluestone eloquently states the reason for this in his seminal work *Novels into Film* (1957):

Quantitative analyses have very little to do with qualitative changes. They tell us nothing about the mutational process, let alone how to judge it. In the case of film versions of novels, such analyses are even less helpful. They merely establish the fact of reciprocity; they do not indicate its implications for aesthetics. They provide statistical, not critical data. Hence, from such information the precise nature of the mutation cannot be deduced. (p. 5)

The rigor of qualitative textual analysis, however, should not be underestimated since it involves an accounting and analysis of the precise nature of the “mutational process” that occurs as a result of the migration of content from one form to another. Many scholars, including Bluestone (1957), Jenkins (1997), McDougal (1985), McFarlane (1996), and Stam (2005), perform this function by juxtaposing specific sections of text and film and analyzing their discrepancies.
Selecting Units of Analysis

It is common, in analyses of adaptations, for the researcher to select specific examples for analysis based on their historical importance, their status as a literary “classic,” and/or the general point about adaptation that he/she wishes to make. Though this relatively subjective method of selection may have its value in insuring the inclusion of certain important examples, it lacks a rigorous accounting of the total universe of adaptations. In an effort to avoid this weakness in the current project, and to gain a more complete familiarity with the total population of film adaptations of comic art, I undertook a project beginning in May of 2006, to comprehensively list all adaptations that use comic art as their source material.

The creation of the “Comics Adaptations List” (Jones, 2008) (located at http://www.mattsmediaresearch.com/comicslist/adaptationsofcomicslist.html) began with my compiling as many examples as possible based upon personal recollection and previously published short lists (e.g. Wikipedia: “Comic book films” (n.d.), “Films based on comics” (n.d.), “Films based on comic strips” (n.d.) and the Internet Movie Database: “Based on comic” (n.d.). Once a brief preliminary list was formed from these sources, it was published on the Comics2Film electronic message board (http://www.comics2film.com/BB2/) along with a message seeking assistance in making the list as complete as possible:

Hi everyone. I wonder if it is possible to compile a list of all comic to film adaptations? The following list is of comic titles that have been adapted to film. This list excludes items that have been derived from other media (for instance, the film "Conan the Barbarian" was more of an adaptation of the original R. E.
Howard stories than of the various comic book incarnations). Please add to this list any items that you feel might be appropriate.

As the list continued to grow and take shape based on Comics2Film users’ contributions, it was relocated from the discussion board to a separate website, which enabled a high degree of customization and further collaboration among a variety of message board users on websites featuring similar content, including http://www.comicbookmovie.com, http://www.comicscommunity.com, http://www.efavata.com, and http://www.tcj.com/ (The Comics Journal website). With this added collaboration, the list began to take on new dimensions as entire sections were added and multiple contributions were made daily. As of this writing, more than 50 participants have contributed to the development of the list, which contains 163 entries for comics adapted to live-action films. Each individual entry is reviewed before being added to the list, which continues to grow as it accounts for new discoveries of old adaptations and the release of new ones.

Procedure

The first step in gaining perspective on the range of film adaptations of comic art was to refer to the list and gather as many available sources and adaptations as possible. Due to constraints on availability/accessibility, not every item on the list was obtainable, but an effort was made to account for as many entries as possible. To reduce the enormous scope of possibilities, only live-action, feature length film adaptations and their sources were specifically sought. Sequels were not examined since the first film generally establishes treatment of narrative and enunciative structures\(^4\). Nearly one

\(^4\) This is obviously not the case for all sequels. Nolan’s *Batman Begins* (2005), for example, does not resemble Burton’s *Batman* (1989) or Schumacher’s *Batman & Robin* (1997).
hundred adaptations, which represent approximately 60% of the total population of comic
to film adaptations, were reviewed for this project.

The second step was to perform an initial reading/viewing of all sources and
adaptations and to take notes about the general ways in which adaptations engaged with
their source material. In all cases, reading the source material preceded viewing the film
since this represents the natural progression of their availability as media products.
Based on this initial reading/viewing, a categorization was formed to account for the
different ways in which adaptations depart from the original text, since this is what is at
the heart of the adaptive process (Bluestone, 1957; Jenkins, 1997; McFarlane, 1996).
Sources and their adaptations were then selected from these categories, based on their
status as prototypical examples of either thematic or structural adaptations, to form a
sample for more detailed analysis of the ways adaptations diverge from their source
material. These included Superman (Donner, 1978), Art School Confidential (Zwigoff,
2006), American Splendor (Berman & Pulcini, 2003) Barbarella (Vadim, 1968), and
Ghost World (Zwigoff, 2001), as thematic adaptations, and Sin City (Miller, Rodriguez,
& Tarantino, 2005), A History of Violence (Cronenberg, 2005), Road to Perdition
(Mendes, 2002), V for Vendetta (McTeigue, 2005), and 300 (Snyder, 2006) as structural
adaptations. It is important to note that, of these ten selections, all of them were adapted
directly from comic book form to film with the single exception of Superman (1978).
This was done to limit, as far as possible, the confounding influence of intermediate
adaptations. For example, Batman (1989), Spider-Man (2002) and others were not
included because they carry the baggage of prior adaptation (see Jones, 2008). Superman
(1978) was included despite its multiple prior adaptations because of its prototypical
status in American superhero comic books, which make up a significant proportion of all adaptations.

In the third step, I performed a secondary reading and viewing of the sample. In this step, notations were made during the reading of the source, concerning aspects of the “distributional functions” mentioned by McFarlane (1996). These included “cardinal functions” (major events or turning points in the narrative) and “catalysers” (supportive actions that motivate the flow of the narrative).

In the fourth step, I performed a tertiary reading and viewing of the sample. The task of this reading/viewing was to observe and note the enunciative or stylistic distinctions between source and adaptation. Because film adaptations may depart from their comic art sources in terms of their elements of visual style (mise-en-scene, lighting, framing, camera movement, montage, visual effects) and differing format constraints (presentation of sound, transitions, depiction of movement), it is these that will be focused on in the analysis of the translation process.

In step five, for those adaptations that bear strong enough resemblance to their source material to permit it, a viewing of the adaptation was performed “book in hand” to observe and notate the more subtle distinctions between film and source text.

Finally, an interpretation highlighting the distinctions between different categories of adaptation was composed based on all of the analyses that were performed. Rather than taking the form of an exhaustive case-by-case study, however, specific examples were used to illustrate major points and demonstrate the major strategies adopted by film adaptations of comic art.
Results and Discussion

This section focuses on a textual analysis of ten film adaptations of comic art that were selected from the Comics Adaptations List (Jones, 2008) to characterize the differences between thematic and structural adaptations. The list of comic art source materials and film adaptations\(^5\) are included in Table 1.

Based on these analyses, three models are presented below that represent how the operations used in thematic adaptations differ from those used in structural adaptations. Film adaptations are considered to be \textit{thematic} if they share in common particular characters and conflicts with their comic art source material, but do not employ the same set of “distributional functions” (McFarlane, 1996) for the central plot of the film. Conversely, film adaptations are considered to be \textit{structural} if they do, for the most part, use the same set of distributional functions as the comic art source material upon which they are based.

Before going directly into a discussion of the differences between thematic and structural adaptations, it is first necessary to describe the set of operations that are used to transform the comic art source to the film adaptation. To assist in doing this, the General Model of Adaptation (Figure 1) is employed.

\(^5\)A detailed scene-by-scene analysis of how each of these films relates to their comic book source material can be located at http://www.mattsmediaresearch.com/comicart.html.
<table>
<thead>
<tr>
<th>Comic Art Sources</th>
<th>Film Adaptations</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Eightball #7</em>, <em>Art School Confidential</em> (Clowes, 1991)</td>
<td><em>Art School Confidential</em> (Zwigoff, 2006)</td>
</tr>
<tr>
<td><em>Barbarella</em> (Forest, 1966/1964)</td>
<td><em>Barbarella</em> (Vadim, 1968)</td>
</tr>
<tr>
<td><em>Road to Perdition</em> (Collins &amp; Rayner, 1998)</td>
<td><em>Road to Perdition</em> (Mendes, 2002)</td>
</tr>
<tr>
<td><em>300</em> (Miller &amp; Varley, 1998/2006)</td>
<td><em>300</em> (Snyder, 2006)</td>
</tr>
</tbody>
</table>

Table 1. Sources and Adaptations. A list of sources and their adaptations analyzed in Study One.
Figure 1. General Model of Adaptation. This model includes the components of the source and adaptation along with the operations through which the adaptive process occurs.

Figure 1 represents the general model of adaptation. Based on a reading/viewing of the sample from the Comics Adaptations List (Jones, 2008), this model was developed to reflect the various divergent operations that are employed in adapting comic art to film structurally and thematically.

Some of the operations were selected from a series initially proposed by Stam (2000; 2005b): “selection, amplification, concretization, actualization, critique, extrapolation, analogization, popularization, and reculturalization” (2000, p. 68), while others were initially proposed by Field (1952): “condensation” and “incorporation.” Similar operations were collapsed into a single term (“concretization” was collapsed into “actualization”), and operations that did not apply directly to how the source material was transformed or manipulated by the adaptation were eliminated (“critique,” “analogization,” “popularization,” and “reculturalization”). Each of these operations,
while valid under certain contexts, does not apply to an investigation of the structural and thematic aspects of adaptation. The operations taken from Field (1952) included “condensation” (removing plot elements) and “incorporation” (adding plot elements). Incorporation was split into two operations (“extrapolation” and “fabrication”) based on their differing use in thematic and structural adaptations, which will be discussed later. Additional terms included “reorganization,” “unification,” and “translation.” These will be defined in the discussion that follows.

Source Material and Adaptation

In the left column of Figure 1, the elements of the comic art source material are described while, in the right column, the corresponding elements of the film adaptation are described. In the first tier, “Constraints and affordances of the medium” refers to the expressive potential of the medium itself, including any limitations and/or capabilities facilitated through its display characteristics. For example, actual sound does not exist in the comic art page, but it does in the soundtrack of a film. Thus (physical) sound is a constraint for comic art, but an affordance for film.

As described in chapter two, integrational functions (i.e. the psychological makeup of characters as well as the atmosphere of the story) are not transferable from one medium to another. For this reason, the model calls attention to how the constraints and affordances of the medium impinge upon the integrational functions in such a way as to render their particular execution unique to their present medium. Compare, for example, the task of the comic artist trying to create a somber psychological mood (integrational function) and a filmmaker trying to do the same. The comic artist might approach this task by using copious amounts of ink or intense cross-hatching (a shading
technique that makes use of intersecting lines) to achieve the effect. A film director, however, must choose a different strategy since these tools are not typically employed in the medium of film\(^6\). Therefore, to reconstitute the psychological mood, the adaptor must use the techniques and conventions of the medium he/she is working within.

In the second tier of the model, the distributional functions are represented by a series of consecutive events: “A, B, C.” The major events of the story and the order in which they are presented make up the cardinal functions or “hinge points” of the narrative, while minor events that support them are referred to as “catalysers” (McFarlane, 1996). In a purely structural adaptation, the distributional functions are selected and transferred directly from the comic source to the film adaptation. A good example of this is the extended cut of the film *Sin City* (2005), which will be discussed later.

The third tier of the model represents “themes,” which are the product of the common event elements that recur in the form of distributional functions. Most commonly, these are characters and conflicts. From the opposite direction, common psychological elements and atmosphere are derived from integrational functions, which are specific to the particular medium. This is often referred to as the “mood” of the story.

The fourth tier of the model represents “integrational functions,” which, as previously noted, are composed of the psychological makeup of the characters as well as the atmosphere of the story. Again, these are specific to the medium in which they occur and if they are to be translated from one medium to another, the constraints and affordances of the adaptive medium need to be taken into consideration.

\(^6\) Animated film adaptations of comic art would be an exception.
Operations

Before going through and describing each of the operations, I should note that they are presented in bold text or parentheses based upon their membership in two overlapping categories. Operations in Figure 1 above that appear in bold type are considered “primary” operations, because they can be employed first and are not used to facilitate other operations. Conversely, those that appear in normal type are considered “secondary” operations because they do facilitate other operations. For example, reorganization is a secondary operation to selection because a scene must be selected (chosen) before it is reorganized (placed in a different order within the narrative). In addition, operations that appear without parentheses are considered to be “causal” operations, because they serve as the catalyst for others by actively moving and changing elements from source material to adaptation. Those in parentheses are “consequential” operations because they exist only as the result of the causal operations. For example, as will be demonstrated for thematic adaptations, unification (the state of all narrative elements joined into a single plot) is a consequential operation of fabrication, which is a causal operation because it refers to the creation of a plot.

Each of the operations is defined in general terms within the following list. More specific definitions are precluded because they are not being referred to here in the context of thematic or structural adaptations. A more nuanced understanding of the operations will result from their use in the models of thematic and structural adaptations that are to come.

1. (Unification): Unification is defined first because it is the most important of the operations and the reason for the existence of all the others (thus its primary
status). Regardless of the thematic or structural nature of the adaptation, it must take on a narrative forged out of the unification of all the narrative elements into a single plot. It is also a consequential operation, however, because it can only be achieved through the use of other operations.

2. **Selection**: Selection is a primary, causal operation that refers to taking elements from the source material and incorporating them into the adaptation. In thematic adaptations this refers to the themes (common event elements, i.e. characters and conflicts) of the source text and in structural adaptations this refers to specific distributional functions (i.e. scenes, plot elements).

3. **Reorganization**: Reorganization is a secondary operation to selection and refers to the reordering of selected distributional functions in structural adaptations. Reorganization is a causal operation because it can be used to contribute to unification of the narrative in the context of the adaptation.

4. **Condensation**: Condensation is a secondary operation to selection and refers to the reduction of selected characters and/or distributional functions in structural adaptations. Condensation is causal because it can also contribute to the unification and amplification of the narrative in the context of the adaptation.

5. **Extrapolation**: Extrapolation is a secondary operation to selection and refers to the addition of new material to selected distributional functions in structural adaptations. Extrapolation is causal because it can also contribute to the unification and amplification of the narrative in the context of the adaptation.

6. **(Amplification)**: Amplification is a secondary and consequential operation that can result from condensation, extrapolation, and/or fabrication. It has to do with
the emphasizing of some themes or distributional functions above others.

Amplification is not specific to either thematic or structural adaptations.

7. **Fabrication**: Fabrication is a primary and causal operation that is specific to thematic adaptations. It refers to the distributional functions that were created specifically for the adaptation. Although it is created independently, a fabricated plot resonates with the themes of the source material (e.g. *Superman* (1978), *Art School Confidential* (2006)).

8. **Translation**: Translation is a primary and causal operation that is germane to all adaptations (adaptations that don’t use translation would be referred to as “remakes” not adaptations). There are a number of ways translation is achieved in an adaptation. Far and away the most common type of translation in a comic to film adaptation is “actualization” – making the comic artwork come alive through recording actual people and settings on film. However there are numerous other ways that this is achieved. These will be discussed in a later section and include the following: intermedia reflexivity, grabbing the panel, expansion, breaking up the panel, and conversion.

9. (Actualization): Actualization is a secondary and consequential operation of translation and refers to the effect of replacing comic artwork with actual people and settings that are recorded on film.

Now that each of the main operations has been described in general terms, their specific applications are described below in the context of thematic and structural adaptations.
Thematic Adaptations

The following model presents the most basic form of a thematic adaptation:

![Source Material](image)

Although extreme and simplistic, this model is helpful to visualize the path of operations that would be taken by a strictly thematic adaptation. In Figure 2, the distributional functions of the comic art source material give way to the common event elements (characters and conflicts) that compose themes. These are then selected and incorporated into a narrative fabricated to achieve unification through a plot that is expressed through the new set of distributional functions.

**Selection, Fabrication, and Unification in Art School Confidential**

Of the entire sample of adaptations cataloged on the Comics Adaptations List (Jones, 2008), the one that comes closest to this extreme is *Art School Confidential* (2006), which is based upon a four-page, twenty-six panel story by Daniel Clowes from...
the comic book *Eightball #7* (Clowes, 1991). Given the profound lack of source material quantity, *fabrication* was an essential operation. However, as reflected in Figure 2, this fabrication was predicated upon thematic *selections* that were made from the source material.

The comic book version of *Art School Confidential* (Clowes, 1991) tells the story of Daniel Clowes, the author and protagonist, who went to art school as a “freelance undercover agent” to uncover the “scam of the century.” The brief story is composed entirely of the author’s narration mocking art school students and professors. Thus, two themes emerge: (1) “undercover agent” and (2) mocking art school students and professors.

Based only on these themes, the entirety of the film’s plot structure was *fabricated*. Although several specific scenes in the comic were selected, they required a narrative context to be fabricated since none was present in the source material. In brief, the film adaptation of *Art School Confidential* (2006) tells the story of a young artist (Jerome) who goes off to art school with the desire to become the greatest artist of the 21st century. He soon falls in love with a model named Audrey, but in order to realize his dreams and win her over, he must achieve notoriety. To complicate matters, Audrey is interested in another student who is secretly working as an undercover cop investigating Jerome for a recent string of campus serial murders. In an attempt to gain attention for his own work, Jerome uses the paintings of Jimmy, a middle-aged former art student turned serial killer. By displaying Jimmy’s murderous paintings for his final art school project, Jerome hopes to get noticed but is arrested for murder instead. In prison, he becomes a famous artist and Audrey falls in love with him.
Notice that, although none of these distributional functions are grounded in the comic book story, the theme of an “undercover agent” is present in the form of the undercover cop investigating Jerome. Beyond this, the theme of “mocking art school students and professors” resonates throughout the film. One quintessential example occurs in Scene 3 where incoming freshmen arrive at campus: a filmmaker videotapes himself, a girl dressed in “gothic” clothing waves goodbye to her parents, a “hippie” girl steps on glass with her bare feet, a musician’s guitar case opens to reveal a trove of drug paraphernalia, etc. This scene resonates with the “recurring character types” mentioned in Panels 9-14 of the comic book.

A second example occurs in Scene 16 when the famous alumnus, Marvin Bushmiller, is interviewed on stage. When one student asks if he learned anything at Strathmore, he responds, “I learned that the faculty is made up of old failures who teach only because they need the health insurance” before turning to his interviewer and saying, “David was too busy trolling the halls for fresh meat to worry about health.” This notion of art school faculty being inept and lecherous has its origins in Panels 4 and 25 of the comic story, which portray faculty as less interested in student work than ogling young women.

Another mockery of art school students appears in Scene 21 during a classroom critique when everyone has unconditional praise for Flower’s self-portrait. Such uncritical positive regard also occurs in Scene 30 when Professor Sandiford expresses admiration for Jonah’s painting of a race car, prompting the rest of the class to lavish praise upon the painting as well. These scenes are derived from Panel 3 of the comic story, wherein a professor suggests that a student’s painting is “nice” and the rest of the
class repeats this sentiment (Clowes draws an arrow to the students that he labels “brainwashed shills”).

These last two examples are particularly important because they establish the antagonism between Jonah and Jerome that ultimately serves to draw attention to Jerome as a suspect in Jonah’s undercover investigation of the campus murders. This, in turn, serves to establish Jerome as a famous artist and help him win back Audrey to resolve the main conflict of the film. Therefore, in these particular cases, the selected themes are manifested in order to further the progression of the film adaptation’s narrative through what McFarlane (1996) might refer to as “catalysers,” or the supporting actions that lead up to major events (in this case, Jerome’s arrest and imprisonment). Other examples of thematic manifestations also exist, but are of less narrative consequence.

Demonstrating that few thematic adaptations are completely free of the distributional functions of the source material, *Art School Confidential* (2006) has three scenes which bear strong similarity to particular panels from the comic book story and are worthy of mention because of the pivotal role they play in the newly constructed narrative.

To begin with, on the first day of art class that is portrayed in Scene 6, several specific elements from the original comic book story appear in the film. First, the nude model, “Leslie,” is obviously derived from the “freakish, poodle-haired” model from Panel 8 of the comic story. Second, the professor’s comment that, “Only one student out of a hundred will find work in his chosen field” is taken directly from the “pragmatist” art professor in Panel 16. Third, and most drastically, Jerome (the protagonist) meets a classmate named Bardo who asks, “Why are the people in these freshman classes exactly
the same every year?” As students are returning from break, he points out “the vegan holy man,” “the boring blowhard,” “the angry lesbian,” “kiss ass” (who eagerly complements the professor on his paintings), and “mom” (who says to the professor “I feel that I am finally about to ripen!”). This corresponds closely to Clowes’ commentary in the original comic book story (Panels 9-14) when he refers to the recurring character types in art classes such as “the technological wizard,” “the hopeless case,” “Joe Pro,” “Mom,” “Mr. Phantasy,” and the “Macho Art-Sadist.” This *selection* is, thus, used as a tool to introduce the characters in the film.

The second *selection* of distributional functions taken from the original comic story is situated in Scene 8 of the film. Jerome’s friend Bardo pushes him into talking to an attractive female classmate. Back at her apartment with Jerome, she cries uncontrollably. When Jerome touches her shoulder to comfort her, she screams, laughs, and then goes back to crying. This scene has a remarkable similarity to Panel 7 of the comic story, which portrays a guy talking to a “crazy” art school girl. It is also nested within the larger sequence of Scenes 7-12, all of which show Jerome going out with different “crazy” art-school girls. To some extent, they are all *selections* based on Panel 7 of the comic book story. Within the logic of the film adaptation, these scenes serve to show that no one can replace Jerome’s desire for “Audrey,” the art model who becomes his muse.

Scene 18 is the final distributional function *selected* from the original comic book story and it serves as a powerful moment within the film because it is when Jerome discovers Audrey as his ideal artistic subject and falls in love with her. In the scene, Audrey comes to class and poses nude as an art model. This scene is strikingly similar to
the first panel of the comic story in which a beautiful female model poses nude in front of an art class. In essence, the entire story is built around this image since Jerome’s desire for Audrey and for artistic recognition serves as his primary motivation throughout the film. In addition, the scene serves as a “cardinal function” (McFarlane, 1996) since it is the major narrative hinge point that establishes Jerome’s motivation for the remainder of the film.

*Selection, Fabrication, and Unification in Superman*

Another excellent illustration of this selection-fabrication-unification set of operations in thematic adaptations comes from *Superman* (1978). Because there is no single graphic novel or comic book series that the *Superman* (1978) film is adapted from, the specific distributional functions (i.e. plot) of the film are fabricated. However, the fabricated plot is consistent with the long established themes that were selected from the comic book series (see Figure 3).

![Figure 3](image_url) Themes in *Superman* (1978). This model shows the basic themes present in *Superman* (1978) based on common comic book elements.
For one thing, in the broadest possible sense, the plot of the film primarily concerns Superman’s struggle to save California from Lex Luthor’s scheme to use a nuclear missile to blow up the San Andreas Fault and create a new coastline that he is the owner of. Such a plot, although not specifically detailed in any individual *Superman* comic book, is consistent with the “good vs. evil,” “justice,” and “feats & rescues” themes that are present in almost every *Superman* comic book story up until the release of the film, e.g. *Superman # 248, The Man Who Murdered Earth* (Wein, Swan, & Anderson, 1972). Superman’s opposition to Luthor in this conflict represents the thematic struggle of “good vs. evil.” Toward this end, his saving California through heroic “feats & rescues” and ultimately bringing Luthor to “justice” also clearly echoes the themes present in the comic books. Insofar as Superman is assisting the United States military in stopping Lex Luthor, this central conflict ties into the “American way” and “politics & patriotism” themes as well.

If Superman is the personification of good in the “good vs. evil” theme, then certainly Lex Luthor personifies evil and, more specifically, the “bad guys” theme. This is made clear from the outset in Scenes 13-14 when he kills a police officer using a mechanical door and begins to unravel his plan to pull off “the greatest real-estate swindle of all time” (incidentally, real-estate swindles have a long history in *Superman* comics, e.g. *World’s Finest #37, The Superman Story* (Finger, Boring, Kaye, 1941)). Later on in Scenes 31-38, Luthor’s plan to use kryptonite to disable Superman while he bombs the San Andreas Fault is laid out in its entirety. The comic books have made prolific use of this “schemes & kryptonite” scenario and it is not surprising to see this theme used in the film adaptation as well.
Two extended sequences in Superman prominently feature the “feats & rescues” theme. Scenes 16-21 show Clark Kent transform into Superman using a revolving door, before going on a spree of rescues, including: (1) saving Lois from a helicopter accident, (2) stopping a burglary, (3) stopping thieves who are fleeing from the police, (4) rescuing a little girl’s cat, and (5) saving Air Force One from crashing. While the “feats & rescues” theme is pervasive throughout this sequence, Clark’s transforming into Superman, stopping criminals, and saving the President’s airplane also highlight the “double identity,” “justice,” and “patriotism” themes respectively. The second sequence, in scenes 39-60, features Superman (1) diverting a missile from striking New Jersey, (2) diving underground to stop an earthquake, (3) rescuing a school bus, (4) rescuing a passenger train, (5) rescuing Jimmy Olson from the collapsing Hoover Dam, (6) building a barrier to the flood caused by the broken dam, and (7) rescuing Lois by sending the earth into a reverse orbit to go back in time. As the climax of the film adaptation, this sequence touches on every major theme in the comic books and even borrows directly from stories in Action Comics and Superman comic books.

Other than the build-up to the climax, however, themes from the comic book series repeatedly come to the surface in the Superman film. For example, scenes 11 and 12 show us Clark’s first day at work as a reporter at The Daily Planet. He is introduced to Perry White (editor), Jimmy Olson (photographer), and Lois Lane (reporter), before walking out with Lois at the end of the day. On their way down the street, a mugger pulls them into an alleyway. Clark attempts to reason with him, but Lois impulsively drops her purse and kicks him in the face, causing Clark to get shot. After the mugger is gone, Clark revives and pretends to have just fainted when in actuality he caught the bullet in
his hand. These scenes resonate strongly with the “journalism & Lois Lane” theme because, as in the comic books, Clark works as a reporter for The Daily Planet where he meets Lois. They also resonate with the “double identity” theme in the sense that Clark is careful to conceal his powers from Lois. Lastly, the “feats & rescues” theme is represented as well, since Clark uses his powers to stop the bullet from doing harm.

Further along in Scene 25, the connection between the “double identity” and “love triangle” themes is firmly established when Superman visits Lois on her balcony for an interview. After he takes her on a flying tour of Metropolis, he leaves her love-struck for his immediate reappearance at her door as Clark Kent ready to take her on a date. This well established pattern in which Clark expresses love for Lois, but Lois expresses love for Superman is a deeply entrenched theme of the comic books. Near the conclusion of the film, this theme is reiterated when Lois considers the possibility that Clark is really Superman, but immediately dismisses the notion as ridiculous. Jimmy Olson follows up by saying that he (Superman) really cares about her, and Lois responds “someday, if he’s lucky…”

Similar to Art School Confidential (2006), Superman (1978) is not a purely thematic adaptation, and certain selected distributional functions from the longstanding comic books play pivotal roles in the film.

First of all, the very beginning of the film (Scenes 2-10) traces the story of Superman’s journey from his doomed home planet of Krypton to Earth where he is adopted by the Kents and grows up in Smallville where he realizes his superhuman powers. Upon the death of his father, he goes north to discover his origins and identity in the Fortress of Solitude where he is acquainted with his Kryptonian father who teaches
him the secrets of science and the Universe. This basic scenario establishes Superman’s “origin story” and it has a long history in the comic books. Specifically, variations of this story have been told in: *Action Comics #1, Champion of the Oppressed!* (Siegel & Shuster, 1938); *Superman #1* (Siegel & Shuster, 1939); *Superman #53, The Origin of Superman*, July/Aug. (Finger, Boring, Kaye, 1948); *Superman #146, The Story of Superman’s Life*, July (Binder & Plastino, 1961). Naturally, some modifications were made to achieve consistency with the overall film, but these eight scenes follow the same set of distributional functions present in the comic book stories just mentioned.

Another series of selections were made to compose the climactic sequence of the film. Here, Superman stops the earthquake caused by Luthor’s missile by realigning the tectonic plates of the San Andreas Fault. Superman similarly prevents an earthquake from occurring to a group of impoverished migrant workers in *Superman #247, Must There Be A Superman* (Maggin, Swan, & Anderson, 1972). In another daring rescue, he prevents a train from derailing by using his body as part of the track. This rescue also occurs in *Action Comics #5, Superman and the Dam* (Siegel & Shuster, 1938). An even more substantial selection from that same story occurs when Superman saves a town from the flood caused by the collapsing Hoover Dam.

It should be mentioned, at this point, that there are numerous additional selections or “nods” made to the comic book, but the ones mentioned here that were incorporated into the beginning of the film (Scenes 2-10) and the end of the film (Scenes 39-60) are of primary importance because they play a pivotal role in the context of the plot that was developed for the film adaptation. Indeed, the beginning and ending of the film seem to be composed of selected distributional functions that are used to bracket the fabricated
narrative that is constructed to provide the *unification* necessary to bring these selections together.

Lastly, it should be acknowledged that *Superman Returns* (Singer, 2006) is not discussed here because its structural resemblance to *Superman* (Donner, 1978) gives it more of the appearance of a “remake” than an adaptation proper.

*Selection, Fabrication, and Unification in American Splendor*

More than *Superman* (1978) or *Art School Confidential* (2006), *American Splendor* (2003) makes prolific use of the distributional functions of its comic book source material. However, it is addressed here because it still maintains its status as a thematic adaptation due to the fact that the *selected* distributional functions are subordinated to an original plot that is *fabricated* for the purpose of the film. Thus, *American Splendor* (2003) clarifies that the *fabrication* of a new plot, which incorporates the elements of the source material, is the hallmark of the thematic adaptation. To emphasize this point even further, study two makes use of a scene from *American Splendor* to test responses to a structural adaptation, because there is a corresponding comic book story from which the scene was adapted. Had responses to the entire film been the subject of investigation, it would have necessarily been considered a “thematic adaptation” because there is no comic book (previous to the release of the film) that corresponds to the plot of the film.

Insofar as *American Splendor* is a documentary film about the life and work of comic book author Harvey Pekar, it is enormously consistent with the themes of the original comic book series and the graphic novel, *Our Cancer Year* (Pekar, Brabner, & Stack, 1994), which are, themselves, documentary in nature. The remaining narrative
that was fabricated for the purpose of tying together the vignettes adapted from the comic books is thematically consistent because it encompasses and extends the preexisting stories.

One important thematic aspect of these stories that was effectively adapted to the fabricated portions of the film is the reflexive quality of the presentation. In many of the original comic books, Harvey Pekar addresses the reader directly from the page of the book. This parasocial performance is captured in Scenes 4, 10, and 21 of the film when Harvey is answering interview questions and directing his responses straight to the viewer. The gradual inclusion of other people in the backstage/interview setting with Harvey further contextualizes the film as a reflexive product. For example, Scenes 25 and 80 involve not only the “real” people being portrayed by actors in the movie (Harvey, Joyce, Toby), but also the actors themselves who mix and intermingle with those whom they portray. This atmosphere in which actors are placed in close proximity to the people they portray creates a tight bond between sign and referent that relativises the performance of the actor in terms of who he/she is representing. This occurs in the American Splendor comic books as well by presenting the character of Harvey (sometimes also named Herschel or Jack) through the drawing styles of a variety of artists. Such a technique reduces the monopoly that the representation has on reality.

Another example of this in the film occurs when Harvey comments offhandedly about Paul Giamatti, the actor playing himself. He says: “Here’s our man. Yeah, all right, here’s me. Or the guy playing me anyway, though he don’t look nothing like me. But whatever.” Harvey’s commentary on his own portrayal here is completely consistent
with the reflexive commentary on representation that occurs in many of the *American Splendor* stories.

Having stated this, *American Splendor* (2003) does prolifically incorporate stories from the original comic book series in the plot of the film. In fact, in the broadest sense, one might even say that the film is merely a collage of various stories from the *American Splendor* comic book series that has been combined with the graphic novel, *Our Cancer Year* and stitched together with narration and interviews of Harvey Pekar and his friends and family. Of course, to say this is to ignore the clever ways that the adapted stories are modified in order to serve the plot of the film, which is not adapted from any specific comic book story.

It seems that all of the major turning points or “cardinal functions” (McFarlane, 1996) in the narrative are adapted from comic book stories and then modified to fit the demands of the plot of the film. First of all, Scenes 5-7 are an obvious adaptation of *An Everyday Horror Story* (Pekar & Shamray, 1980) in which Harvey loses his voice and worries that his wife might leave him because he can’t communicate for a long period of time. Several pivotal changes are made in this story for the sake of the film’s plot, though. For instance, the comic book portrays his wife as being very understanding and supportive while the film shows her coldly walking out on him. This change supports the plot structure of the film, however, because it establishes Harvey’s dissatisfaction with his personal and professional life, a necessary prerequisite for the events that are to come. In addition, the original story transpired over a long period of time, several locations and three separate doctor visits. By establishing all of this in a single scene, the
film successfully abridges the glut of details unnecessary for the story’s repositioning in the context of the film.

Another sequence that is borrowed from the comic book series, but significantly modified to meet the needs of the film, comes in Scenes 11-13, which are adapted from *The Young Crumb Story* (Pekar & Crumb, 1979). Once again, the original comic book story is longer because it includes more characters, settings, and events, but, for the sake of the film, its modified adaptation serves to introduce Harvey to Robert Crumb who is instrumental in launching the *American Splendor* comic book series, which, in turn, brings Harvey and Joyce together. Ultimately, it is these two elements (Joyce and comics) that help Harvey recover from his battle with cancer at the conclusion of the film.

The next plot contribution gained from a story selected from the original comic book series is Harvey Pekar’s visit to the grocery store where he must wait behind an “old Jewish lady.” The original story, titled *Standing Behind Old Jewish Ladies in Supermarket Lines* (Pekar & Crumb, 1978) is reappropriated in Scene 16 to serve as the impetus for Harvey to go home and start writing a comic book story about his own daily struggles. Whereas the original story involves multiple trips to the grocery store and veers off into a lesson about how one should not make snap judgments, the film abridges this and uses the story as a catalyst to Harvey’s creation of the first issue of *American Splendor* in the next scene. Scene 18 follows up and continues the adaptation of *The Young Crumb Story* with Harvey showing Crumb samples of his comic book stories. Impressed, Crumb offers to illustrate them and Harvey is overjoyed.
A further significant contribution to the plot that is adapted from the comic book series is Harvey’s chance encounter with Alice Quinn, an old friend from college. Fitting with the now established pattern, the original comic was longer and involved additional settings and characters such as Alice’s home and her family. The film utilizes this story primarily to express Harvey’s loneliness and to serve as a segue to his eventual meeting with Joyce, a critical development in the plot of the film.

The next sequence (Scenes 28-36) is selected from the story *Dear Mr. Pekar: What Do I Do For a Living* and serves to introduce Joyce into Harvey’s life. Once again, this story was modified to suit the needs of the film adaptation. Some aspects were abridged, such as Joyce’s working with the inmate theater company in Iowa, her stay at the hospital, her decision making process about getting married to Harvey, and Harvey’s trip to Delaware to help Joyce move her things. Other aspects were extrapolated such as the scene at the “yuppie restaurant” and the scene at Harvey’s apartment where Joyce vomits in the bathroom. Whereas the reduction removes extraneous details, the addition integrates the remainder into the new context of the film’s plot. McFarlane (1996) might refer to such extrapolation as serving the function of a “catalyser,” which is a supportive action that facilitates the flow of the narrative. As a general rule, catalysers must be extrapolated whenever significant portions of the original plot are abridged. In this particular case, the “yuppie food” from the restaurant scene provided the reason why Joyce gets sick, and Harvey’s compassionate response to Joyce’s illness led to Joyce’s snap decision to marry Harvey.

The last major selections adapted into the film’s cardinal functions are derived from the story *Late Night with David Letterman* (Pekar, 1987) and the graphic novel, *Our
Cancer Year (Pekar, Brabner, & Stack, 1994). The former serves as a bridge to the latter when Joyce’s impatience and dissatisfaction with Harvey’s appearances on the Letterman show (see Scene 58 in Shay’s Restaurant) lead to her decision to go to the Student Peace Conference in Israel, which is part of the plot of Our Cancer Year.

What is presented in the film, however, is an extremely condensed version of the original story in Our Cancer Year that is aimed at arriving at a quick and tidy conclusion. Portions eliminated include Joyce and Harvey’s struggle to buy a house and move out of their old apartment. Portions severely abridged include Joyce’s Student Leadership Project and Harvey’s cancer treatment. For example, Joyce’s single trip to Israel in the film is based on a combination of three separate trips to various locations (including Israel) in the graphic novel. During these trips, she befriends students who ultimately visit her in the end. In the film, Joyce’s student friends are replaced by Danielle, the daughter of a comic book artist whom they adopt at the conclusion of the film.

Perhaps most noteworthy is how Harvey’s agonizingly detailed struggle with his cancer treatment in the graphic novel is reduced to a 13 shot montage which makes use of a mixture of live action footage and panels from the graphic novel. The cinematic montage is a natural way to abridge and streamline comic art source material by removing details and centering the action on a progression of imagery that itself has a formal resemblance to the medium of comics. After all, if comics are “juxtaposed pictorial and other images in deliberate sequence” (McCloud, 1992), how does this definition differ from that of a montage on film? Multiple other film adaptations of comic art make use of the montage in this way.
One last minor selection bridges the gap between Harvey’s struggle with cancer and his retirement at the end of the film: *The Harvey Pekar Name Story* (Pekar & Crumb, 1977). Although some of the monolog is abridged, the story, placed in this new context, serves to summarize all of Harvey’s personal and professional struggles throughout the film by way of an examination of the significance and individuality of his name. This last point highlights the essence of a thematic film adaptation: selecting and sequencing portions of the original narrative so that they can be placed in a new context that propels the fabricated plot of the film. It should be added that there are numerous other examples of comic book stories that were incorporated or at least referenced in the *American Splendor* film adaptation, but the ones mentioned here served as cardinal functions in the organization of the fabricated plot.

*Fabrication in Barbarella and Ghost World*

Another example of a thematic film adaptation that makes extensive use of distributional functions selected from the source material is *Barbarella* (1968). Although, at first glance, the film seems structurally faithful to the cardinal functions of Chapters 4-8 of the original comic book, the central plot of the film is actually fabricated in such a way as to incorporate many of the preexisting elements from those chapters and others preceding it. Unlike the comic art source material in which Barbarella stumbles whimsically into each of her adventures, a clear-cut plot is fabricated for the purposes of the film adaptation. Scene 1 of the film establishes this plot when the “President of Earth” contacts Barbarella aboard her spacecraft and tells her she must go on a mission to find the renegade scientist, Duran Duran, and stop him from using his “Positronic Ray” weapon. Barbarella’s quest to accomplish her mission then serves as the context for each
of the distributional functions that are to follow, which loosely correspond with the
distributional functions of the comic art source material but are condensed, extrapolated,
and reorganized based on the needs of the fabricated plotline of the film adaptation.

Yet another case of a thematic adaptation that abundantly incorporates the
distributional functions of its source material is *Ghost World* (2001). Like *Barbarella*
(1968), this film initially appears like a structural adaptation because of its resemblance
to the comic book upon which it was based, however it too has a fabricated central
plotline that links together the structural elements that were selected from the source
material and reorganizes them to suit the needs of the new film narrative.

This strategy is employed because comic books published in a series of
installments are unlikely to have a readymade story structure suitable for a feature length
film due to the fact that each individual issue or chapter has its own self-contained
narrative that, although compatible across stories, doesn’t form a tightly unified central
narrative suitable for a feature film. In the case of *Ghost World* (2001), the central
narrative was fabricated and the distributional functions were reorganized to meet its
needs. Regardless of their selection of distributional functions, *Barbarella, Ghost World,*
and *American Splendor* highlight the defining feature of all thematic adaptations, the
fabrication of the plot. Although distributional functions from the source material are
selected, they are placed in the service of the plot that was developed especially for the
film. Precisely how this occurs is dependent upon the individual adaptation, but the fact
that it does occur is what makes the adaptation thematic.

Throughout the preceding discussion of *American Splendor* (2003), *Barbarella*
(1968), and *Ghost World* (2001) several operations designated for structural adaptations
were mentioned because of the abundance of distributional functions that were selected from the source material of these three adaptations. In the next section each of these structural operations will be discussed in the context of specific structural adaptations.

**Structural Adaptations**

The following model illustrates the relationship between a structural adaptation and its source material:

![Figure 4. Structural Adaptation. This model shows the course through which a structural adaptation is formed.](image)

As opposed to a thematic adaptation, which, for the most part, selects themes from the source material and subordinates them to the service of a new set of fabricated distributional functions, a structural adaptation selects the actual distributional functions of the source material for use in the adaptation. Although, the way these selections are
transformed through the operations of *condensation, extrapolation, and reorganization* ultimately determines the nature and quality of the adaptation.

In its idealized form, the structural adaptation *selects* the distributional functions of the source material directly, bypassing all other operations. In Figure 4, this is represented by the arrow that points from the “distributional functions” of the source material to the “selection” operation, to the word “pure,” and, finally, to the “distributional functions” of the adaptation. Although no adaptation accomplishes this in the absolute sense, the extended cut of *Sin City* (2005) is perhaps the closest example of such extreme structural fidelity and will be discussed at the end of this section.

More commonly, distributional functions *selected* from the source material undergo a rather extensive transformation process by means of the operations listed in Figure 4. Note that the double arrows between *reorganization, condensation, and extrapolation*, indicate the absence of a preordained order in which these operations must occur. Nor is there a requirement that all of these operations occur in any given adaptation. Also notice the dashed arrows, which indicate that “themes” influence how each of these operations are employed. Below, each of these operations is discussed in the context of specific examples from structural adaptations.

As previously described, the *selection* operation within the context of structural adaptations brings the plot’s distributional functions from the source material into the adaptation. Recall from chapter two that McFarlane (1996) concludes the following:

Broadly, a distinction has been made between those novelistic elements that can be *transferred* and those which require *adaptation proper*, the former essentially concerned with *narrative*, which functions irrespective of medium, and the latter
with *enunciation*, which calls for consideration of two different signifying systems (McFarlane, 1996, p. 195).

Despite the transferable quality of narrative (distributional functions) that makes structural *selection* possible, not all distributional functions need to be *selected* in order for an adaptation to be considered structural. What distinguishes a structural adaptation from a thematic adaptation that *selects* certain distributional functions (such as *American Splendor* (2003)) is that in a structural adaptation the “cardinal functions” are selected. These are the major turning points that propel the narrative forward on a given course and toward a given end. Influential screenwriting expert, Syd Field (1982), refers to the “plot point” as “an incident or event that ‘hooks’ into the action and spins it around into another direction. *It moves the story forward.* The plot points at the end of Acts I and II *hold the paradigm in place*” (p. 111, emphasis in original). So, at a minimum, a structural adaptation must *select* the main cardinal functions or “plot points” of the source material. In some cases, the cardinal functions of the adaptation differ significantly from the source material, but provided they fulfill the same role in arriving at the conclusion of the adapted plot, these are still components of a structural adaptation.

Some structural adaptations *select* specific stories out of a larger series or collection of work. For example, *Sin City* (2005) adapts only four of the original 17 stories: *That Yellow Bastard, The Customer is Always Right, The Hard Goodbye,* and *The Big Fat Kill.* Others, such as adaptations of graphic novels, represent the entirety of the original work. In both cases, though, the key defining feature is that they are anchored by the cardinal functions of the source material.
Selection and Condensation

One particularly good example of how a structural adaptation is sustained by the selected cardinal functions of the source material is David Cronenberg’s 2005 adaptation of the graphic novel *A History of Violence* (Wagner & Locke, 1997). Although the source material and the adaptation diverge from each other in many ways, they are kept on the same narrative track because of shared cardinal functions or plot points.

Briefly, the film adaptation, *A History of Violence* (2005), tells the story of Tom Stall, a family man who becomes a hero one night when he defends himself against a pair of robbers who try to hold up his diner. The media attention he receives brings mobsters from his secret past that his family does not know about. After some harassment, the mobsters get serious and take Tom’s son Jack hostage to trade in exchange for him. The fight that follows lands Tom in the hospital, and he must regain his family’s trust by going to confront his criminal past in Philadelphia. A cursory glance at this synopsis reveals what some of the major cardinal functions are: (1) Tom’s diner is held up by robbers (Scene 9), (2) mobsters from Tom’s past come to the diner (Scene 12), (3) mobsters take Tom’s son, Jack, hostage (Scene 19), and (4) Tom goes to Philadelphia to confront his past (Scenes 25-28).

Because *A History of Violence* (2005) is a structural adaptation, these cardinal functions are grounded in the graphic novel source material. Early in Chapter 1 of the graphic novel, the first two cardinal functions are established: (1) Tom defends himself from robbers and (2) the media coverage brings mobsters from his past to the diner. At the conclusion of Chapter 1, the third cardinal function is presented: (3) the mobsters drive up to Tom’s house with his son as a hostage and threaten to hurt him if Tom doesn’t
come with them. In Chapter 3, the final cardinal function appears: (4) Tom goes to confront his past.

Even more specifically, Field (1982) would probably identify plot point #1 (at the end of the first act) as the second cardinal function discussed above (i.e. mobsters from Tom’s past come to the diner) and plot point #2 (the end of the second act) as the third cardinal function (i.e. mobsters hold Tom’s son hostage and threaten to hurt him if Tom doesn’t come with them). Without the selection of at least these two major cardinal functions or plot points in their specified order, *A History of Violence* (2005) would not be a structural adaptation. The same is true for all structural adaptations.

In modified structural adaptations, once cardinal functions are selected, they may undergo several additional operations including condensation, extrapolation, and reorganization. These are aimed primarily at achieving the consequential operation of unification, which brings together all the elements of the film adaptation into a single narrative structure that is based on the cardinal functions of the source material. These three operations are discussed below, but due to their interrelationship, some of the concepts will be mentioned simultaneously.

As stated in the definition above, condensation refers to the reduction of selected characters and/or distributional functions in structural adaptations. However, this reduction can occur in three basic ways to achieve specific goals. The first of these, condensation as combination, refers to the combination of more than one character from the source material into a single character in the adaptation and may be employed for one or more of the following reasons: First, because of the time constraints of the feature film in adapting a lengthy graphic novel or comic book series, multiple characters from
the source material may have to be combined into a single character in the adaptation to reduce time spent introducing and establishing new characters. Second, fewer characters are more manageable to incorporate into a unified narrative. Third, the need to match content to the needs of the medium may require combination: As an actualized narrative form (i.e. one that uses live action to tell a story), film requires characters to be nearly as complex and multidimensional as people are in real life, because their realistic appearance on the screen sets up this expectation. Conversely, certain one-dimensional characters may be acceptable in the iconic language of comic art because we have a different set of expectations for a caricature than we do for a photorealistic image of a human being. In this sense, there is an expected correspondence between the level of detail in appearance and the multidimensionality of a character.

One way to create a character with multiple dimensions is by collapsing several one-dimensional characters together. For example, in the graphic novel Road to Perdition (Collins & Rayner, 1998), Michael O’Sullivan and his son are hunted by numerous mafia hitmen. In the film adaptation, however, all of these one-dimensional thugs are combined into the single twisted but charismatic character of Harlen Maguire, played by Jude Law. This also occurs in A History of Violence (2005) when multiple levels of law enforcement from the graphic novel (Frank Carney; Deputy Jervis; Detective Lester; Lester’s partner; Detective Paglia; Paglia’s partner) are combined into the friendly old character of Sheriff Sam Carney, played by Peter MacNeill. Numerous other examples of this form of condensation abound in film adaptations of comic art.

A second type of condensation refers to abridging the distributional functions that were selected from the source material. As a general rule, action, narration and dialog
from the source material that is not essential to the plot of the story are abridged at various points in the adaptation to create a more action-oriented and “streamlined” narrative. More specifically, in McFarlane’s (1996) terms, “catalyzers” (supportive actions) that are extraneous to the “cardinal functions” (major events) of the narrative are often removed to tighten the pace of action.

One good example of *abridged condensation* is found in Scene 13 of *V for Vendetta* (2005) when, after bombing The Old Bailey, the protagonist, “V,” forces the television station to broadcast his revolutionary speech to the people of London. While this is clearly based on “A Vocational Viewpoint” from Book 2, Chapter 4 of the graphic novel, much of it is abridged to retain almost exclusively his main point with regard to asking the people of London to join him the following November in a stand against the government. Similarly, V’s captive, Evey Hammond explains her life story to V and tells him she wants to help in whatever way she can. Although this scene has roots in Book 1, Chapter 3 of the graphic novel, it is also heavily abridged. Furthermore, it is deeply integrated into the narrative action since, in the film, Evey escapes from V by pretending to help him. In both of these examples of *abridged condensation*, extraneous details are trimmed and what remains is used economically in service of the story to form a stronger narrative *unity* in the film adaptation. *V for Vendetta* (2005) will be discussed in further detail concerning *condensation* and *extrapolation* starting on page 150.

In structural film adaptations that correspond very closely to their comic art source material, such as *300* (2006) and *Sin City* (2005), dialog and narration present in the original work are noticeably *abridged* in the film adaptation. Because of the extremely close structural relationship between source and adaptation in the extended cut
of *Sin City*, abridged action, narration, and dialog are not difficult to identify. For example, in the comic book version of *That Yellow Bastard*, Hartigan removes the spark plugs from Roark Junior’s car so that it will not start when he tries to escape with young Nancy Callahan. When this is adapted in Scene 6 of the film, Hartigan chases Junior straight to the pier and the car isn’t even involved. Another representative example is found in *The Hard Goodbye* when Marv finds himself trapped with his parole officer, Lucille, in Kevin’s underground prison cell. The comic book depicts Marv trying, unsuccessfully, to pull the bars off the window before bashing his way through the door with his shoulder. But in Scene 13 of the film version, Marv successfully pulls the bars out of the window, thus eliminating the need for the extraneous action.

Another way material from the comic book is abridged in its film adaptation is through the removal of digressions in the voice-over narration. For instance, in the comic book version of *The Hard Goodbye*, after Marv visits Lucille and stops by his mother’s house to pick up his gun, he wanders the streets and thinks to himself about his retarded friend, Chuck, who used to watch in amazement as Marv solved jigsaw puzzles. He likens this to the murder of his lover, Goldie, musing that her killer is like a missing piece of the puzzle. This is adapted in Scene 5 of the film, but the narration about Chuck is excluded. Similar to this, when Marv arrives at the Roark family farm, he crosses through the woods and thinks about how he has hated the woods since he was a kid in summer camp. Although present in the comic, this internal monolog about the woods is also abridged from the film adaptation.

Finally, once at the farm, Marv is knocked unconscious when Kevin strikes him in the head with a sledgehammer. In the comic book, Marv gives a lengthy narration
about what it feels like to be knocked senseless, but the film removes this narration and simply fades to black. Replacing the narration with a fade to black is particularly effective because it uses the cinematic convention itself (fading to black) to stand in for what was described in the narration that was abridged. More of this will be discussed later in terms of translation of conventions from one medium to another.

There are other examples of how the film adaptation is condensed through abridging action, narration, and dialog originally present in the source material, but these examples are adequate to make the point. 

Elimination and Extrapolation

The third and final type of condensation, elimination, is defined by eliminating the distributional functions of the source material by not selecting them at all. Since this is a more invasive form of condensation than the previous two types, it is always accompanied by extrapolation, which refers to the addition of new material to selected distributional functions in structural adaptations. Unlike fabrication, which is based exclusively on themes, extrapolation is also based on the distributional functions that were selected from the source material in the sense that it uses them as a point of departure for what is added. Because of the complementary relationship between elimination and extrapolation, they will be discussed below in conjunction with one another in the context of three adaptations: A History of Violence (2005), Road To Perdition (2002), and V for Vendetta (2005).

As described above, A History of Violence (2005) tells the story of Tom Stall, a family man with a secret past in organized crime that comes back to haunt him when he receives media attention for thwarting a robbery at his diner. Ultimately, he must face his
past to win back his family. Although this accurately describes the film and qualifies it as a structural adaptation based on its use of the main cardinal functions from the graphic novel, it fails to account for the fact that fully one third of the graphic novel was eliminated from the film. This eliminated portion was Chapter 2: “The Brooklyn Murders.”

In Chapter 2 of the graphic novel, Tom confesses his past to his wife and son by telling the story of how he (Joey Muni) and his friend Richie Benedetto assaulted Vittoria’s Restaurant and killed mob boss Lou Manzi for money and revenge. Because Richie’s brother Steve got involved with the mob and was killed by Manzi’s hitman, John Torrino, Richie plotted the attack on Vittoria’s Restaurant. Joey was against the plan until he found out that his ailing Grandmother needed an expensive heart operation that the money from the robbery would easily be able to pay for.

After planning and committing the attack, Richie began flaunting his money and was soon caught by John Torrino. They came after Joey too, but he narrowly escaped and started a new life as Tom Stall.

In the film adaptation, the specific details of Tom’s violent past as “Joey” remain vague, but this theme of a violent youth from the missing chapter re-emerges in the extrapolated storyline involving Tom’s son, Jack, and his conflict with Bobby, a bully at Jack’s high school. In other words, instead of flashing back to tell the story of Tom’s violent past as Joey, the film remains in the present to tell the story of his son Jack’s violent experience at school which reflects and, ultimately, combines with Tom’s conflict with the mobsters of his past. Several key scenes are extrapolated for this purpose.
In Scene 5, Jack is playing baseball in gym class. Because he catches the ball that wins the game, Bobby harasses him back in the locker room calling him a “little faggot” and pushing him into a locker. This conflict between Jack and Bobby culminates in Scene 17 when Bobby and his friends corner Jack in the hallway. Having no choice but to fight, Jack explodes in a rage, beating up both of his aggressors. He punches Bobby in the face repeatedly, shouting, “Come here. Are you laughin’? Are you laughin’ now…you motherfucking cocksucking piece of shit?”

A few aspects of this scene seem to allude to the missing second chapter of the graphic novel. First, Jack’s furious question, “Are you laughin’ now?” recalls Richie’s comment to Joey in Chapter 2 as they make their getaway from the crime scene: “Freakin’ Manzi ain’t laughin’ now!” More importantly, there are two scenes in Chapter 2 where Joey is cornered and must fight back. First, after he and Richie steal goods from a warehouse, they are held up in an alley by two thugs who they fight. The clearest connection to the missing second chapter, though, is when John Torrino corners Joey in an alley. To survive he must fight, and this sensibility is shared in Jack’s fight with Bobby in the film adaptation.

To uncover the unifying function of this extrapolation we must consider the consequences of Jack’s actions. In the very next scene (Scene 18), Jack is being lectured by his father about fighting at school. Angrily, Tom tells Jack, “In this family, we do not solve our problems by hitting people!” When Jack responds saying, “No, in this family, we shoot them!” Tom hits him across the face and Jack runs off. This sets the stage for Scene 19, which is the second major “cardinal function” selected from the graphic novel: Edie returns home and tells Tom that Fogarty followed her to the mall. Just as she is
saying this, Fogarty pulls up to the house holding Jack hostage. Sending Edie back inside, Tom confronts Fogarty and offers himself in exchange for Jack. Once Jack is safe, Fogarty tells Tom to get in the car, but he fights instead. Tom takes out both of Fogarty’s henchmen before being shot in the shoulder. Fogarty approaches Tom to finish him off when Jack suddenly comes from behind and kills Fogarty with a shotgun.

To clarify specifically how this unification occurs, Jack’s fight with Bobby leads to a conflict with his father (Tom) in which Jack is slapped in the face and runs away. In the next scene he is brought back to the house as Fogarty’s hostage and Tom fights Fogarty and his men. Thus Jack’s extrapolated conflict with Bobby is intertwined with his father’s larger conflict with the mobsters from his past.

In the graphic novel, there is no conflict between Buzz (Jack’s name is Buzz in the graphic novel) and his father. Instead, Buzz (Jack) just happens to be riding home from his friend Dennis’s house when he is noticed by the mobsters who, up to that point, had been arguing about whether or not Tom is Joey and if they should return to New York. Seeing his resemblance to his father, though, John Torrino (Carl Fogarty’s name is John Torrino in the graphic novel) is now certain that Tom is really Joey. They kidnap Buzz (Jack) and take him back to the house for the confrontation with Tom/Joey.

Comparing this to the film, it becomes clear that the changes made in the adaptation (the elimination and extrapolation described above) serve to unify and amplify the central conflict of the story in several ways. First, the relationships and conflicts among the mobsters about whether or not Tom is really Joey are eliminated. Similarly, Jack’s visit to Dennis’s house is also eliminated. But the most unifying change in the film adaptation is the link between Jack’s conflict with Bobby at school and Tom’s
conflict with Fogarty. Had Jack not argued with Tom about his fight with Bobby, he wouldn’t have run away and been caught by Fogarty and his men. These scenes become interdependent upon one another.

In the graphic novel, Chapter 2 is like a long flashback in the middle of the story, but the extrapolation in the film that replaces Chapter 2 is fully integrated with the plot as it unfolds in the present tense. The result is a more unified story that eliminates extraneous characters and conflicts and amplifies the relationships and conflicts within the Stall family.

Another set of examples highlighting the complementary relationship between elimination and extrapolation can be found in Road To Perdition (2002), which tells the story of Michael Sullivan, Jr. who, in the wake of the murder of his mother and younger brother, goes with his father on a journey for revenge against the powerful Irish crime family for whom his father worked.

The original graphic novel takes place during The Great Depression and is told from the perspective of Michael Jr., whose life changes drastically after he secretly accompanies his father to work and finds out that he is a hitman for the Looney family, a local Irish crime syndicate. He is discovered and brought home safely, but this leads to Connor Looney (son of mob boss John Looney) murdering his mother and his younger brother, Peter. After this happens, he travels throughout the Midwest with his father who is planning to bring him to his Aunt and Uncle and, ultimately, take revenge against the Looney family. Having obtained documents that incriminate John Looney, his father meets with Eliot Ness and his officers, who later move in and arrest John Looney at his compound. Then, father and son begin to rob banks, stealing only mob money in an
attempt to force mobster Al Capone to give up the whereabouts of John’s son Connor, whom they have been hiding. When a woman is hurt in one of the bank robberies, Michael Sr. rushes her to a doctor and they stay quiet for a while. Finally, they rob and burn the Quinlan, a profitable gambling boat run by the Looneys. With the loss of the Quinlan, Capone gives up Connor Looney and Michael Sr. takes his revenge by killing him in the street. When at last they arrive in Perdition, the home of his Aunt and Uncle, his father is shot by a hitman. An orphan, Michael Jr. grows up in the Catholic Church where he becomes a priest and writes his memoirs.

Unlike *A History of Violence* (2005), there is no gaping hole in the middle of the adaptation of *Road to Perdition* (2002) that is filled with extrapolation. Instead, specific sequences are eliminated and replaced with extrapolated action toward the goal of unifying and amplifying the conflict in the film adaptation. There are four aspects of the story that illustrate this well.

First, the omniscient narrative at the beginning of the graphic novel, which starts with the adult Michael Jr. writing his memoirs and runs throughout the story, is eliminated to permit the audience direct access to the events in the story through Michael Jr.’s point of view. His introductory description of the Midwest during the Great Depression and his father’s association with organized crime and the Looney family is eliminated and replaced with the extrapolation of the first 18 scenes of the film that provide this exposition in the present tense, mostly from Michael Jr.’s perspective. This occurs not only because film is a more inherently “present-tense” medium (Bluestone, 1957), but also because it grants an opportunity to establish the subtler traits of the main characters through their situated actions. For example, Michael Jr.’s precocious
inclination toward the adult world is first insinuated when he smokes a pipe as he rides his bicycle home in the street amidst automobiles, and again when he peeks into the casket at a funeral. The funeral itself, in Scenes 9-14, also serves to establish the historical era and social milieu directly, as opposed to the illustrated narration of the graphic novel source material.

Second, the last bank robbery that Michael Sr. commits in the graphic novel ends with a woman being shot and his bringing her to a doctor. Because this takes the story into a digression, it is eliminated. Instead, in the last bank robbery of the film adaptation, the bank manager merely tells Michael Sr. that their accountant withdrew the money. A couple of scenes later, Michael Sr. finds the accountant, Alexander Rance, but is shot by mob hitman Harlen Maguire as he escapes with the financial records. This leads young Michael Jr. to find help at the home of an elderly farming couple (where he later returns to live at the end of the film). By eliminating the shooting of the mother at the bank and, instead, extrapolating the shooting of Michael Sr. and the scenes at the home of the old farming couple, focus is retained on the main characters and central conflict, amplifying and unifying them in three ways: (1) As Michael Sr. recovers from his gunshot wound at the home of the old farming couple, he and his son have a heart-to-heart talk in which he tells his son that they are very much alike, (2) looking through the financial records taken from Alexander Rance, Michael Sr. discovers that Connor has been stealing from his father. This later leads him to confront John directly to try to persuade him to give up his son, Connor, and (3) the scenes at the home of the farming couple foreshadow where Michael Jr. will return after his father is killed.
A third elimination/extrapolation that functions to unify and amplify the narrative deals with the confrontation of John Rooney. Instead of meeting with Eliot Ness to give him evidence to incriminate John Looney that ultimately leads to a raid and arrest by federal agents, the film eliminates this digression in favor of extrapolating a direct confrontation between Michael Sr. and John Rooney at a church where Michael presents him with evidence that his son, Connor, has been stealing from him. Because John still won’t give up the location of his son, Michael will later return to kill him in Scene 70, but by eliminating the involvement of Eliot Ness and the federal government, and extrapolating the meeting between Michael and John, the main characters and central conflict are both amplified and unified.

The last example of elimination/extrapolation in Road to Perdition (2002) also deals with making the conflict between characters more personal and direct. In the graphic novel, it is Michael Sr.’s burning of the Looney’s “Quinlan” gambling boat that finally persuades Capone and Nitti to give up the location of Connor Looney to him. In the film adaptation, this is eliminated and the extrapolation of Michael Sr. killing John Rooney replaces it. With John Rooney dead, Connor is no longer protected and Michael Sr. walks into the Lexington Hotel and shoots Connor in the bathtub. As in the previous example, this elimination/extrapolation amplifies and unifies the narrative by making the conflicts between the characters more direct.

Following A History of Violence and Road to Perdition, a third set of examples highlighting the complementary relationship between elimination and extrapolation can be found in V for Vendetta (2002), which tells the story of a near future in which London is under the control of a totalitarian regime that is disrupted by “V,” a terrorist and...
revolutionary dressed in a cape and Guy Fawkes mask who leads the people in revolt. The plot begins with V rescuing a young woman, Evey, from being brutalized by the police, and taking her to a rooftop where she watches as V blows up The Old Bailey. Soon afterward, V breaks into the television station and broadcasts a message to the people of London, asking them to join him in one year in a stand against the government. Evey (who works at the television station) helps V escape, but is knocked unconscious in the process, causing V to take her with him back to his secret home base where he forces her to stay, lest she reveal his whereabouts. Government officials, including Mr. Creedy (police), Mr. Etheridge (audio surveillance), Mr. Dascombe (broadcasting), Mr. Heyer (video surveillance), and Mr. Finch (detective) are commanded by the High Chancellor, Adam Sutler, to find the terrorist while, in the meantime, V is killing off prominent government officials. When V kills Bishop Lilliman, Evey helps him, but escapes in the process. Evey goes to stay with Gordon Dietrich, a popular television comedian who puts on a show parodying Chancellor Sutler. The program shows the changing tide of public opinion against the government, but Dietrich is arrested and Evey is caught. In prison for a long time, Evey refuses to give up information about V. Willing to be executed, she is strangely set free to discover that V has been holding her captive in disguise the entire time. At first she is furious with him, but then comes to realize that he freed her from her fears. In the meantime, Mr. Finch discovers that the government was responsible for the biological attacks at St. Mary’s and Three Waters that catapulted Chancellor Adam Sutler into power. Ultimately, Evey returns to see V before the day of the revolution and he shows her the train packed with explosives that he will use to destroy the houses of Parliament. Leaving Evey, V goes down the tunnel to face Mr.
Creedy, who has brought him Adam Sutler in exchange for himself. In a fantastic fight in which V is mortally wounded, he stumbles back to the train, where Evey places him aboard and sends it to explode Parliament as he wanted. The people of London then gather outside and watch as Parliament explodes, and hope for a just future is reborn.

The synopsis of the film presented above is a heavily condensed version of the original 3-book, 36-chapter graphic novel, and there are two related ways in which elimination and extrapolation of the source material work to unify it into the film adaptation. The first way is by shifting the focus from the relationships among government officials to the primary relationships of the protagonists: V and his young protégée, Evey. The second is by extrapolating a crime committed by the government that unites all the elements of the narrative.

Beginning with the first of these, there is a more extended network of characters and relationships in the graphic novel that is eliminated in the film. Whereas the film focuses primarily on the relationship between V and Evey and their conflict with the government, the graphic novel develops a variety of secondary characters and subplots, most of which revolve around the top government officials. To begin with, Mr. Creedy only takes over as head of the “finger” (police) after his predecessor, Derek Almond, is killed trying to apprehend V at the home of the coroner, Delia Surridge. Derek Almond’s widow, Rosemary, whose abusive relationship with Derek is covered in some detail, finds herself working at a burlesque house where she buys a gun and ultimately kills the leader, Adam J. Susan, near the end of the story. None of these relationships are explored in the film.

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8 Chancellor Adam Sutler’s name is Adam Susan in the graphic novel.
Another example of condensation and elimination revolves around the character of Conrad Heyer of the “eye” (government surveillance) and his submissive relationship to his cold and ambitious wife, Helen, whose ultimate plan is for Conrad to take the place of the leader so that she can control the government through him. Toward that goal, she conspires and has an affair with Mr. Creedy’s paid thug, Alistair Harper, whom she hires to kill Creedy when the time is right to ensure Conrad’s elevation to the position of leader. However, when Conrad sees a videotape of Helen having sex with Alistair, he fights him and they both die as a result. Again, none of this is included in the film. Indeed, Derek and Rosemary Almond, Helen Heyer, and Alistair Harper don’t even appear as characters in the film. The character of Mr. Creedy seems to absorb Derek Almond and Alistair Harper (combination), and the marital relationships are omitted completely.

The relationships above are eliminated and replaced by a series of connections based on an extrapolated crime committed by the government that unites all the characters into a single unified plotline, which I will now describe as the second way unification occurs in the adaptation.

The most important way that the film adaptation differs from the graphic novel source material is the extrapolation of the biological attacks on St. Mary’s and Three Waters that preceded Chancellor Sutler’s rise to power. This addition serves the purpose of unifying various characters and plot elements which were formerly independent of one another.

First of all, V’s bombing of The Old Bailey gains the attention of Mr. Finch and his assistant Dominic. Although they cannot identify V (because of his mask), they are
able to see Evey’s face and pursue leads pertaining to her. In Scene 11, they discover that her parents were political activists and that she was part of the juvenile reclamation project. Later, in Scene 17, they discover her brother was a student who died from the biological attack at St. Mary’s.

Second, after investigating the murder of prominent party member Lewis Prothero, Mr. Finch and Dominic establish a connection between Prothero’s stock holdings in Viodoxic Pharmaceuticals, and the disease outbreak at St. Mary’s. After working all night, Mr. Finch tells Dominic that he suspects someone in the government is responsible for the biological attacks at St. Mary’s and Three Waters. Finally, the complete story emerges in Scene 59 when Mr. Finch and Dominic go to visit a secret informer known as William Rookwood (who is really V in disguise).

Rookwood tells the story of Sutler’s rise to power and Creedy’s idea to unleash the biological agent developed at Larkhill on the citizens. After the attacks on St. Mary’s and Three Waters, Sutler is elected High Chancellor and the cure is marketed through Viodoxic, a company in which prominent party members hold stock. By extrapolating this portion of the story, several key characters and plot elements are brought together to form a tighter unity in the overall film: (1) V was a prisoner at Larkhill, the detention facility where Delia Surridge was performing biological tests on human subjects which resulted in the development of the virus which was unleashed on St. Mary’s and Three Waters, (2) Chancellor Sutler rose to power with the help of Mr. Creedy, whose idea it was to use the biological agent developed at Larkhill to poison St. Mary’s and Three Waters so that party members in the newly established government could then market the drug that would stop the virus, and (3) Evey’s brother was killed at St. Mary’s, causing
her parents to become politically active, which led to their arrest and her detention in the juvenile reclamation project.

Beyond unifying these previously disparate characters, the addition of the story of the biological attacks on St. Mary’s had the effect of amplifying the conflict in the story. In the graphic novel, V’s vendetta seems to be a relatively personal consequence of what was done to him at Larkhill. Naturally he recognizes the broader corruption of the repressive totalitarian government, but there is no single underlying atrocity that the government has committed. In the film, the government is guilty of killing almost 100,000 people, many of them young children. This fact in itself raises the stakes and forces the viewer into an allegiance with V.

The previous three sets of examples from *A History of Violence* (2005), *Road to Perdition* (2002), and *V for Vendetta* (2005) respectively have served to demonstrate how condensation through eliminating distributional functions from the source material often necessitates extrapolation in order to tie the remaining cardinal functions together into a unified narrative. However, in some cases, extrapolation alone is used to fortify a narrative that lacks the multiple plot dimensions typical of a feature film. One excellent example of this is found in *300* (Snyder, 2006).

*Extrapolation in 300*

*300* (2006) adapts Frank Miller’s short (81 page) graphic novel of the same name, which tells the tale of the Spartan King Leonidas whom, despite the decision of corrupt and superstitious priests, takes 300 of his best soldiers to stop King Xerxes and his massive Persian army at the “Hot Gates,” a narrow cleft of rock in the cliffs of the shoreline. After days of battle, the Spartans are betrayed by Ephialtes, a hunchback
traitor who, rejected by the Spartans, leads the Persians in through the back of the Hot Gates. At last, Leonidas makes his final stand and he and the 300 die bravely before Xerxes. But the tale is told by Delios, the narrator who is leading the entire Greek army to battle with the Persian Empire.

This synopsis accurately describes the central plotline in both the graphic novel source material and the film adaptation, however the film adaptation goes further, adding narrative information to enrich and unify the story and provide more dimensions to some of the characters. Additional storylines revolve around extrapolated familial relations, and an extrapolated conflict on the home front. How these are incorporated is described below.

Scene 3 introduces King Leonidas’ elaborated relationship to his family. He is training his son to fight and teaching him about “respect and honor” when the Queen comes to tell him that a Persian messenger has arrived. This scene initiates the extrapolation of King Leonidas’ role as family man. Scene 5 further emphasizes Leonidas’ role as husband when he discusses his concerns with his wife before they make love. In the next scene (Scene 6), just before Leonidas parts with his family, his son hands him his helmet and his wife gives him a necklace. The necklace doesn’t exist in the graphic novel, but is added to the film in order to offer a tangible symbol of Leonidas’ connection to his family. In Scene 30, Leonidas gives the necklace to Dilios to return to his wife because he intends to die in combat. When the Queen receives it in Scene 34, she knows Leonidas is dead and places it on the neck of their son. This gesture potently reinforces the extrapolated relationship between Leonidas and his family and provides a unifying closure that simultaneously amplifies the dramatic force of the scene.
Furthermore, just before Leonidas makes his last stand against Xerxes in Scene 33, he has a memory of his wife lying in a field of grain. This short flashback serves as the focal point of all of the previous extrapolation about Leonidas’ relationship to his family. He recalls his wife and his land, the very things he has been fighting for all along. Bringing this to attention rehashes all of the previous additions involving Leonidas and his family and serves to integrate them into the overall unity of the narrative.

Scene 6 also introduces the Spartan Captain’s extrapolated relationship to his son, Astinos. When King Leonidas sees the Captain’s son among the 300 Spartans bound for the Hot Gates, he says, “He is too young to have felt a woman’s warmth.” The Captain replies, “I have others to replace him. Astinos is as brave and ready as any. No younger than we were the first time you stood next to me in battle.”

Later, as they enter the Hot Gates in Scene 10 and Dilios narrates, “Brothers, fathers, sons…we march,” Astinos walks by his father, who gives him a stern glance. Further along, in Scene 22 Astinos saves his father, the captain, from an attacking Persian. At the conclusion of the battle in Scene 26, the Captain calls to his son and smiles approvingly just before a Persian rides up and decapitates Astinos. Although Astinos was also killed in the graphic novel, his death is shown with graphic detail in the film. The death of his son causes the Captain to grieve and ultimately give a powerful speech in Scene 29: “I have lived my entire life without regret until now. It’s not that my son gave up his life for his country. It’s just that I never told him that I loved him the most. That he stood by me with honor. That he was all that was best in me.” Leonidas replies, “My heart is broken for your loss.” The Captain continues: “Heart? I have filled
my heart with hate.” Leonidas says, “Good.” This speech has the profound effect of personalizing the conflict and amplifying its importance. It also ties together all of the previous scenes involving the relationship between the Captain and his son, giving the story a greater sense of unity through integrating these elements into the larger narrative.

All of this is emphasized further in the last battle of Scene 33 when we see the Captain fighting even after he’s been impaled by an enemy spear. As we see his last fight, we recall his relationship with his son and the horror he felt because of his death. Without these elements that were extrapolated in the film adaptation, this aspect of the story would not have been as well integrated into the unity of the overall narrative.

As an overall note, the extrapolation of familial relations in the film adaptation also functions to create deeper, more complete characters. Although it may be acceptable in the pages of a comic book or graphic novel to present a one-dimensional “caricature,” this doesn’t work in the medium of film, perhaps (as previously suggested) because of the expectations fostered through the actualization generated by the photorealism of the presentation.

Beyond the extrapolation of family ties, the film adaptation manufactures an additional conflict on the home front between Leonidas’ wife, Queen Gorgo, and Councilman Theron, a member of the Spartan council who has been secretly bought off by the Persians.

Although the stage is set in Scene 4 when Theron shows that he is in league with the Persians, the conflict at home begins in Scene 12 when the head of the Spartan Council comes to speak to the Queen, telling her, “The courtyard is a more fitting place for a married woman.” She remains in her home because she fears Councilman Theron is
spying on her. She requests to speak to the council and let them know that “Freedom isn’t free at all. That it comes with the highest of costs, the cost of blood.”

The conflict is further perpetuated in Scene 18 when Theron finds her son and brings him back to her saying she should “keep a better eye on him if he’s to be king one day. It would be unfortunate if anything were to happen to him. Or to his beautiful mother.” Just before this, the head of the Spartan Council told her she should make Theron her ally before addressing the council in two days.

In Scene 28, Theron comes to visit the Queen. She attempts to negotiate with him to support sending the army north to help King Leonidas, but Theron is not receptive. Finally he agrees to help send the army north in exchange for sex. She disrobes and he roughly turns her around and sodomizes her saying, “This will not be over quickly. You will not enjoy this. I’m not your king.”

This conflict between the Queen and Councilman Theron culminates with her speech to the Spartan Council in Scene 31 where she appeals to the council members to send the army north to aid Leonidas and his 300 soldiers. Theron reproaches her, questioning her honor and accusing her of offering herself to him. When he calls her a whore, the Queen stabs Theron in retaliation and, as he falls to the floor, Persian coins spill from his purse, revealing him as a traitor.

This extrapolated political battle on the home-front cultivates an additional dimension to the narrative that has the effect of “heightening the stakes” by amplifying the dramatic importance surrounding Leonidas’ fight against the Persians. The Queen’s struggle on behalf of her husband compels the viewer to further identify with his struggle.
Also, the addition of this storyline develops a richer, more three-dimensional narrative while still remaining unified around the primary conflict of the battle.

Notice that in all of the examples of extrapolation described above, that the material extrapolated is consistent with the themes (characters and conflicts) of the source material as indicated by the dashed lines of Figure 4. While this is also true of the fabrication in thematic adaptations, extrapolation (as previously mentioned) is connected to the existing distributional functions of the source material.

Reorganization in Sin City

Other than selection, the various kinds of condensation (combination, abridging, elimination), and extrapolation, one last causal operation remains to be discussed: reorganization. Once again, reorganization refers to the reordering of selected distributional functions in structural adaptations. Despite being first on the list, reorganization is described here last because it is heavily interdependent with the other operations and requires a prerequisite understanding of selection, condensation and extrapolation in order to be fully explained.

Although there are numerous examples of reorganization throughout the structural adaptations chosen for scrutiny, one especially clear example will be described below: Sin City (2005) (the theatrical release).

Although the extended cut of the Sin City (2005) film is presented as four separate episodes which correspond to the four comic book stories that they adapt, the theatrical release combines all of these into a single intertwined narrative that shifts between stories in the order that follows: (1) The Customer is Always Right, (2) the beginning of That
Yellow Bastard, (3) The Hard Goodbye, (4) The Big Fat Kill, and, finally, (5) the remainder of That Yellow Bastard.

Because these stories are not presented in chronological order, they are bound together, instead, through reorganization and extrapolation. An examination of the sequence above reveals a clear logic in the order of presentation. The unique aesthetics and atmosphere of the film are introduced in The Customer is Always Right. A man follows a woman out onto a balcony and, after exchanging a few words and embracing, shoots her dead with a silenced gun. His comments afterward, “I’ll never know what she was running from. I’ll cash her check in the morning,” indicate that she had hired him to kill her.

From there we move into That Yellow Bastard, which occupies a special role in the theatrical release because it is split into two parts that bracket the other two stories employed in the adaptation. The first portion of That Yellow Bastard introduces us to John Hartigan, a tough cop out to save a little girl named Nancy Callahan from the clutches of Senator Roark’s twisted son, Junior. When he arrives on the scene, he punches out his partner, Bob, for trying to stop him and fights his way to Nancy. But when Hartigan finds Junior, he escapes with Nancy out to the pier. Following Junior, Hartigan frees Nancy and shoots Junior just before Bob shows up and shoots Hartigan in the back. After waiting just long enough for backup to arrive, Hartigan blacks out with Nancy in his lap. Hartigan’s black-out is a segue to the remaining two stories, which are presented intact from beginning to end.

First, The Hard Goodbye tells the story of a tough guy named Marv who wakes up one morning with a dead woman in his bed and fights his way to the truth to avenge
her. Next, *The Big Fat Kill* introduces Dwight and Shellie before telling the story of how Dwight saves Gail and the girls of Old Town from infiltration by the mob. Finally, the plot returns to Hartigan as he wakes up in the hospital.

Put in prison for the crimes of Roark Junior, eight years pass before he receives a severed finger in an envelope and believes that they have found Nancy again. Falsely confessing to everything, Hartigan gets out of prison and finds Nancy only to discover that they used him to find her.

Hartigan and Nancy escape to a motel together, but Roark Junior (mutated and yellow from treatments used to save his life) ambushes them and kidnaps Nancy. Picking up the trail, Hartigan finds his way to the barn where Junior intends to kill Nancy. He pretends to collapse and waits until Junior comes close enough before stabbing him, tearing off his sex organ and punching him into a yellow pulp. Outside, Hartigan sends Nancy on her way before putting a gun to his head and killing himself so that they can never find her again.

The last three stories combine and flow together in this order for several reasons. First of all, the “chronological span of the narrative events” (Blusetone, 1957, p. 49) in *That Yellow Bastard* is longer than either of the other two stories because Hartigan spends eight years in prison. And, although *The Hard Goodbye* and *The Big Fat Kill* are not presented as occurring during his time in prison, the story retains its lengthier sense of chronological duration and, thus, is used to encompass the others.

Another reason this arrangement forms a strong unity is that some characters appear in multiple stories. Frank Miller comments about the original comic books: “My citizens do tend to bump into each other a lot across stories” (Miller & Rodriguez, 2005,
p. 13). For example, Dwight’s girlfriend Shellie in *The Big Fat Kill* is also a waitress at Kadie’s bar who serves Marv a drink in *The Hard Goodbye*. More important to connecting the stories used in the film, however, is the fact that Nancy appears in both parts of *That Yellow Bastard* in addition to *The Hard Goodbye*. In the first part of *That Yellow Bastard*, she’s a little girl who is saved by John Hartigan; in *The Hard Goodbye*, she’s the exotic dancer who helps Marv; and, finally, in the second part of *That Yellow Bastard*, she’s a young woman who is saved again by Hartigan.

Even though the original comic books themselves use these characters across different stories, the film adaptation goes further by extrapolating additional interaction across stories. During *The Hard Goodbye*, for instance, when Marv walks into Kadie’s bar, Dwight (from *The Big Fat Kill*) is sitting down in the corner. The camera indexes on him and he thinks to himself how Marv would have been better off as a warrior in an ancient land. This occurs only in the film and serves as unification between *The Hard Goodbye* with *The Big Fat Kill*. Another example also occurs at Kadie’s bar when, in the second part of *That Yellow Bastard*, John Hartigan finds Nancy dancing on the stage in front of Marv (from *The Hard Goodbye*). Here, it is *That Yellow Bastard* and *The Hard Goodbye* that are unified.

Finally, in the very last scene of the film, Becky (the young hooker from Old Town who betrayed Gail) walks down the hallway of a hospital and gets onto an elevator where she’s offered a cigarette by the killer from *The Customer is Always Right*. This is pure extrapolation since it has no basis in any of the original comic books, but it has the effect of unifying the reorganization of stories in the theatrical release since it closes the film in the same way that it was opened. More specifically, the last scene of the film
answers the question posed in the first. We do not know why the woman on the balcony wanted to be killed, but Becky was running from Gail and the girls of Old Town whom she betrayed.

Composite Model of Adaptation

The two previous sections describe adaptation operations as they are employed in both thematic and structural examples. Based on the examples above, Superman (1978), Art School Confidential (2006), American Splendor (2003), Barbarella (1968), and Ghost World (2001) constitute “thematic” adaptations whereas Sin City (2005), A History of Violence (2005), Road to Perdition (2002), V for Vendetta (2005), and 300 (2006) constitute “structural” adaptations. The composite model in Figure 5 incorporates all of the operations except for translation, which will be discussed next.
Figure 5. Composite Model of Adaptation. This model shows the course through which thematic and structural adaptations are formed.

Translation

Integrational functions pose a special challenge in adaptation because, as opposed to distributional functions, which may be transferred directly between narrative media, they must undergo “adaptation proper” (McFarlane, 1996, p. 13). This is essentially a matter of translating the modifications imposed upon the integrational functions by the constraints and affordances of the source medium (comic art) to the modifications imposed upon the integrational functions by the constraints and affordances of the adaptive medium (film) (see Figure 6).
Themes are composed not only of common event elements drawn from the original set of distributional functions in the source material, but also from the common psychological elements derived from the integrational functions. However, unlike the distributional functions, medium specific tools and strategies must be used to translate the psychological elements of the source to the adaptation.

The process of translating integrational functions from the source medium to the adaptive medium may be especially important to capturing the “spirit” of the original work as it is described by Elliot (2003). This essential quality of the source text that exists outside of its original form may be captured only through an awareness of how to manipulate the conventions of the adaptive medium to evoke a similar atmosphere.

Seven forms of translation are described below using specific examples from the adaptations employed in the above analysis. These are: actualization, intermedia
reflexivity, grabbing the panel, expansion, breaking up the panel, conversion, and cooling off for a hotter medium.

Actualization

First, “actualization” refers to the effect of replacing comic artwork with actual people and settings that are recorded on film. All live-action film adaptations are actualized in the sense that they bring the iconic symbols of comic art to life in the form of physical actors and settings that are captured on film. It was this quality of film adaptation that Elliot (2003) was referring to in her “incarnational” concept, wherein the words of the source text are replaced by the physical bodies, actions, and settings of the adaptation.

Intermedia Reflexivity

Second, to understand Szczepanik’s (2002) concept of intermedia reflexivity, it is helpful to discuss the nature of the comic book to film translation process as occurs in American Splendor (2003). Szczepanik defines intermedia reflexivity as “the reflection of material, structural and pragmatic features of one medium merging into another” (p. 29). With respect to this idea, he further observes, “this irruption of different media elements makes visible, and simultaneously defamiliarises, the hidden mechanisms of the underlying medium” (p. 29). In essence, what this means is that when one medium is depicted through the display of another, the conventions of both media forms become more obvious and their particular methods of representation become more apparent.

There are numerous instances within American Splendor where the medium of comic books is depicted through the medium of film in precisely this way. Certainly the most obvious form of intermedia reflexivity in the American Splendor film is the actual

9 Sin City (2005) is an exception to this rule because the settings were computer generated.
use of comic books to tell portions of the story. Developing characters such as Mr. Boats and Joyce along with describing events such as Harvey’s appearance on The David Letterman Show, and his struggle with cancer treatment are all assisted in part with actual comic artwork from American Splendor and Our Cancer Year. Perhaps the most remarkable manifestation of this technique occurs in Scene 19, which is a montage that shows the publication of the first issue of American Splendor through morphing scenes from Harvey’s life into the artwork on the pages of the comic book.

Even the DVD menu for the film serves as an example of intermedia reflexivity since it is authored to permit the viewer to choose from different features by electronically “turning the pages” of the interface which is designed to function like the pages of a comic book. Similarly, the opening credit sequence also consists of the pages of a comic book, but with live action footage occupying many of the panels on the pages. In this way, the medium of film is depicted through the medium of comics, which is, in turn, depicted again through the medium of film. By juxtaposing the formal features of the intersecting media, the conventions of each are made relative to one another and the representation processes of both media are laid bare.

Another way that comic books and film are merged in American Splendor is through the blending of conventions. It is a common technique throughout the film to set the scene or establish the setting through the use of a “word box” in the upper left corner of the screen. For example, the first shot of the film has the words “1950: Our story begins” in the corner. The words “Voice trouble, 1975…” transitions us into another scene, and so forth. This specific technique occurs nine times throughout the course of
the film, so it is fair to say that it is fully integrated into its particular set of narrative conventions.

Word boxes are not the only way that comic book conventions are mixed into the film, though. In Scene 16, Harvey is getting on the checkout line at the grocery store when word balloons appear above his head to reveal his thoughts. Once on the checkout line, an animated version of himself pushes a comic book panel into the frame of the shot and starts to talk to Harvey. Another example of this occurs when Joyce travels to meet Harvey for the first time and is imagining what he might look like based on the renditions of him in *American Splendor*. She sees various styles of animated Harveys sitting all about the train station. In a final example that occurs near the end of the film, Harvey walks into an animated environment where he discusses his name. Things are reversed in this example: it is the environment that is animated and Harvey that is live-action.

These examples of mixing the conventions of comic art and film are blatant efforts to merge the conventions of two systems of representation, but the film does not stop there. More subtle strategies further develop the intermediated relationship between the disparate forms of representation. For example, the abundant use of “page turn” and, to a lesser extent, “vertical wipe” transitions between scenes has the effect of mirroring the appearance of comic art when it is read from a page. Similarly, the use of a “split screen” in several instances such as Joyce and Harvey’s phone conversation in Scene 32 has the effect of transforming the cinematic frame into comic book panels.

Of these more subtle examples of how the film adopts some of the conventions of comic art, one in particular stands out. In Scene 22, Harvey is at work while he struggles to write the next issue of *American Splendor*. The scene is broken up by a series of jump
cuts that show Harvey pacing, sitting on the floor, and working at his desk. Since the fragmented progression of imagery in comic art is not unlike the effect of a series of jump cuts in film, this serves as a very subtle way of incorporating a comic book aesthetic into the film.

Another film that briefly makes use of intermedia reflexivity in the translation process is *Superman* (1978). In the first scene of the film, curtains open on a movie screen with the words “June 1938.” An issue of *Action Comics* appears next and a childish hand turns open the cover. The boy reads: “In the decade of the 1930s even the great city of Metropolis was not spared the ravages of the world-wide depression. In the times of fear and confusion the job of informing the public was the responsibility of the Daily Planet: a great metropolitan newspaper whose reputation for clarity and truth had become a symbol of hope for the city of Metropolis.” Literally filming the comic book calls attention to the distinctive features of both media, but also naturalizes the translation process. Morphing the comic-book image of the “Daily Planet” into the film image merges the conventions of both media.

Due to its remarkable level of aesthetic fidelity, the remaining types of translation are described within the context of *Sin City* (2003), but supplemented by other examples where possible.

There is certainly no better example of a structural film adaptation of comic art source material than the 2005 adaptation of Frank Miller’s *Sin City* comic book series. In the back of a 1996 issue from the original series, a fan writes a letter to Frank Miller suggesting “The perfect cast for a *Sin City* flick: your right hand (or left), a brush, 184 pieces of bristol, and a couple jugs of ink.” It seems that when it came time for the task,
Robert Rodriguez and Frank Miller did almost the equivalent through the use of computer-generated environments that were mapped onto the green-screen backgrounds that actors performed in front of. Miller himself even compares the production of the film to the act of drawing: “The process by which Robert puts these movies together using the green screen and everything, greatly resembles drawing. It’s really a matter of creating elements and moving them about” (Miller & Rodriguez, 2005, p. 16). He further notes, “Sin City is far and away the most faithful translation of a comic book to film” (Miller & Rodriguez, 2005, p. 12). Director Robert Rodriguez echoes this sentiment, commenting, “This is the most faithful adaptation of a graphic novel every [sic] produced in Hollywood…” (Miller & Rodriguez, 2005, p. 15). Elaborating further on the philosophy that governed the film’s production, he states, “Instead of adapting the comic to cinema, we can turn it around, and bring the comic to life and really just translate it to the screen” (Miller & Rodriguez, 2005, p. 15).

Due to this extreme structural fidelity to the source material, Sin City (2005) presents a unique opportunity to compare the medium of comic art to the medium of film and to understand how the translation of conventions occurs between these media forms. But before going further to delineate how this translation occurs, it is necessary to refer to the theory of the “Uncanny Valley” (Mori, 1970) to explain why there are such a variety of differences between source and adaptation in a film that follows so closely the structural features of the comic book source material.

The Uncanny Valley is a phenomenon discovered in the field of robotics that describes reduced levels of familiarity and positive emotion occurring in response to robots that are very similar to humans as opposed to robots that are only marginally
similar. This is theorized to occur as a result of the foregrounding of the few remaining non-human characteristics exhibited by the robot. In the case of robots that are less similar to humans, it is the human characteristics that are foregrounded, leading to increased familiarity and positive emotional response. Applying this general concept to the current problem, it seems that the more structurally similar the adaptation is to its source, the more opportunity exists for mismatches between comic book and film. In opposition, an adaptation that is not sufficiently similar to its source material will not allow close scrutiny because there is a lack of correspondence. Having established this, I now proceed in distinguishing the types of translations made in *Sin City*.

*Grabbing the Panel*

The simplest technique employed in translating imagery from the comic book to the film is what I will term “grabbing the panel.” This refers to the numerous instances throughout the film (both the theatrical and extended cut) in which the content and composition of a panel from the comic book is reproduced precisely in the film and frozen onscreen for an instant. This technique strongly reflects Rodriguez’s view of the adaptation as a simple change of medium in which the film supplies “snapshots of movement” (Miller & Rodriguez, 2005, p. 16). Further elaborating on this process, Rodriguez explains, “I lined up the frame right from the original panels, so that it was the shot from the comic, but it was moving” (Miller & Rodriguez, 2005, p. 17).

Although an exhaustive discussion of each instance of this technique would be of limited value, it is worthwhile to point out some of the most obvious examples. Those that follow are taken from the individual stories of the extended cut, though they appear in the theatrical release as well.
Beginning with *That Yellow Bastard*, the last shot of Scene 7 takes place on the pier and occurs after John Hartigan has saved young Nancy Callahan from the clutches of “Junior,” the evil child-molester/murderer. His corrupt partner has shot Hartigan and he is sitting slumped over against the dock post as Nancy nestles into his lap. This particular shot is very true to the composition of the original comic book drawing, and it is used to maximum effect here because it is a transition to the next phase of the story.

A second instance occurs in the vignette, *The Customer is Always Right*. In this scene, a woman walks out onto a balcony overlooking the city and a man follows her. He offers her a cigarette and they embrace. The scene of their embrace is composed with careful attention paid to the drawing from which it originates and, like the original, it is rendered with reversed values (i.e. negative). As with the previous example, this too is a pivotal moment since it immediately precedes his shooting her.

Likely the most prolific example of “grabbing the panel” is used in Scene 18 of *The Hard Goodbye*, after Marv and Wendy go to the hardware store to purchase supplies to use against the woman-killer and cannibal named Kevin. Driving out to the Roark family farm, Marv goes over the supplies in his head (“rubber tubing, gas, saw, gloves, cuffs, razor wire, hatchet, Gladys [his gun], and my mitts”) and as he names each successive item, it appears onscreen composed meticulously similar to the identical series of panels in the comic book. So, for nine shots in a row, the panels of the comic book and the frames of the film are nearly indistinguishable. This is the essence of the “grabbing the panel” technique, to make occasional contact with the source material in the form of a literal reproduction of its imagery onscreen so that the act of watching the film is like reading the comic book onscreen.
Examples of “grabbing the panel” also occur outside of Sin City (2005). In Road to Perdition (Mendes, 2002), for example, the driving montage that ends in Chicago features an image of Michael Jr.’s face looking out of a car window that is reflecting the image of the city. This is composed based on the full-page comic book panel in Chapter 2, page 115 of the graphic novel.

Expansion

Expansion is without doubt the most ubiquitous technique used in the Sin City adaptation because it refers to the addition of detail that was not present in the original comic book and can include photographic detail, motion, and sound. Naturally, comic books portray motion and sound as well, but here I refer to the apparent motion produced by the persistence of vision and the audible sound from the soundtrack of a film.

Beginning with the addition of photographic detail, it should be noted that although the film bears a strong resemblance to the comic book based on framing, composition, and lighting/contrast, the intention of the filmmakers was clearly to actualize the characters by embodying them in real people. Further, great care was taken to photograph the actors for a maximum amount of exposure latitude so that detail and contrast could be manipulated in postproduction. Previsualization Supervisor Chris Olivia explains specifically:

We didn’t want to do too much processing in camera because then it would limit us later on. Once we got the plates in, the team started doing rough composites; turning them black and white, getting the contrast levels right, making sure the skin looked right and the eyes didn’t get too dark. Then it was a matter of getting the actors integrated with the CG backgrounds we were designing. From that
point, it was just a balance of stepping back to look at the picture compositionally to make sure the overall shot wasn’t too black or too white and that the live action plate was embedded realistically in the shot (Chris Olivia, Previsualization Supervisor) (Miller & Rodriguez, 2005, p. 20).

In this way, the photographic detail of film supplemented the original comic book aesthetic.

The addition of motion is sometimes difficult to perceive in the Sin City film adaptation because the original comic books portray it so fluently to begin with. However, close scrutiny reveals an abundance of instances where the formerly static panels of the comic book are stitched together at a rate of twenty-four frames per second. I point out the following five examples that are typical of what occurs throughout both the theatrical release and extended cut of the film.

Scene 13 of That Yellow Bastard finds our hero, John Hartigan, in prison for a crime against young Nancy Callahan that he did not commit. For her own safety he has told her not to come forward and tell the truth, so she writes him letters instead. Eight years later, when the letters suddenly stop coming, Hartigan feels alone and forgotten and this is graphically portrayed on the page of the comic through a series of four frames tumbling downward and becoming progressively smaller. In the film, the intervals are bridged with motion and the shot becomes a long withdrawal that revolves clockwise to achieve the same effect. A very similar example occurs in Scene 15 of The Hard Goodbye when Wendy shoots Marv. The comic book portrays Marv’s descent into unconsciousness with swirling lines drawn behind his prostrate form whereas the film merely adds a circular motion to the shot.
Perhaps the most emblematic example of expansion occurs in Scene 1 of *The Hard Goodbye* when Marv and Goldie have sex. This is meant to be a powerful scene because it is Marv’s motivation for everything he does afterward. Five panels from the comic book provide the static basis that is expanded upon in the scene from the film. Aside from one additional shot, the only difference between the comic book and the film adaptation is the addition of photographic detail, motion, and sound. A similar instance occurs in *That Yellow Bastard* when, years later, Hartigan meets the adult Nancy Callahan. To keep her from danger, they flee to a nearby motel where Nancy tries to seduce Hartigan. She gives him a kiss that, in the comic book, is depicted through a series of six panels in descending order over two pages. In the film, this is one action that, viewed in light of the comic, unites the panels into one continuous motion. Perhaps even more so than the previous translation technique, this is what Rodriguez (2005) refers to as “snapshots of movement” (Miller & Rodriguez, 2005, p. 16).

A final clear-cut example of expansion occurs in *The Big Fat Kill* when Miho severs Jackie-Boy’s hand with her throwing star. Before throwing it, she assumes a static pose for an instant that is composed directly from the comic book. The additional motion of the star actually being tossed is what expands the static panel into the moving image. Again, these are only a few of the multitude of examples from the film.

Sound is one of the most powerful expansions made in the film adaptation of *Sin City*. It has no direct origin in the pages of the comic book with which to compare, but the music, sound effects and audible dialog make the film adaptation of *Sin City* an extremely legible experience.
Breaking up the Panel

A third translation technique that is used to adapt the *Sin City* to film is what I term “breaking up the panel,” and it refers to the abundance of instances wherein the visual information on the page of the comic book is broken up into its component parts for translation to film. Take, for example, the very first scene of *That Yellow Bastard* where John Hartigan is on his way to save young Nancy Callahan and he encounters his corrupt partner Bob just outside the warehouse. In the comic book, this is conveyed across a two-page spread that shows Hartigan’s car on the left as he walks off to the right with Bob grabbing his coat, attempting to keep him back. But before the reader’s eye reaches this imagery at the bottom of the page, a block of text above details all of Hartigan’s thoughts and feelings about what he’s going to do. In the film, this action is divided into two separate scenes. The first shows Hartigan driving his car as he thinks to himself about what he’s going to do. The second shows his confrontation with Bob.

This is done because a comic book reader attends to different portions of the page gathering information in a left to right, top to bottom fashion, whereas the frame of the motion picture focuses the reader’s attention on one thing at a time. As Carroll (1988) argues, “The constant reframing of all the action that is endemic to movies enables the spectator to follow the action perfectly, and, so to say, automatically” (p. 203). This highlights a major difference between how users interact with these media. In an explanation of how this interaction occurs in comic art, Jones (2005) uses the term “automontage” to describe the “visual shuffling” that occurs as the reader employs his/her own agency to explore the comic book text. Coming from a completely different perspective, Meyerowitz (1978) uses the term “extended retina” to describe the
perception of size and distance that viewers have in response to televised images. Widening this concept to apply to interaction with film, we could say that, since the screen is like an extended retina, it attends for us, thereby limiting our agency and constantly imposing the direction of our attention. Based on this, it is not only aesthetically preferable, but also functionally necessary for the film adaptation to further break up the action from the comic book so as to more precisely direct the viewer’s gaze. Several key examples of how this occurs in the context of the *Sin City* adaptation are described below.

One common application of this technique is in conversations between or among characters. To illustrate, in *The Customer is Always Right*, a man follows a woman out onto a balcony. Offering her a cigarette, he speaks to her before they embrace. The comic book version presents this conversation in two panels showing both the man and the woman. In the film, the conversation is further subdivided through the use of close-ups and reaction shots that alternate between speakers as the dialog is delivered.

Although “breaking up the panel” is used at various points throughout each adapted story from *Sin City*, it finds its most prolific application in *The Big Fat Kill*. In Scene 4 of the story, Dwight (the protagonist) has followed Jackie-Boy and his buddies into “Old Town” (the part of the city controlled by prostitutes). Jackie-Boy and his friends are looking for sex when they drive up next to Becky and proposition her to get into the car. She tries to explain that she’s not working, but Jackie-Boy won’t take no for an answer. Meanwhile, the girls of Old Town are secretly keeping an eye on things and female ninja/assassin Miho stands perched on a building above, ready to attack at any moment. In the comic book, this is all conveyed through a single large panel where
Dwight is getting out of his car around the corner, Miho is sitting on the roof, and Jackie-Boy is driving next to Becky in the alleyway. In the film, each of these elements is made visible in identical order but through the perspective of a camera moving backward through space. First Dwight is revealed, then Miho, then Jackie-Boy and Becky. What was one panel is translated into three angles in one continuous take. And, as in the previous example, the conversation that follows between Jackie-Boy and Becky is also broken up from a single panel into close-ups and reaction shots.

Another strong example occurs in Scene 7 after Jackie-Boy and his thugs have been killed by Miho and Dwight discovers Jackie-Boy’s badge, revealing him to be a hero cop. In the comic book, this is depicted through a series of panels that show reaction shots from all of the Old Town girls while, in the film, we flashback to Dwight’s memory of his girlfriend Shellie’s muffled warning to him as he jumps off the ledge in pursuit of Jackie-Boy. Next, Dwight narrates about the truce between the girls of Old Town and the police. In the comic book, the narration is printed in text boxes over one large master panel of the girls and Dwight gathered around Jackie-Boy’s corpse. In the film, it is broken up into a series of close-ups of each of the girls. The master shot is still there, but we pull out into it at the very end and hold just long enough to make it legible. Finally, Dwight argues with Gail (leader of the girls) to get him a car so he can hide Jackie-Boy’s corpse in the tar pits. Again, the comic book reveals this dialog in a “long shot” panel that reveals the whole scene while the film uses a medium shot that is fixed on Dwight and Gail.

This disassembly of the comic book imagery through the camera’s lens continues unabated in the following scene as the girls bring a car and Becky asks Gail to go home
while Dwight helps Miho dismember the corpses of Jackie-Boy’s friends so that they’ll fit in the trunk. What was one master panel becomes a series of three shots, which clarify each of the actions just described.

One last variation of this technique occurs in Scene 15 of *The Big Fat Kill* after Miho has rescued Dwight from the tar pits. Dwight tells Miho his plan to rescue Gail and Old Town from the clutches of the mob that threatens to overtake them. In the comic book, this is explained in a text box next to an image of Dwight and Miho running from the tar pits. In a radical departure, the film presents a shot of Dwight and Miho facing each other as the camera rotates 360° around them while Dwight’s narration explains what is happening. This example of “breaking up the panel” is unique in that pure motion replaces cutting or reframing in accomplishing the task. This suggests that one essential component of *translating* the static panels of comic art to the moving frame of film is that a constant stream of visual information is made available to the eye because, unlike the page of the comic book, film does not usually allow the eye of the spectator to optically roam the screen in search of new information. Instead, as in the “extended retina” metaphor, the screen replaces the eye.

**Conversion**

Beyond “grabbing,” “expanding,” or “breaking” the panel, there is the more complex process of translating the conventions of one medium into another that I term *conversion*. McFarlane’s (1996) model, first described in Chapter 2, distinguishes between **distributional** and **integrational** functions. Whereas distributional functions are “horizontal” and deal with actions and events in the order that they happen (i.e. plot), integrational functions are “vertical” and deal with the psychology of characters and the
atmosphere of the setting. *Conversion* is called for by integrational functions because they are not immediately transferable and thus require a *translation* between media forms that amounts to using the conventions of the adaptive medium to reproduce the conventions of the source medium. There are many examples of this occurring throughout the *Sin City* (2005) adaptation, but two particularly effective cases are discussed below.

The first of these cases comes from the last scene (Scene 33) of *That Yellow Bastard*. Having saved Nancy a second time and having killed Senator Roark’s evil child-molester/murderer son, Junior, John Hartigan realizes that the Senator will stop at nothing to get at Nancy and the only way for her to be safe is for him to die. With this knowledge, he raises his gun to his head and pulls the trigger, splattering his brains into the snow by the roadside where he said goodbye to Nancy only a moment before.

The comic book depicts this event through three images laid out across six pages. The first two-page spread is of Hartigan putting his gun to his head. The words “An old man dies, a young woman lives. Fair trade. I love you, Nancy” appear in two word boxes off to the right. The second pair of pages contains the word “BOOM” in massive, bold, white letters. The third is a two-page landscape of the snowy night with Hartigan dead on the ground on the lower right side. In the film, the entire action is presented in two shots. In the first, Hartigan drops to his knees as the camera tilts up to his face and he narrates, “There’s only one way to beat him. An old man dies, a young woman lives.” The very next shot is in negative with Hartigan’s white silhouette against a black snowy background as he lifts his gun to his head. The narration continues with the words “Fair trade” just before Hartigan fires it, splattering his brains out and falling to the ground,
dead. His voice continues saying, “I love you, Nancy” before the camera tilts up to the snow speckled sky.

The main difference between these versions is the film’s replacement of the onomatopoetic “BOOM” with the continuous motion of Hartigan aiming his gun at his head and blowing his brains out. In the comic book, the decision to replace the act of suicide itself with the visualized sound of the gunshot creates an atmosphere of reverence for Hartigan. Because he is sacrificing himself for Nancy, his action is brave but horrifying and, by creating distance between the reader and Hartigan’s actual suicide through the use of the image-sound “BOOM,” Miller allows his character a dignified death. The film, however, does not have the luxury of using onomatopoeia to disguise or, as McLuhan (1964/1996) might say, “cool off” the scene, since we know the medium is capable of presenting sound and image simultaneously and in their natural relationship of correspondence to each other. The solution, then, in this more immersive medium, is to distance the viewer in other ways. Although Hartigan’s act of suicide is displayed in the film (complete with bloody splatter), there are two other ways in which the film distances viewers.

First, the figure of Hartigan is presented in negative (i.e. black and white values reversed) so that he is a white silhouette against the dark of night. Second, the action is depicted in long shot, literally placing distance between the viewer and Hartigan as he performs his gruesome final act. Through this distancing and cooling of detail, the film successfully translates the conventions and integrational functions from the medium of comic art to the medium of film.
The second example selected to describe the conversion of integrational functions between media forms is taken from Scene 8 of The Hard Goodbye when Marv’s brutal search for information about Goldie’s killer leads him to a confessional where he kills a corrupt priest who is working for Cardinal Roark. In the comic book, this is depicted in one page with four panels descending horizontally. The first three of these are enclosed in the block letters “BLAM” that serve as the panel windows through which we view the action. The first “BLAM” encloses Marv’s gun with the words “worth dying for.” The second “BLAM” encloses the priest’s head exploding with the force of the gunshot with the words “worth killing for.” The last “BLAM” encloses a shot of the church steeple with the words “worth going to hell for.” The fourth and final panel of the sequence is a close-up on Marv holding his handgun and saying “Amen.” In the film adaptation of this scene, the same exact progression of action occurs, but the “BLAM” panel windows are replaced by the actual sound of gunshots as Marv fires at the priest. Similarly, the enclosed words, “Worth dying for. Worth Killing for. Worth going to hell for,” are vocalized in narration by Marv, and the coda “Amen” is spoken out loud in close up in the last shot.

In addition to serving as a further example of Rodriguez’s concept of “snapshots of movement,” this scene provides another powerful example of how the conventions of the adaptive medium (film) are manipulated to provide the expression of integrational functions that are equivalent to those in the source medium (comic art). Because this is a drastic moment in the narrative where Marv shows his relentlessness by killing a priest, it is reflected in the expressionism of a page that featured massive block letters to represent the sound of gunshots as it envelopes the action of Marv shooting the priest. Converted
to film, the onomatopoeic panels become audible gunshots that are punctuated with reverberation to supply an emphasis equivalent to the imposing size of the “BLAM” container panels of the original comic book.

Another example of conversion is found in *American Splendor* (2003). In Scene 66, Harvey learns he has cancer and the words of the doctor sound far away and become distorted with reverberation. The depiction of this in *Our Cancer Year* (Pekar, Brabner & Stack, 1994) originally achieves this effect by distorting the graphic appearance of the letters on the page. This is a powerful example of how different sets of conventions can achieve similar results across media form.

*Cooling Off for a Hotter Medium*

This final form of translation does not concern changes in the form of presentation as with the previous examples, but rather changes in content that result from an increase in the level of detail afforded by the adaptive medium (i.e. film).

Marshall McLuhan (1964/1996) makes his famous distinction between hot and cold media in the following statement:

>A hot medium is one that extends one single sense in ‘high definition.’ High definition is the state of being well filled with data. A photograph is, visually, ‘high definition.’ A cartoon is ‘low definition,’ simply because very little visual information is provided (p. 22).

The fact that he specifically uses comic art as an example of cool media and, later, describes film as a hot medium, has implications for how translation occurs in the adaptation of comic art to film.
Because film is hotter than comic art, content must sometimes be altered if consistency of meaning is to be maintained from source to adaptation. Of course, consistency of meaning is not always the goal (as in *A History of Violence*) so changes are made or not made accordingly. In the example of *Sin City* (2005) where consistency of meaning is the goal, though, substantial changes are often, paradoxically, necessary to maintain this.

One type of change that is often employed involves the behavior of characters as the actors within the scene portray it. For example, in Scene 3 of *The Hard Goodbye*, after Marv escapes from the police, he goes to see Lucille, his sexy parole officer. In the comic book, Marv grabs her violently and yells in her face about how the old days are back and there is no squaring things with the parole board, but in the film, Marv is much more calm and subdued during this scene. Another example occurs later when Marv is captured and interrogated by the girls of Old Town in Scene 15. The comic version depicts him yelling like a maniac whereas he is very calm and “cool” in the film.

This reduction of intensity also occurs in the first scene of *The Big Fat Kill* when Jackie-Boy comes knocking at Shellie’s door. He is furious and demonstrative in the comic book, but actor Benicio Del Toro plays him with more subtlety in the film. Later, in Scene 10, Dwight is driving the corpses of Jackie-Boy and his friends to dispose of them in the tar pits when he starts to hallucinate that Jackie-Boy is talking to him. Here again, Dwight is depicted as frantic in the comic book, but relatively calm in the film.

Aside from the acting, the intensity of the violence and amount of nudity is also reduced in certain instances within the film adaptation. Specifically, in *The Big Fat Kill*, Dwight, Gail, and Miho are each depicted naked at points within the comic book, but are
always (at least partially) clothed in the film. With respect to violence, in Scene 14 of *The Big Fat Kill*, Miho impales an Irish mercenary with her sword, which travels through his back and out his mouth. As extreme as this may sound, the comic book was still more intense because it depicted the sword traveling through his anus and out his mouth instead.

Beyond *Sin City* (2005), other films including *300* (2006) and *V for Vendetta* (2005) also contain scenes of nudity in the original graphic novel that are either eliminated or altered to include clothing in the film adaptations.

*Road to Perdition* (2002) represents a particularly interesting example of “cooling off for a hotter medium” because it involves changes to the names of characters. John “Looney” becomes John “Rooney,” Tony “Lococo” becomes Tony “Calvino,” and Michael “O’Sullivan” becomes Michael “Sullivan.” Author Max Allan Collins notes of this, “one of the few changes Hollywood would make in my material was changing the name “Looney” to “Rooney” – apparently the former may have sounded too comic-booky” (Collins & Rayner, 1998, p. 10). Since the names in the film remove the exaggeration that occurs through double entendre (e.g. Looney, Lococo) or ethnic exaggeration (e.g. O’Sullivan), this is certainly an example of “cooling off for a hotter medium.”

All of these examples point to the fact that, because film is a “hotter” medium, richer in detail and, as a result, more visceral and intense, the exaggerations of the cooler medium of comic art sometimes don’t apply, and a literal translation on film would actually give the scene a very different meaning than was originally intended.
Summary and Conclusion

In the preceding chapter, thematic film adaptations of comic art were distinguished from structural adaptations through models that distinguished between which adaptive operations were used and how they were used.

For the most part, thematic adaptations are constructed through the selection of general themes from the comic art source material as they are represented in characters and conflicts. Once these specific characters and conflicts are selected, a new plot is fabricated, which integrates these elements into a single, unified narrative. *Art School Confidential* (Zwigoff, 2006) and *Superman* (Donner, 1978) are exemplary of this model.

Furthermore, although distributional functions from the source material are sometimes incorporated into the film, as in *American Splendor* (Berman & Pulcini, 2003), *Barbarella* (Vadim, 1968), and *Ghost World* (Zwigoff, 2001), they do not comprise the central narrative and are often co-opted for use in the context of the fabricated plot.

Conversely, the distributional functions of the comic art source material are specifically selected for the structural film adaptation. In doing this, the “cardinal functions” or “plot points” which anchor the central narrative of the source material are integrated directly into the film adaptation. In practice, of course, the incorporation of distributional functions is not clear-cut, and a series of operations are employed to ease the transition between media. Once the necessary cardinal functions and catalysts are selected, they may be reorganized, condensed, and/or extrapolated in order to amplify certain aspects of the story and reconstitute the narrative unification of the source material. *Sin City* (Miller, Rodriguez & Tarantino, 2005), *A History of Violence*...
(Cronenberg, 2005), *Road to Perdition* (Mendes, 2002), *V for Vendetta* (McTeigue, 2005), and *300* (Snyder, 2006) provide examples of how these operations are implemented in structural adaptations.

Finally, the process of *translating* integrational functions between the media of comic art and film was elucidated and a series of operations were identified, including: *actualization, intermedia reflexivity, grabbing the panel, expansion, breaking up the panel, conversion, and cooling off for a hotter medium.*

The next chapter shifts the focus from the medium as *artifact* to the medium as *agent* insofar as the effects of adaptation on audience telepresence responses is concerned.
Based on the distinction between thematic and structural adaptations defined in study one, a second study was performed on the reader/viewer’s reception process and cognitive experience of the events of the story insofar as telepresence is concerned. As stated, the basic questions are: (1) How is the film spectator’s experience of telepresence influenced by prior experience with the comic art source material of the film adaptation? and (2) Which medium produces a stronger sense of telepresence? Nuñez and Blake’s (2003) application of cognitive priming to the study of telepresence in virtual environments is relevant here since the virtual environment of the film might be primed by exposure to the comic text. As discussed in chapter three, thematic priming has been observed in the context of heightening the telepresence experience by prefamiliarizing the individual with the theme of the virtual environment (Ladeira, 2005; Nuñez & Blake, 2003) while structural priming may go even further toward maximizing telepresence by providing a very close correspondence between priming stimulus (comic art) and virtual environment (film).

In what follows, I (1) describe the design and procedure that were used, (2) explain how participants were recruited, (3) describe the instrumentation and the specific data which it was intended to gather, (4) detail the apparatus used to present the treatment materials to the participants, (5) specify the particular comic art sources and film adaptations that were used as treatment stimuli, (6) operationalize the conceptual hypotheses stated in chapter five, and (7) present and discuss the results of the experiment.
Method

Design and Procedure

A four-group posttest only between-subjects experimental design was employed to address the questions and test the hypotheses presented in chapter five. Testing took place in a screening room located on a university campus with seating arrangements that resembled a typical movie theater. For conditions two through four, a twenty-four inch television set and DVD player was placed on a table in the front of the room. Once participants were informed of their rights, those willing to participate signed statements of informed consent (Appendix A) before being subjected to one of the four conditions enumerated below:

1. Participants in condition one were exposed to the comic art (source) treatment and evaluated for telepresence experience using the Temple Presence Inventory (TPI) (Lombard & Ditton, 2007) (Appendix B) and University College London (UCL) presence questionnaires (Slater, Steed & Usoh, 1993) (Appendix C).

2. Participants in condition two were exposed to the film (adaptation) treatment and evaluated for telepresence experience using the TPI and UCL questionnaires.

3. Participants in condition three were exposed to the comic art (source) treatment before being exposed to the corresponding film (adaptation) treatment and evaluated using the TPI and UCL questionnaires. In this condition, the film was adapted from the comic thematically.

4. Participants in condition four were exposed to the comic art (source) treatment before being exposed to the corresponding film (adaptation) treatment and
evaluated using the TPI and UCL questionnaires. In this condition, the film was adapted from the comic structurally.

Once this procedure was completed, participants filled out one of two short personal experience questionnaires depending upon whether they had been exposed to comic art (Appendix D) only or to film (Appendix E). These personal experience questionnaires served to assess their level of interest in and experience with the treatment material, as well as their level of interest in film and comics generally. This was deemed important based on the previously discussed findings of Ladiera et al. (2005) with regard to content preference effects in cognitive priming.

Overall, experimental sessions ranged from thirty to forty-five minutes in length. The number of volunteers participating in any particular experimental session ranged from one to sixteen and the mean number of participants per group was five.

Participants

A total of 146 participants were recruited from a population of undergraduate students who were offered extra credit in their communication courses in exchange for their participation. Thirty-eight participants were randomly assigned to condition one, 57 to condition two, 25 to condition three, and 26 to condition four.

Instrumentation

To maximize validity and test reliability, two measures of telepresence were employed. First, the TPI (Temple Presence Inventory) scale developed by Lombard and Ditton (2007) (Appendix B) was used to evaluate the following dimensions of telepresence: (1) engagement, (2) spatial presence, (3) parasocial interaction, (4) social presence – passive interpersonal, (5) social presence – active interpersonal, and (6) social
richness. The other dimensions of social realism and perceptual realism were deemed irrelevant to the present investigation and thus were not included. All together, there were thirty-four TPI items included. In addition, the three-item UCL (University College London) presence questionnaire developed by Slater, Steed, and Usoh (1993) (Appendix C) was used to measure the general concept of presence. Both of these measures were presented on a single thirty-seven-item questionnaire.

The TPI was chosen as the primary measure because of its inclusive approach to the concept and recognition of dimensions that apply to narrative media such as film and comic art. The UCL questionnaire was chosen because it is a short, overall measure of the presence concept that has been widely employed.

**Apparatus**

Comic art treatment material was presented to participants in booklet form on color photocopied sheets of paper that reproduce the exact proportions of the original work. The monitor used to present the film adaptations to participants in conditions two, three and four was a twenty-four inch Dynex television set attached to an Insignia DVD player. Because screen size has been demonstrated to be an important factor in telepresence experience (e.g. Lombard, 1995; Lombard, Reich, Grabe, Bracken & Ditton, 2000; Lombard, Ditton, Grabe & Reich, 1997; Bracken & Petty, 2007), it was important to select a size that was large enough to evoke a measurable response, but not so large that the effects from comparisons with the priming conditions might be drowned out. A twenty-four inch screen was deemed appropriate because it occupies a middle ground between what has previously been operationalized as a “large screen” (46”) and “small screen” (12”) (Lombard et al., 1997).
Treatment Materials

Treatment materials were composed of excerpts from six separate film adaptations and excerpts from the six corresponding sets of comic art source material which they were adapted from. Three of these films were clear examples of thematic adaptations: Superman (Donner, 1978), Catwoman (Pitof, 2004), and Art School Confidential (Zwigoff, 2006). The other three were clear examples of structural adaptations: Sin City (Miller & Rodriguez, 2005), A History of Violence (Cronenberg, 2005), and American Splendor (Berman & Pulcini, 2003). It bears repeating that, although American Splendor was categorized as a thematic adaptation in the first study, it is classified here as structural because the particular scene from the film that was selected is structurally adapted from the corresponding comic book story.

Film excerpts ranged from four to seven minutes in length, and comic art excerpts ranged from four pages to thirty pages in length. (Reading duration was timed to test and control for potential differences resulting from divergent page lengths.)

More detailed information for each clip is listed below:


**Operational Hypotheses**

The hypotheses presented in chapter five were operationalized for this study as follows:

1. Participants who are primed by exposure to a comic text before viewing a film adaptation of that text (conditions three and four) will report higher scores on the TPI and UCL in response to viewing the film than participants who are not primed (condition two).

2. Participants who are primed by exposure to a comic text before viewing a structural (film) adaptation of that text (condition four) will report higher scores on the TPI and UCL in response to viewing the film than participants who are primed by exposure to a comic text before viewing a thematic adaptation of that text (condition three).
3. In conditions three and four, participants with a preexisting interest in the priming stimulus (comic art source material) will report higher scores on the TPI and UCL in response to viewing the film adaptation than participants who have no preexisting interest.

4. TPI and UCL scores reported by participants during the film viewing condition (condition two) will be significantly higher than levels of telepresence experienced by participants during the comic art reading condition (condition one).

Results and Discussion

Data collected from 145 participants using personal experience measures (Appendix D, E), the Temple Presence Inventory (Lombard & Ditton, 2007) (Appendix B), and the University College London presence questionnaire (Slater, Steed & Usoh, 1993) (Appendix C) were entered into a Microsoft Excel spreadsheet and cleaned before being imported to SPSS version 11.5 for statistical testing. All statistical tests were performed using additive indices of participant responses. One participant from the first condition was disqualified from the analysis as a result of insufficient personal experience information. The final data set included 36 participants in Condition 1 (comic art only), 57 in Condition 2 (film with no prime), 25 in Condition 3 (film with thematic prime), and 26 in Condition 4 (film with structural prime). Note that the first two conditions have more participants because no distinction is made between thematic and structural priming and, therefore, must include both varieties. In addition, variations in number of participants across groups owes to the group administration of the experiment. Also, stimulus sampling was used across all conditions resulting in 17 participants.
exposed to Superman, 20 exposed to Catwoman\textsuperscript{10}, 30 exposed to Art School Confidential, 28 exposed to Sin City, 28 exposed to A History of Violence, and 21 exposed to American Splendor.

\textit{Temple Presence Inventory – Factor Analysis}

Before testing of the four primary hypotheses could begin, a factor analysis was needed to ensure the viability of dimensions within the Temple Presence Inventory (TPI). As previously noted, the “engagement (mental immersion),” “spatial presence,” “parasocial interaction,” “social presence – passive interpersonal,” “social presence – active interpersonal,” and “social richness” dimensions were included.

An initial principal component analysis (without rotation) revealed six factors with eigenvalues greater than one. Items were considered to load on a factor if their correlation with that factor was 0.4 or greater.

Next, outputs were generated for all combinations of extraction (Principle Component Analysis and Principle Axis Factoring) and rotation (Varimax, Equamax, Quartimax, and Direct Obliman) and interpreted based on their level of correspondence to the original dimensions of the TPI. A Principle Axis Extraction with Varimax Rotation yielded the factor structure most consistent with these dimensions. Factor 1 loadings included all “engagement” and “social richness” items (in addition to 1 “spatial presence” item), Factor 2 loadings included 5 of 7 “spatial presence” and all “parasocial interaction” items, Factor 3 loadings included all “social presence – passive interpersonal” items, and Factor 5 loadings included only “social presence – active interpersonal” items. Only 1 item for “spatial presence” loaded by itself on Factor 4, and

\textsuperscript{10} Although Catwoman (Pitoff, 2004) was not included in the text analysis, it is included here as a thematic adaptation for the sake of presenting a more contemporary group of treatments.
Factor 6 had no items that loaded 0.4 or greater, therefore these were not considered. If an index were to be constructed based exclusively on this analysis, it would appear as follows (see Appendix F for items and factor loadings):

1. “Engagement and Social Richness” (14 items)
2. “Spatial Presence and Parasocial Interaction” (12 items)
3. “Social Presence – Passive Interpersonal” (4 items)
4. “Social Presence – Active Interpersonal” (2 items)

Although several intuitive arguments could potentially be made to explain the association of “engagement” with “social richness” and “spatial presence” with “parasocial interaction,” it should be acknowledged that Principle Component Extraction combined with Equamax or Direct Obliman rotation separates “engagement” and “social richness” into two discreet factors while blurring the distinctions between some of the others. In addition, not all of the dimensions of the original TPI are included in this analysis. As a result, this data is not intended to refine the dimensions of the TPI, rather to gain perspective on how the items group in an independent analysis using the data generated by this study. The following report of the confirmatory factor analysis using the original TPI dimensions will provide the basis by which dimensions are constructed for this study.

Temple Presence Inventory – Confirmatory Factor Analysis

A confirmatory factor analysis was performed for each of the dimensions used in the questionnaire in accordance with the divisions made in the original TPI (Lombard & Ditton, 2007). Each individual dimension yielded only one factor with an eigenvalue greater than 1 (engagement = 8.102, spatial presence = 3.818, parasocial interaction =
4.128, social presence – passive interpersonal = 2.799, social presence – active interpersonal = 1.710, social richness = 4.317), and the lowest factor loading for any individual questionnaire item was 0.468 (which was substantially lower than the next lowest loading of 0.679). In addition, reliability scores for each factor were calculated using Cronbach’s Alpha (engagement = .9061, spatial presence = .8457, parasocial interaction = .8789, social presence – passive interpersonal = .8539, social presence – active interpersonal = .6229, social richness = .8954). Based on the positive results of these confirmatory analyses and reliability scores, it is considered that each of the dimensions can be applied according to the original item groupings of the TPI. Thus the index used for subsequent analyses is as follows (see Appendix G for items and factor loadings):

1. “Engagement” (6 items)
2. “Spatial Presence” (7 items)
3. “Parasocial Interaction” (7 items)
4. “Social Presence – Passive Interpersonal” (4 items)
5. “Social Presence – Active Interpersonal” (3 items)
6. “Social Richness – (7 items)

*Temple Presence Inventory – Cumulative Factor Analysis*

In addition to the individual dimensions, an overall factor analysis was also performed for all the items on the TPI grouped together as an overarching presence construct. A principle component analysis with no rotation forcing a single factor outcome produced an index of 31 items with a Cronbach’s Alpha reliability score of 0.95. The three items removed from analysis due to loadings of less than 0.4 were: (1) “Did the
experience seem more like looking at the events/people on a movie screen or more like looking at the events/people through a window?” (Spatial Presence), (2) “During the media experience how well were you able to observe the style of dress of the people you saw/heard?” (Social Presence – Passive Interpersonal), and (3) “How often did you make a sound out loud (e.g. laugh or speak) in response to someone you saw/heard in the media environment?” (Social Presence – Active Interpersonal). See Appendix H for items and factor loadings.

**University College London Questionnaire – Confirmatory Factor Analysis**

A confirmatory factor analysis was also performed for the three-item UCL questionnaire, which intends to measure a general “presence” factor. Principle component extraction with no rotation revealed a single factor with an eigenvalue of 2.447 and the lowest factor loading was .888. A reliability score of .8870 was obtained using Cronbach’s Alpha. As with the TPI, this measure can also be applied in its original form. See Appendix I for items and factor loadings.

**Omnibus Test**

Because the experiment performed encompasses four conditions and makes use of treatment stimulus sampling, an overall 4 X 6 ANOVA was performed to seek out general trends in the data. The first variable was “condition” and it had four levels based on the type of treatment each group of participants was exposed to (1 = comic book only, 2 = film adaptation only, 3 = comic book prime followed by its thematic film adaptation, 4 = comic book prime followed by its structural film adaptation). The second variable was “treatment story” and had six levels based on the different comics and film adaptations used as treatments (1 = Superman, 2 = Catwoman, 3 = Art School
Confidential, 4 = *Sin City*, 5 = *A History of Violence*, 6 = *American Splendor*). Because the goal for this omnibus test was only to gain a rough overall perspective on the data, both dependent measures (TPI and UCL) were combined. To maintain the integrity of the TPI dimensions, separate reports of TPI and UCL measures along with a combined measure are used for subsequent tests, although it should be noted that these scales have extremely strong correlation ($r(142) = .788$, $p < .001$).

The overall test uncovered a significant main effect for treatment story ($F(5,126) = 3.123, p = .011$) and a significant interaction between condition and treatment story ($F(9,126) = 2.305, p = .02$), however no significant main effect for condition was found. A closer look at the interaction effect will provide some insight into the reason why condition produces no initial statistical significance.

The interaction reveals that the mean scores of 4 of the 6 treatment stories move in the direction predicted by the priming hypothesis (H1: *Viewers of film adaptations of comic art will experience higher levels of telepresence if they have prior experience reading the comic art source material than if they do not*). The mean scores of *Superman* and *Art School Confidential*, however, move in the opposite direction, indicating that participants reported higher levels of telepresence without priming (condition 2) than with priming (condition 3 or 4). In particular, differences between conditions for *Superman* were highly significant ($F(2,14) = 10.766, p = .001$) in the opposite direction. An LSD post-hoc test further revealed that levels of telepresence reported in Condition 2 (film with no prime) were significantly higher than both Condition 1 (comic art only) ($p = .007$) and Condition 3 (film with thematic prime) ($p < .001$). Such a finding may indicate a “negative priming” phenomenon in which low telepresence resulting from
exposure to the priming material (the comic book) influences the experience of the film to also produce low telepresence responses. Placing this possibility aside for the time being, there are additional findings that may explain the counterintuitive responses elicited by Superman.

In order to control for the differences among treatment stories that may exist as a result of the level of popularity of a given comic book or film, a question on the personal experience questionnaire asked: “Have you ever been exposed to other media based on this comic title/series [or film] before?” A crosstabulation between each treatment story and previous exposure to other media revealed that Superman alone was exposed in some form to all participants. A chi-square test confirms that this imbalance between observed and expected cell counts is significant ($\chi^2(5, N = 141) = 46.9, p < .001$). A second crosstabulation comparing treatment stories based on previous experience reading the comic title/series revealed that Superman was the only story for which more participants had previous experience reading the comic than not (by a margin of 11 to 6). A chi-square test demonstrates that this difference is also significant ($\chi^2(5, N = 142) = 15.64, p = .008$). Finally, a third crosstabulation comparing treatment stories based on previous experience with other film adaptations revealed that Superman was the only story in which the majority of participants had also seen a different film adaptation previously (by a margin of 11 to 1). The chi-square test demonstrates strong significance for this difference as well ($\chi^2(5, N = 106) = 35.62, p < .001$).

Given the disproportionate amount of familiarity and experience that participants reported with regard to Superman, there may be a “saturation effect” occurring which renders additional priming previous to exposure to the film adaptation useless or even
detrimental to the experience of telepresence. Considering this from a cognitive perspective, easily accessible schemata will not benefit from further activation and may actually be desensitized through exposure to a repetitive stimulus.

A second omnibus test was conducted excluding Superman and this revealed a significant main effect for condition \( F(3,112) = 2.62, p = .05 \). As a result of these exceptional issues with regard to Superman, the following hypothesis tests were conducted both including and excluding this treatment story.

*Hypothesis 1: Viewers of film adaptations of comic art will experience higher levels of telepresence if they have prior experience reading the comic art source material than if they do not.*

Using the combined TPI/UCL measure, a comparison of Condition 2 (film with no prime) with Condition 3 (film with thematic prime) revealed that thematic priming generates higher levels of telepresence than no priming \( F(1,33) = 4.70, p = .04 \). Surprisingly, however, this was not the case for structural priming because scores generated in Condition 4 (film with structural prime) were not significantly different from scores generated in Condition 2 (film with no prime) \( F(1,53) = .75, p = 0.39 \). Upon further examination of the interaction effect \( F(2,53) = 3.6, p = .03 \) it becomes clear that this is the result of responses to the American Splendor treatment story which produced a reverse priming trend similar to Superman, although not statistically significant.

Conversely, responses to A History of Violence yielded strong evidence for the structural priming effect with mean scores in the priming condition significantly higher than the control condition on the TPI \( t(18.91) = 3.43, p = .003 \), the UCL \( t(17) = 2.72, p = .01 \), and both measures combined \( t(19) = 3.5, p = .003 \). Additionally, it should be noted that
in the structural priming ANOVA, there was a main effect based on treatment story alone
\( F(2,53) = 5, p = .01 \) and a post-hoc test reveals a significant difference between
*American Splendor* and *A History of Violence* \( (p = .001) \). The fact that *American
Splendor* produced the lowest mean score (significantly lower than *A History of Violence*)
may also be used as evidence pointing toward the “negative priming” effect referred to
earlier in conjunction with *Superman*.

Examined separately, the TPI and UCL generally produce the same patterns of
significance as the combined measure except that the UCL alone measures no thematic
priming effect \( (F(1,33) = 3.32, p = .08) \). This discrepancy is evidence that the three-item
UCL is a less sensitive measure than the six dimensions of the TPI used in this study.
Interestingly, even when examining only the 7-item “spatial presence” dimension of the
TPI (the most closely related dimension to the UCL) significance is still found for
thematic priming versus no priming \( (F(1,33) = 4.46, p < .05) \).

Finally, combining thematic and structural priming conditions and comparing
them to the film-only control condition produces a significant main effect for priming
when using the combined scale as the dependent measure \( (F(1,86) = 4.39, p = .04) \).
When the scales are separated, the TPI yields significance \( (F(1,86) = 4.24, p = .04) \) (see
Figure 7) while, once again, the UCL is not sensitive to this priming effect \( (F(1,86) =
1.77, p = .186) \). Despite this, the UCL does show a significant interaction \( (F(4,86) =
2.51, p = .048) \) in the direction of the priming hypothesis for *Catwoman* and *A History of
Violence*. 
Hypothesis One

All factors taken into consideration, these results present evidence consistent with the first hypothesis, and provide room for further theorizing with regard to the “saturation” and “negative priming” effects discussed earlier.

Hypothesis 2: Viewers of film adaptations of comic art will experience higher levels of telepresence if the film is adapted structurally from the comic art than if the film is adapted thematically.

Testing the results of thematic versus structural priming on the experience of telepresence yields a very subtle effect. It is one thing to compare the effects of priming versus non-priming on levels of telepresence experienced in response to a film adaptation, but something wholly different to compare two levels of priming since the
latitude in variance for the effect to be expressed and yield statistical significance is vastly reduced. Despite this, an LSD post-hoc test based on the results of the TPI (excluding *Superman*) uncovered a nearly significant mean difference (13.5), using an additive index ranging from 34 to 187, between levels of telepresence resulting from the structural priming condition and levels of telepresence resulting from the non-priming control condition (*p* = .06) in the direction of the hypothesis. This degree of difference was not found for the thematic priming condition (*p* = .18). Thus, if there is a difference that approaches significance between the level of telepresence experienced as a result of structural priming versus non-priming, but clearly no significant difference between thematic priming and non-priming, one might tentatively conclude, in line with the hypothesis, that structural priming is more effective than thematic priming at cognitively preparing viewers to experience a telepresence response. Of course, this evidence is tenuous at best because a direct comparison of the difference between the structural and thematic priming conditions was not found to be significant (*p* = .78).

Complicating matters further, a separate LSD test (also excluding *Superman*) shows that the UCL measured the opposite effect: participants who were thematically primed report significantly higher levels of telepresence than those who were not primed (*p* < .05) whereas participants who were structurally primed do not (*p* = .73). Insofar as the TPI is the more sensitive measure, an argument may still be maintained that there is marginal evidence that structural priming yields higher levels of telepresence, but this is very weak indeed. In fact, it is just as reasonable to conclude the opposite based on the results gathered from the UCL: thematic priming yields higher levels of telepresence than structural priming. This opposing conclusion would even find previous theoretical and
empirical support based on Nunez and Blake’s (2006) study of flight simulator hobbyists discussed at the conclusion of chapter three.

Hypothesis 3: Participants with a preexisting interest in the priming stimulus (comic art source material) will report higher telepresence scores in response to viewing the film adaptation than participants who have no preexisting interest.

Testing this hypothesis has implications for what Nunez and Blake (2006) refer to as the effect of “thematic inertia” on telepresence. It is logical that individuals who have previously sought out the priming stimulus or related materials for their own personal enjoyment would stand a greater chance of experiencing telepresence in response to the treatment materials presented in this experiment than those who have not.

One way to test this is to examine participant responses to the following personal experience item: “Have you ever seen this particular film before?” and see if there is any significant difference in telepresence responses between those who have versus have not seen the film previously. A mean comparison between these two groups resulted in no significant difference for either the TPI ($t(36.04) = .603, p = 0.55$) or the UCL ($t(43.97) = 1.68, p = 0.1$). The null hypothesis also stands if Superman is filtered out of the analysis.

A second variable that gauges previous interest is whether or not the participant has read any of the issues from the comic title/series upon which the film adaptation was based. A mean comparison between these groups also resulted in no significant differences for either measure. But when Superman was excluded from analysis, the UCL results are significant in the direction predicted by the hypothesis ($t(30.26) = -2.08, p < .05$) (see Figure 8).
Hypothesis Three
Preexisting Interest/Thematic Inertia

$t(30.26) = -2.08, p < .05$

![Graph showing mean UCL raw score by experience with the comic title/series](image)

Figure 8. UCL Results for Hypothesis Three. With Superman excluded from analysis, those who have previously read at least one issue from the comic title/series report significantly higher scores.

What this means is that, according to responses to the UCL, participants who had previously read issues of the comic title/series upon which the film adaptation was based reported significantly higher telepresence scores than those who had not. In addition, there is a relatively weak but significant positive correlation between number of issues read and scores on UCL ($r(92) = .21, p < .05$). These findings provide some support for the thematic inertia hypothesis, although it is curious as to why differences went undetected by the more thorough measurement of the spatial presence dimension of the TPI ($t(33.15) = 1.61, p = .12$) or the entire TPI as a single factor ($r(27.39) = .993, p = .33$).

A third variable that is indicative of previous interest is whether or not the participant has seen any other film adaptations based on the comic title/series before. Not
surprisingly, no effects were found because *Superman* was the only film adaptation that had numerous alternative adaptations.

The last personal experience item that attempts to determine previous interest is: “Have you ever been exposed to other media based on this film before?” No significant differences were found between groups of individuals who had versus had not been exposed to other media based on the film for either the TPI ($t(93.23) = .439, p = .662$) or the UCL ($t(89.61) = .460, p = .647$). The null hypothesis also stands if *Superman* is filtered out of the analysis.

An index of preexisting interest was also constructed based on a factor analysis of these four items. Although the last three grouped together as a single factor, each with loadings of 0.63 or higher, reliability assessment revealed a Chronbach’s alpha of only 0.36. Therefore, the best evidence in favor of the hypothesis is reported above based on whether the participant has read any of the issues from the comic title/series upon which the film was based.

Overall, there is some marginal support here for the thematic inertia hypothesis insofar as previous experience reading issues from the comic title/series is concerned, although, this must be tempered by the fact that this finding is upheld only by the UCL measure.

*Hypothesis 4: The medium of film will produce a stronger sense of telepresence than the medium of comics when content is held constant across media forms.*

Because this study focuses on film adaptations, a unique opportunity exists to control content variables while testing the impact of media form on the experience of telepresence, in other words: “the book problem.” Especially in the context of the
structural adaptation (Condition 4), in which distributional functions are held constant, it should be expected that content is extremely similar across the media forms of comic art and film.

An initial comparison of means through an independent samples t-test between Condition 1 (comic art) and Condition 2 (film) revealed no significant differences based on the TPI ($t(65.1) = 1.34, p = 0.19$), but the UCL shows marginal significance in the opposite direction of the hypothesis ($t(74.19) = 1.93, p = .057$), meaning that, according to results gathered through the UCL, readers of comic art experience higher levels of telepresence than viewers of film (on a 24 inch television screen) when content is held constant. Of course, when *Superman* is removed from the analysis, the UCL shows decisively significant results ($t(63.13) = 2.27, p = .03$) while results from the TPI shows marginal significance ($t(55.3) = 1.96, p = .055$).

A more detailed set of 2 X 6 ANOVAs accounting for “medium” (comic art vs. film) and “treatment story” (*Superman, Catwoman, Art School Confidential, Sin City, A History of Violence, American Splendor*) present a much clearer picture. With the exception of *Superman*, mean scores for all treatment stories on both the TPI and UCL were universally in the direction opposite of the hypothesis. With *Superman* removed from the analysis, significant main effects for “medium” (comic art vs. film) are found on both the TPI ($F(1,73) = 6.05, p = .02$) (see Figure 9) and the UCL ($F(1, 73) = 6.9, p = .01$) in the direction opposite of the hypothesis.
No main effects for treatment story or interactions between treatment story and medium were found for either measure. This indicates that, according to both measures, significantly higher mean scores were reported in response to the comic art condition than the film condition. It should also be pointed out that, under the circumstances, there is an especially valid reason to exclude Superman from this analysis. In addition to the reasons related to popularity and familiarity described at the beginning of this section, Superman is a highly thematic adaptation, meaning that only characters, settings and conflicts are adapted instead of actual events (i.e. plot material). And, as previously noted in the omnibus test section above, when Superman is analyzed alone across all conditions there is a significant main effect ($F(2,14) = 10.77, p = .001$) for condition and
post-hoc analysis reveals that Condition 2 (film only) provokes significantly higher reports of telepresence than both Condition 1 (comic art only) and Condition 3 (film with thematic prime). Thus, it seems less likely that *Superman* shows this pattern because of the reasons asserted in the argument leading up to the fourth hypothesis, and more likely that there was something about the particular treatment story that inhibited telepresence in the comic art condition. Otherwise, why would the priming condition yield lower scores than the film-only condition for *Superman* when the established trend is in the opposite direction?

Overall, tests for this hypothesis present puzzling results. How is it possible for a less immersive and perceptually realistic medium such as comic art to reap higher telepresence scores than the comparatively convincing virtual world of a film (even if it is presented on a 24 inch television screen)? At the very least, this outcome should perpetuate the debate over “the book problem” and lend further credence to the internal/conceptual argument described previously. One potential answer rests in the way we interact with the medium. Bracken and Pettey (2007) report similar counterintuitive findings in a study in which a 2.5-inch iPod screen produced higher levels of immersion than a 32-inch television screen. What both comic books and the iPod have in common is that they are hand-held media. Perhaps there is something related to the control gained over hand-held media that causes an increased sense of telepresence.

**Summary and Additional Findings**

To briefly summarize, confirmatory factor analyses and reliability assessments reaffirmed the original dimensions of the TPI and the single dimension of the UCL. Following this, an omnibus ANOVA testing all conditions and all treatment stories
revealed that responses to conditions in which Superman served as the treatment story consistently resulted in findings that were in the opposite direction of the other treatment stories. Further analysis of personal experience responses to Superman showed large differences based on familiarity between it and the other stories, therefore hypothesis testing was performed both with and without the inclusion of participants who were exposed to Superman.

Of the four main hypotheses tested, evidence was found to support the first one: the general priming hypothesis that individuals who are primed by comic art source material before exposure to the film adaptation experience higher levels of telepresence than those who are not. Contradictory findings were reported for Hypothesis 2, that structural priming produces more telepresence than thematic priming, so any conclusions should be interpreted critically while taking into account the opposing reports of the dependent measures (i.e. TPI and UCL). Similarly, results supporting the third hypothesis, that individuals with a preexisting interest in the comic art priming stimulus will report higher telepresence scores in response to the film adaptation, should be interpreted with caution because they are upheld only by the UCL measure. Finally, results obtained from testing Hypothesis 4, that film viewers would report higher telepresence than readers of comic art, went in the opposite direction expected. Interestingly, these findings were the most decisive in terms of statistical significance.

There were two additional unpredicted findings that lend strong support to the contention that content plays a determining role in the experience of telepresence, a notion previously espoused by Nunez and Blake (2006). First, the use of stimulus sampling for this project functions not only to allow generalization of findings, but also
the opportunity to compare responses across stimuli (i.e. treatment stories). A one-way ANOVA testing all six levels of the “treatment story” variable (Superman, Catwoman, Art School Confidential, Sin City, A History of Violence, American Splendor) revealed significant differences among stories according to both telepresence measures: TPI $(F(5,143) = 3.41, p = .006)$, UCL $(F(5,143) = 3.34, p = .007)$. For the TPI, post-hoc analysis revealed *A History of Violence* to have the highest overall mean score, significantly higher than Superman $(p = .001)$, Catwoman $(p = .04)$, and American Splendor $(p = .001)$. The lowest mean score was in response to Superman, which was also significantly lower than Art School Confidential $(p = .03)$, Sin City $(p = .04)$, and *A History of Violence* $(p = .001)$. The UCL post-hoc test also maintained this general trend, but no significance was found for differences between Superman and Sin City or *A History of Violence* and Catwoman.

A second unpredicted (although not unexpected) finding was that levels of enjoyment have some predictive power for both the TPI and the UCL. Although presence and related concepts are generally seen as the cause of enjoyment (Green, Brock, & Kaufman, 2004; Sherry, 2004; Vorderer, Klimmt, & Ritterfeld, 2004), it is considered here as the result of the enjoyment of content in line with Denham (2004) who maintains that enjoyment is the result of a combination of factors including social norms, viewing situations and program content.

Several questions on the personal experience measures sought to gauge enjoyment. The personal experience measure for Condition 1 (comics only) asked three questions: (1) “How would you rate your level of enjoyment of this issue?,” (2) “How would you rate your level of enjoyment of this comic title/series?,” and (3) “How would
you rate your level of enjoyment of comics generally?” Using the TPI, the overall regression model is significant ($F(3,33) = 16.68, p < .001$), and Table 2 below summarizes the predictive power of each item.

<table>
<thead>
<tr>
<th>Items</th>
<th>Error</th>
<th>Beta (Standardized)</th>
<th>t-score</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of enjoyment of this issue?</td>
<td>4.455</td>
<td>.490</td>
<td>1.989</td>
<td>.056</td>
</tr>
<tr>
<td>Level of enjoyment of comic title/series?</td>
<td>4.333</td>
<td>.209</td>
<td>.858</td>
<td>.398</td>
</tr>
<tr>
<td>Level of enjoyment of comics generally?</td>
<td>2.228</td>
<td>.278</td>
<td>2.424</td>
<td>.022</td>
</tr>
</tbody>
</table>

Table 2. Condition 1 Enjoyment Regression. Items that predict telepresence level for Condition 1 (comic art).

Because all three of these items failed to load on a single factor, an index was not constructed, although a look at the individual items provides interesting results since enjoyment of both the particular issue and the medium of comics generally are significant predictors of telepresence scores according to the TPI. The combination of predictors for the UCL is similarly significant ($F(3,33) = 7.53, p = .001$), but none of the items themselves are found to be significant.

The personal experience measure for the film conditions (2-4) asked similar questions: (1) “How would you rate your level of enjoyment of this film based on what you have seen?,” (2) “How would you rate your level of enjoyment of the comic title/series upon which this film is based?,” (3) “How would you rate your level of enjoyment of comics generally?,” and (4) “How would you rate your level of enjoyment of films generally?” This model for the TPI is also significant ($F(4,43) = 20.25, p < .001$) and Table 3 below summarizes the predictive power of each item.
<table>
<thead>
<tr>
<th>Items</th>
<th>Error</th>
<th>Beta (Standardized)</th>
<th>t-score</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of enjoyment of comic title/series?</td>
<td>2.543</td>
<td>.271</td>
<td>2.458</td>
<td>.019</td>
</tr>
<tr>
<td>Level of enjoyment of comics generally?</td>
<td>1.934</td>
<td>.035</td>
<td>.358</td>
<td>.722</td>
</tr>
<tr>
<td>Level of enjoyment of films generally?</td>
<td>3.121</td>
<td>-.127</td>
<td>-1.261</td>
<td>.215</td>
</tr>
</tbody>
</table>

Table 3. Conditions 2-4 Enjoyment Regression. Items that predict telepresence level for Conditions 2-4 (film).

Once again, the model for the UCL is also significant \( F(4,43) = 9.54, p < .001 \), however, interestingly, the only significant predictor is enjoyment of the film \( \beta = .632, t(101) = 4.63, p < .001 \).

Comparing these regression models, it seems that for both readers of comics and viewers of film, enjoyment of the specific stimulus is the strongest predictor of telepresence. In addition, though, enjoyment of the comic title/series upon which the film is based has some predictive power for level of telepresence experienced in response to the film. This unpredicted finding could also be used to lend support to the third hypothesis (individuals with a preexisting interest in the comic art priming stimulus will report higher telepresence scores in response to the film adaptation) since enjoyment of the comic title/series implies a preexisting interest.

Finally, in addition to testing the individual items, an enjoyment index was created based on a factor analysis of the four-item model above. All items were found to load on a single factor above 0.5 and Chronbach’s Alpha yielded a reliability score of...
This index predicts telepresence as a singular construct ($\beta = .531, t(104) = 6.4, p < .001$) as well as the variance among scores ($R^2 = .282, F(1, 105) = 40.92, p < .001$).

Overall, differences in telepresence scores as reported on the TPI and UCL resulting from differing treatment stories and levels of enjoyment strongly imply that content plays a definitive role in the experience of telepresence.

*Temple Presence Inventory – Dimensions*

Thus far, the interpretation of the results gained from the four main hypotheses and the additional findings have treated presence as a unidimensional construct. One of the advantages of the Temple Presence Inventory (Lombard & Ditton, 2007), though, is the ability to compare scores among multiple dimensions that compose the overall presence construct (i.e. engagement, spatial presence, parasocial interaction, social presence – passive interpersonal, social presence – active interpersonal, social richness). Therefore, although no specific hypotheses were made regarding relationships among these dimensions, the sections below explore their role in the context of the previous four hypotheses that have guided this investigation.

The strategy for exploring these dimensions was to seek out significant mean differences between groups (asserted by each hypothesis) based on scores for each of the six dimensions using independent samples t-tests. Any significant differences were then further explored using ANOVAs. Discrepancies between independent samples t-tests and ANOVAs in which initially significant results fail to be confirmed are attributable to the fact that independent samples t-tests only seek out significant mean differences between two groups while ANOVAs test variation from the grand mean (pooled variance
of both groups) based on the particular value of the independent variable. The differing error terms that are produced by the tests result in different $p$ values.

**Hypothesis 1**

To test for differences in scores between participants in primed versus non-primed conditions, a series of initial t-tests were performed, each using a different dimension of the TPI as a dependent variable. If *Superman* is excluded from analysis, the “social presence-active interpersonal” dimension produces scores that are significant in the direction predicted by the hypothesis ($t(86.44) = 2.01, p = .048$) and “social presence–passive interpersonal” is close ($t(91.22) = 1.87, p = .065$). Despite this, ANOVAs produced no main effects in priming for either “active interpersonal” ($F(1,86) = 3.05, p = .84$) or “passive interpersonal” ($F(1,86) = 2.96, p = 0.9$) social presence, with or without the inclusion of *Superman*. For each of these ANOVAs, the independent variable was “priming” (primed vs. not primed) and the dependent variable was the respective dimension of the TPI (“social presence–active interpersonal” and “social presence–passive interpersonal”). Thus it should be concluded that, while these dimensions contributed strongly to the overall priming effect discussed above, they do not account for enough variance to yield significance on their own.

**Hypothesis 2**

Testing differences in dimension scores between participants who were thematically primed versus those who were structurally primed resulted in a significant finding for “social presence–active interpersonal” in the direction opposite of the hypothesis ($t(33.34) = 2.43, p = .021$) (i.e., thematic priming scores were significantly higher than structural priming scores). As with the previous hypothesis, though, an
ANOVA yielded no significant findings \( (F(2,86) = 2.36, p = .10) \). In this test, the independent variable was “type of priming” (thematic priming vs. structural priming) and the dependent variable was the TPI dimension “social presence – active interpersonal.”

**Hypothesis 3**

Among the four questions intended to gauge preexisting interest, the last one (“Have you ever been exposed to other media based on this film before?”) yielded significance in an independent samples t-test for two dimensions. With *Superman* excluded from the analysis, both “engagement” \( (t(58.37) = 2.31, p = .024) \) and “social presence – passive interpersonal” \( (t(63.79) = 1.97, p = .053) \) are significant in the direction predicted by the hypothesis. Thus, participants with exposure to other media based on the film have significantly higher mean scores of “engagement” and “social presence – passive interpersonal” on the TPI. An ANOVA for “engagement” (dependent variable) revealed that, consistent with the original t-test, significant differences due to previous exposure to other media based on the film (independent variable) exist between groups in the direction of the hypothesis \( (F(1,91) = 5.26, p = .024) \). Therefore, those who have been exposed to other media based on the film report significantly higher “engagement” scores than those who do not.

**Hypothesis 4**

Initial t-tests comparing scores on all dimensions of the TPI based on difference in medium (comic art vs. film) produced significance in the direction opposite of the hypothesis for “engagement” \( (t(78.35) = -2.24, p = .028) \), “spatial presence” \( (t(52.38) = -2.37, p = .022) \), and “parasocial interaction” \( (t(81) = 13.16, p = .002) \) when *Superman* was excluded from analysis. Each of these dimensions also produces significant
differences in an analysis of variance testing the same variables: “engagement” ($F(1,73) = 9.26, p = .003$), “spatial presence” ($F(1,73) = 8.32, p = .005$), “parasocial interaction” ($F(1,73) = 8.74, p = .004$). Therefore, comic art produces significantly higher scores in each of these three dimensions.

If *Superman* is included in the analysis, “social presence – passive interpersonal” becomes significant in the direction of the hypothesis ($F(1,81) = 4.46, p = .038$), but this is likely due to the previously discussed negative priming effect.

**Conclusions**

Because none of the findings relating to the individual dimensions of the TPI were hypothesized, conclusions are necessarily speculative. One might say, with regard to the findings relating to “engagement” in the third hypothesis, that preexisting interest fosters an increased sense of telepresence through engagement, although further theory-based hypothesis testing is necessary to confirm this. Similarly, “engagement,” “spatial presence,” and “parasocial interaction,” might be dimensions that have increased importance with regard to the formal aspects of the medium. Again, more theory based hypothesis testing must take place before this can be stated with any confidence.
CHAPTER EIGHT

GENERAL DISCUSSION AND CONCLUSION

The title of this dissertation, *Found in Translation: Structural and Cognitive Aspects of the Adaptation of Comic Art to Film*, accurately reflects the dual perspective of its approach to the subject as both *artifact* and *agent*. On the one hand, film adaptations are explored as artifacts in terms of their relationship to their source material, while on the other, the effects of viewing adaptations is assessed with respect to the agency they possess toward human cognition, and, more specifically, telepresence. In what follows, the conclusions of the two studies will be summarized before applications, future research, and limitations are offered.

Summary and Conclusions

Study 1 began with the question “What are the different types of comic art to film adaptations that exist based on the devices and strategies used in adapting the content of comic artwork to film?” In pursuit of the answer to this question, a series of models of adaptation were constructed based on a theory of literary adaptation developed by McFarlane (1996). In these models (Figures 2, 4-6), source material and adaptation are divided into tiers based on distributional functions, which are transferable, and integrational functions, which are not. The operations used to transform source material into the adaptation were based partially on previous work by Elliott (2003), Field (1952), and Stam (2000) and included: “unification,” “selection,” “reorganization,” “condensation,” “extrapolation,” amplification,” “fabrication,” “translation,” and “actualization.” Depending upon which combination of these operations is used, thematic adaptations were distinguished from structural adaptations through a variety of
concrete examples that were described within the contexts of the specific models. The inclusion, modification, and application of these models and operations were dictated by the findings of the study itself and should be considered a new theoretical and methodological approach based on the synthesis and practical application of previous theory.

In purely thematic adaptations, commonalities among the distributional functions that compose the “plot” of the source material are identified as themes and generally take the form of specific characters and conflicts that are then “selected” and woven into the context of a new narrative formed through the “fabrication” of a story that is consistent with the themes of the source material, but has a narrative “unity” that is based on the fabricated distributional functions that make up the new plot of the adaptation. Thus, thematic adaptations are defined as adaptations that share in common particular characters and conflicts with their comic art source material, but do not employ the same set of distributional functions in the plot of the film.

As illustrated in Figure 4, purely structural adaptations use all of the original distributional functions from the comic art source material. In practice, however, this abstract “ideal” never truly occurs (although the extended cut of Sin City (2005) comes fairly close). In actuality the vast majority of structural adaptations undergo a series of transformations between source material and adaptation based on a number adaptive operations. First of all, distributional functions are “selected” from the comic art source material. Unlike thematic adaptations, these are not just themes, but actual narrative events. Most important among these distributional functions are the “cardinal functions”
or “plot points” (or their functional equivalents) that anchor the plot and move it in a given direction.

Once the necessary distributional functions have been selected, they undergo one or more additional operations, including “condensation,” “extrapolation,” and “reorganization” in order to form a narrative “unity” among the distributional functions selected from the source material. Condensation refers to the reduction of selected characters and/or distributional functions and often necessitates extrapolation. Extrapolation refers to the addition of new material to the selected distributional functions in structural adaptations. Finally, reorganization refers to the reordering of selected distributional functions in structural adaptations. It is important to note that among these operations there is no specified sequence or mandatory inclusion of any individual operation. Once again, the goal of these operations is to arrive at a narrative unity among the selected distributional functions of the film adaptation. Based on this, structural adaptations are defined as adaptations that, for the most part, use the same set of distributional functions as the comic art source material upon which they are based.

Unlike distributional functions, which are capable of being transferred directly from the source material, integrational functions must be uniquely reestablished through the conventions of the adaptive medium through the process of “translation.” Numerous forms of translation were explored, especially with respect to their manifestation in American Splendor and Sin City, but the most common of these is “actualization,” which refers to the effect of replacing comic artwork with actual people and settings that are captured on film. Others included “intermedia reflexivity,” “grabbing the panel,” “expansion,” “breaking the panel,” “conversion” and “cooling off for a hotter medium.”
Study 2 began with the question “How is the film viewer’s experience of telepresence influenced by prior experience with the comic art source material of the film adaptation?” Previous research on user and content factors such as cognitive priming (Ladeira, Nunez & Blake, 2005; Nunez & Blake, 2003), content knowledge, and thematic inertia (Nunez & Blake, 2006) led to a series of hypotheses that were tested in an experiment that utilized a four group posttest only between subjects design. Each of one hundred forty-five participants were subjected to one of the following conditions: (1) comic book only, (2) film only, (3) comic book followed by a thematic film adaptation of the comic book, and (4) comic book followed by a structural film adaptation of the comic book. In all cases, the dependent variable was telepresence (including the following dimensions: engagement, spatial presence, social presence – passive interpersonal, social presence – active interpersonal, parasocial interaction, and social richness) and was measured using the Temple Presence Inventory (Lombard & Ditton, 2007) and the University College London presence questionnaire (Slater, Steed & Usoh, 1993). The high correlation of these measures ($r(142 = .788, p < .001$) suggests that, although different in terms of length and detail, they are both measuring the same underlying presence construct. The insights gained from comparison of these instruments throughout the results section of study two also emphasizes the importance of combining the dimensions of the TPI to assess presence as an overall construct and not just a collection of separate dimensions. For one thing, different dimensions are not easily separable in all cases, as demonstrated in the combinations of the engagement and social richness along with the spatial presence and parasocial interaction dimensions in the initially reported factor analysis (see Appendix F).
There is even some theoretical support for why parasocial interaction and spatial presence might be combined in this analysis. Horton and Wohl (1956) describe parasocial interaction as a mediated “simulacrum of conversational give and take” (p. 215) that is achieved through four principle strategies. Among these are technical devices such as the subjective camera angle which allows the onscreen performer (persona) to speak to the audience in “direct address,” a technique sometimes referred to as “breaking the fourth wall” to supply the illusion of face-to-face encounter in which persona and audience share the same space (i.e. spatial presence). Perhaps due to the inclusion of the American Splendor adaptation that features Harvey Pekar in a subjective camera angle talking to the audience in direct address, spatial presence and parasocial interaction became conflated in the experience of participants. That is, the parasocial interaction with Harvey combined with a feeling of sharing space with him through the use of a subjective camera angle.

This doesn’t mean that the dimensions of the TPI should not receive attention as well, as they did in the “dimensions” section of chapter seven, just that the forest (presence) should not be lost because of the trees (the individual dimensions).

Stimulus sampling was also employed for both “thematic” and “structural” adaptations. Thematic adaptations included Superman (1978), Catwoman (2004), Art School Confidential (2006) and structural adaptations included Sin City (2005), A History of Violence (2005), and American Splendor (2003).

Main Hypotheses

The first of the hypotheses is as follows: “Viewers of film adaptations of comic art will experience higher levels of telepresence if they have prior experience reading the
comic art source material than if they do not.” Once Superman (1978) was excluded from analysis based on a disproportionately large amount of prior experience that participants had with it compared with the other treatment stories, an ANOVA of responses to the TPI revealed a significant difference in the direction of the hypothesis (F(1,86) = 4.24, p = .04).

The second hypothesis called for a test of telepresence responses based on the difference between thematic and structural priming distinguished above: “Viewers of film adaptations of comic art will experience higher levels of telepresence if the film is adapted structurally from the comic art than if the film is adapted thematically.” According to the results of the TPI, although there were no significant differences found between the structural and thematic priming conditions, nearly significant differences were found between the structural priming condition and the no priming condition in the direction of the hypothesis. This difference was clearly not significant between the thematic priming condition and the no priming condition. The reverse trend was found when the UCL was used as the dependent measure, so results are conflicting and inconclusive. Neither the hypothesis, nor Nunez and Blake’s (2006) contention that more specific content knowledge yields less telepresence find support here. The probable reason for this involves effect size. In previous studies of cognitive priming, effects were sought between priming and non-priming conditions and found only within the context of an interaction (Nunez & Blake, 2003a) or when combined with prior interest in the theme of the priming stimulus (Ladiera, Nunez, & Blake, 2005). To go further and seek differences between levels of priming is likely to result in very small effect sizes that are
measurable only with large pools of participants and radically opposed examples of thematic versus structural priming stimuli.

The third hypothesis stated, “Participants with a preexisting interest in the priming stimulus (comic art source material) will report higher telepresence scores in response to viewing the film adaptation than participants who have no preexisting interest.” According to the UCL, participants who had previously read issues of the comic title/series upon which the film adaptation was based reported significantly higher telepresence scores than those who had not. In addition, there is a relatively weak but significant positive correlation between number of issues read and scores on the UCL. The TPI showed no significant effects.

In an attempt to explore the “book problem,” a third research question asked, “Which medium produces a stronger sense of telepresence? Comic art or film?” Based on previous research (Banos et al., 2005; Julien & Over, 1988; Waterworth et al., 2001) demonstrating the importance of concrete environments over more abstract environments in the experience of telepresence, it was hypothesized that film would produce a stronger sense of telepresence than comic art when content was held constant across media forms. When comparing the telepresence scores of those participants who only read the comic book source material to those who only viewed the film adaptation, a 2 X 5 ANOVA accounting for medium (comic art vs. film) and treatment story (Catwoman, Art School Confidential, Sin City, A History of Violence, and American Splendor) with Superman excluded revealed a significant main effect for medium on both the TPI and the UCL in the direction opposite of the hypothesis. This indicates that, according to both measures, significantly higher mean scores were reported in response to the comic art condition.
than the film condition. Although at odds with previous research on media form, these results are similar to the counterintuitive findings by Bracken and Pettey (2007) that report higher levels of immersion in response to a 2.5-inch iPod screen than a 32-inch television screen. One factor that is common to both studies is that both comic books and iPods are hand-held media. Perhaps there is something related to the control gained over hand-held media that causes an increased sense of telepresence. One method of evaluating this is to test responses to print versus online comics.

Although further experimentation is needed to move beyond speculation, this finding reaffirms the contradiction of the book problem. The fact that a more immersive and perceptually realistic medium, such as a motion picture, is revealed to produce significantly lower amounts of telepresence than the comparatively iconic and monosensory medium of comic art, calls into question the sensorimotor immersion assumption and lends further support to Biocca’s (2003) three-pole model. This point is even stronger when taken in conjunction with the cognitive priming phenomenon: If the priming stimulus contributes to the mental imagery space providing a more complete mental representation, and it is the mental representation we respond to, then priming should naturally lead to a more intense experience of telepresence.

One potential criticism that may be leveled at this conclusion is based on the experimental apparatus used to display the films. As previously explained in chapter seven under the subheading “apparatus,” a twenty-four inch television was chosen as a mid-sized display monitor so as to leave (statistical) “room” for the priming effect to take place. Because of this necessity, though, it may be that the relatively modest screen size contributed to the counterintuitive finding stemming from hypothesis four. In other
words, the context of presentation for the film stimuli may have been inferior to that of the comic book stimuli, which resulted in an inaccurate comparison. This seems unlikely since all experimental conditions took place in the same room. However, the addition of a large screen condition would enable further worthwhile comparisons.

Additional Findings

The first unhypothesized finding was that multiple significant differences in telepresence scores for both measures were reported among treatment stories, regardless of other factors such as priming, preexisting interest, and medium. This finding alone is compelling evidence of the role content plays in determining telepresence experience. Probing further, though, it becomes clear that content may not be the sole determinant of these discrepancies. For example, A History of Violence (2005) garnered the highest telepresence responses, so one might assume that action and violent content produce a stronger sense of telepresence. However, there is no significant difference between that film and Art School Confidential (2006), which provoked the second highest set of scores with no violence at all. The same trend is found at the low end of the spectrum with Superman (1978) (high action content) and American Splendor (2003) (low action content) provoking similar scores.

This leads to a conclusion that there may be another factor involved in the equation to produce telepresence: style. Specific techniques that give rise to the previously discussed qualities of flow, trajectory, and distillation (chapter three) will vary based on the conventions of the particular medium and how the creator applies them, (i.e., style). For example, the way a film is written, photographed, acted, and edited is a matter of great consequence to how much telepresence the audience will experience. The
extent to which style and creative use of the medium can be quantified and applied scientifically is likely to cause some controversy but should nonetheless be explored in the future.

The second unhypothesized finding was that some forms of enjoyment were valid predictors of telepresence scores. For comic book readers (condition 1), enjoyment of the issue and of comics generally were significant predictors. For film viewers (conditions 2-5), level of enjoyment of the film and the comic title/series on which it was based were significant predictors.

Using enjoyment to predict telepresence, as opposed to the more common practice of using telepresence to predict enjoyment, illuminates the individual user’s role in determining their own sense of telepresence and further supports the notion that internal/conceptual factors play a pivotal role in the process. Take, for example, the anomalous finding concerning the *Superman* treatments labeled “negative priming” in chapter seven. In this case, participants in condition 2 who viewed the *Superman* (1978) film without being primed with the comic book reported the highest overall levels of telepresence while those in condition 1 who only read the comic book reported the lowest overall levels of telepresence. Most interesting for the present point though is that when participants were primed with the *Superman* comic book prior to watching the film, they also reported the lowest mean scores. This effect indicates that experience with the comic book “spoiled” the telepresence experience in response to the film. I suggest that this negative priming is the result of the enjoyment variable. Because participants did not enjoy the comic book, their level of telepresence was diminished. This lack of enjoyment of the comic book also influenced telepresence in response to the film adaptation.
Such a conclusion is, of course, speculative, as correlation does not necessarily indicate causation. Despite this, the ability to predict levels of telepresence with levels of enjoyment strongly implicates user preferences for content and style that fall outside the visage of a strictly external/perceptual view of telepresence.

A final small piece of evidence from the second study that reinforces an internal/conceptual view of telepresence is found in the analysis of individual dimensions of the TPI. The only dimension to achieve significance in a confirmatory ANOVA (in the direction predicted by the hypothesis) was “engagement” in the third hypothesis: 

*Participants with a preexisting interest in the priming stimulus (comic art source material) will report higher telepresence scores in response to viewing the film adaptation than participants who have no preexisting interest.* Because this dimension is composed of items such as “To what extend did you feel mentally immersed in the experience?” and “How engaging was the story?” it only makes sense within an internal/conceptual framework for telepresence. That engagement should stand out as an important factor in the experience of telepresence suggests that conceptual operations play a key role.

**Applications**

There are two potential areas of application for this research, methodology and industry production.

Starting with methodology, the above models of thematic and structural adaptations are likely to prove useful for adaptations of all kinds. Although the “translation” operation is medium specific, the actual models of adaptation (i.e., Figures 3-5) deal with distributional functions, which, according to McFarlane (1996), are
transferable across media form. Thus, when analyzing adaptations of any kind, these models are likely to be of value insofar as they provide the benefit of a precise framework for analysis and interpretation. As reviewed previously in chapter two, scholarship on literary adaptation has focused primarily on individual adaptations of classical works, and those that do achieve a broader perspective on the nature of the adaptive process (e.g. Bluestone, 1957; Elliot, 2003; Stam, 2000, 2005a, 2005b) leave ample room for the operations and models described in chapter six.

Beyond this, the main reason these particular models are especially suited to the task is that they liberally incorporate and synthesize previous operations and put them together into working structures which account for the variability of the particular relationship of source material to adaptation. In addition, the terminology applied to models and operations is unambiguous because it refers specifically to objective content relations between source and adaptation, reserving inferences about cultural context, aesthetic appraisal, and ideology to a subsequent step which can incorporate the models and operations as evidence to support such claims, much the same way that statistical results are separated from conclusions in scientific research.

Constructing models composed of operations that deal with objective content relations rather than ideologically loaded terminology also reduces the bias of interpretation by restraining inference to the empirical relationship between source and adaptation. For example, certain terms used by Stam were not adopted due to their conflation of analysis and interpretation: “critique,” “analogization,” “popularization,” “reculturalization,” “transculturalization” (Stam, 2000, p. 68; 2005a, p. 45). To make this point as explicit as possible, one can point to specific examples of thematic fabrication or
structural condensation and extrapolation in an adaptation, but how does one point out “reculturation?” This is not at all to say that reculturation\textsuperscript{11} does not take place or is irrelevant, just that it should be grounded on the more objective, concrete operations proposed in chapter six.

Building from this, the models proposed in chapter six are not only valuable as tools of methodology, but also as an instructional manual for students interested in learning to adapt material from other media to film. Though a detailed workbook is beyond the scope of this dissertation, the steps below provide a concise outline of how such an instruction manual might work.

Following Figure 5 precisely, the first decision to make is whether the source material will be adapted thematically or structurally. This decision might be based on the amount of source material so that long-running comic book series are adapted thematically, and self-contained graphic novels are adapted structurally. Naturally, exceptions to this rationale (such as \textit{Sin City} (2005)) will always exist.

The next step in thematic adaptation is to select the specific themes, which can include characters, conflicts, and settings. These should then be combined with a narrative that, although \textit{fabricated} for the purpose of the film, is still consistent with the themes selected for use and which arrives at a \textit{unified} plot in the end.

Structural adaptations would proceed by selecting distributional functions from the source material with special attention paid to “cardinal functions” or important “plot points” that move the story forward toward its final conclusion. Next, these would be \textit{reorganized} in the context of the adaptation to best serve the needs of the plot. Once this

\textsuperscript{11} Stam does not formally define reculturation, but it very likely refers to the way an adaptation differs from the source to suit the new cultural context.
is done, the selected distributional functions would then be condensed and extrapolated in order to fit cohesively into the larger plot and form an overall unity that is consistent with the themes and plot of the source material. Although it was stressed at several points during the analysis that there is no specific order or mandatory inclusion for “reorganization,” “condensation,” and “extrapolation,” they are presented in this sequence within the model because this would be the natural progression in the decision making of a screenwriter adapting material to a film.

Lastly, for both thematic and structural adaptations, translation processes must be put into place in order to capture or augment the integrational functions of the source material.

Future Research

There are two directions for future research, which correspond to each of the studies performed. First, Study 1 examines the correspondence between source material and adaptation, however it does not explore any of the ideological implications of condensing or extrapolating content. For example, V for Vendetta (McTiege, 2005) condensed portions of the original graphic novel and then extrapolated new material linking the oppression and conflict of the story to the United States-led war in Iraq. From an opposing ideological stance, 300 (Snyder, 2006) extrapolated an additional conflict involving the Queen, which culminated in her impassioned speech before the Spartan Counsel seeking support for her husband’s war against the Persian Empire. Viewed in a contemporary context this is an argument in favor of the war in Iraq and surge of additional troops. Thus, whenever certain aspects of the source material are downplayed
through condensation or exaggerated through extrapolation, contemporary politics and ideology may be a factor.

Since narratives are the primary channel through which human culture is transmitted, the retelling of narratives through adaptation should be considered the primary vehicle for the transmission of culture. This concept would fruitfully be explored through the exploration of specific narratives as they are adapted and re-adapted over time. Notice that the general model of adaptation (Figure 1) shows that, similar to source material, adaptations have distributional and integrational functions that can also be adapted. Thus adaptations can, themselves, become source material for future adaptations.

The second avenue of research that is opened stems from Study 2, which explores the cognitive effects of user, content, and form variables on telepresence experienced in response to adaptations and their source material. Using comic art and film limits the study to narrative media forms even though many videogames have been adapted directly from comic books, or from films that have been adapted from comic books. What effect do user, content, and form variables have when the stimulus is an interactive environment?

Limitations

Although every effort was made to ensure the validity of the findings described in the studies, some methodological limitations should be considered in interpreting the results.
Text Analysis

A tremendous task was undertaken in gathering all previous comic art to film adaptations into an almost comprehensive list (Jones, 2008) before collecting and reviewing nearly 70% of them. The text analysis that resulted focused on ten specific adaptations to describe the models and operations that are at the heart of the adaptive process. Though an exhaustive scene-by-scene analysis of every possible adaptation may have provided further insight and more examples to draw from, such a task was not feasible given the obvious practical limitations. On the other hand, this also provides an opportunity for future work in which the heuristic value of the models described in the text analysis can be applied.

Experiment

The second study serves as an excellent lesson in the importance of stimulus sampling. If, for example, Superman (Donner, 1978) had been the only treatment story for thematic adaptation, qualities specific to it would have had an overwhelming effect on the results. However, even with a sample of six different treatment stories, there is no guarantee that the unique qualities of the individual stories did not somehow influence outcomes. In addition, all stories except for Catwoman (Pitof, 2004) were selected based on their analysis in study one, eliminating the opportunity for random selection. Further study of the telepresence responses to film adaptations of comic art using different, randomly selected treatment stories would be useful in generalizing these findings. This may also uncover the differing levels telepresence in response to thematic versus structural priming that the current study failed to show conclusively.
A second criticism relates to the length of the treatment stories. Wherever possible, excerpts of comic art and film were selected to have natural (i.e. not abrupt) starting and stopping points, but it would have been preferable to present comic art sources and film adaptations in their entirety. Of course, this is impractical because, in some cases, this would have required the experiment to last for days. Nevertheless, perhaps a longitudinal study may be an option in future research.

Lastly, practical considerations necessitated the testing of multiple participants simultaneously. Although efforts were made to ensure consistency among groups (e.g. asking participants to sit in the front rows if seats were available), individuated testing would have permitted more standardized conditions and increased experimental control.

Closing Comment

The obvious metaphorical relationship between literary adaptation and Darwin’s (1964/1859) theory of evolution through biological adaptation and natural selection has been alluded to previously. Specifically, in his analysis of the many reincarnations of Batman, Brooker (1999) points out that “it is through being adapted that Batman has survived” (p. 197). However, neither adaptations deriving from comic art nor more traditional literary sources emerge independently. This is to say that as with the content of any mediation, meaning takes up final residence within the receiver. Thus, studying how adaptations function as cognitive agents in addition to cultural artifacts is an essential ingredient to grasping a general understanding of their nature. For it is of far less importance how the artifact “evolves” than how its agency affects the “evolution” of the receiver and the culture at large. Toward this goal, the present dissertation has sought to clarify the basic processes of adaptation and investigate its cognitive consequences.
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APPENDIX A

CONSENT FORM

Title: Found in Translation: The Adaptation of Comic Art to Film

Investigator: Matthew T. Jones, Mass Media and Communication, (201) 337 1965

Faculty Advisor: Dr. Matthew Lombard, Mass Media and Communication, (215) 204 7182

We are currently engaged in a study of reader/viewer response to comic art adaptations. If you should choose to participate in our research, you will experience the following sequence of events:

(1) You will be brought into a private room and left alone to complete a short demographic questionnaire [five minutes]. (2) You will either read a comic book or view a segment of a film [thirty minutes] or read a comic book and then view a segment of a film [sixty minutes]. (3) You will be left in private to complete a brief questionnaire [ten minutes]. Accounting for potential delays, this entire process will take no longer than ninety minutes.

The data you provide will be recorded anonymously and your participation and anything you say during the session will be held in the strictest confidence.

We welcome questions about the experiment at any time. Your participation in this study is on a voluntary basis, and you may refuse to participate at any time without consequence or prejudice.

Questions about your rights as a research subject may be directed to Mr. Richard Throm, Office of the Vice President for Research, Institutional Review Board, Temple University, 3400 N. Broad Street, Philadelphia, PA, 19140, (215) 707 – 8757.

Signing your name below indicates that you have read and understand the contents of this Consent Form and that you agree to take part in this study.

Participant’s Signature_____________________
Date_____

Investigator’s Signature_____________________
Date_____
APPENDIX B

TEMPLE PRESENCE INVENTORY (Lombard & Ditton, 2007)

Thank you very much for agreeing to complete this questionnaire.

The questions on these pages ask about the media experience you just had.

There are no right or wrong answers; please simply give your first impressions and answer all of the questions as accurately as possible, even questions that may seem unusual or to not apply to the particular media experience you just had. For example, in answering a question about how much it felt like you were "inside the environment you saw/heard," base your answer on your feeling rather than your knowledge that you were not actually inside that environment.

Throughout the questions, the phrases "the environment you saw/heard" and "objects, events, or people you saw/heard" refer to the things or people that were presented in the media experience, not your immediate physical surroundings (i.e., the actual room you were in during the media experience).

Please circle the responses that best represent your answers. All of your responses will be kept strictly confidential.

----------------------------------------------------------------------------------------

1. To what extent did you feel mentally immersed in the experience?
   Not At All 1 2 3 4 5 6 7 Very Much

2. How involving was the experience?
   Not At All 1 2 3 4 5 6 7 Very Much

3. How completely were your senses engaged?
   Not At All 1 2 3 4 5 6 7 Very Much

4. To what extent did you experience a sensation of reality?
   Not At All 1 2 3 4 5 6 7 Very Much

5. How relaxing or exciting was the experience?
   Not At All 1 2 3 4 5 6 7 Very Much
6. How engaging was the story?
Not At All 1 2 3 4 5 6 7 Very Much
7. How much did it seem as if the objects and people you saw/heard had come to the place you were?
Not At All 1 2 3 4 5 6 7 Very Much
8. How much did it seem as if you could reach out and touch the objects or people you saw/heard?
Low Interest 1 2 3 4 5 6 7 High Interest
9. How often when an object seemed to be headed toward you did you want to move to get out of its way?
Never 1 2 3 4 5 6 7 Always
10. To what extent did you experience a sense of being there inside the environment you saw/heard?
Not At All 1 2 3 4 5 6 7 Very Much
11. To what extent did it seem that sounds came from specific different locations?
Not At All 1 2 3 4 5 6 7 Very Much
12. How often did you want to try to touch something you saw/heard?
Never 1 2 3 4 5 6 7 Always
13. Did the experience seem more like looking at the events/people on a movie screen/comic book or more like looking at the events/people through a window?
Comic Book/Movie Screen 1 2 3 4 5 6 7 Window
14. How often did you have the sensation that people you saw/heard could also see/hear you?

Never    1  2  3  4  5  6  7  Always

15. To what extent did you feel you could interact with the person or people you saw/heard?

None    1  2  3  4  5  6  7  Very Much

16. How much did it seem as if you and the people you saw/heard both left the places where you were and went to a new place?

Not At All    1  2  3  4  5  6  7  Very Much

17. How much did it seem as if you and the people you saw/heard were together in the same place?

Not At All    1  2  3  4  5  6  7  Very Much

18. How often did it feel as if someone you saw/heard in the environment was talking directly to you?

Never    1  2  3  4  5  6  7  Always

19. How often did you want to or did you make eye-contact with someone you saw/heard?

Never    1  2  3  4  5  6  7  Always

20. Seeing and/or hearing a person through a medium constitutes an interaction with him or her. How much control over the interaction with the person or people you saw/heard did you feel you had?

None    1  2  3  4  5  6  7  Very Much
21. During the media experience how well were you able to observe the facial expressions of the people you saw/heard?

| Not Well | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Very Well |

22. During the media experience how well were you able to observe the changes in tone of voice of the people you saw/heard?

| Not Well | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Very Well |

23. During the media experience how well were you able to observe the style of dress of the people you saw/heard?

| Not Well | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Very Well |

24. During the media experience how well were you able to observe the body language of the people you saw/heard?

| Not Well | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Very Well |

25. How often did you make a sound out loud (e.g. laugh or speak) in response to someone you saw/heard in the media environment?

| Never | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Always |

26. How often did you smile in response to someone you saw/heard in the media environment?

| Never | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Always |

27. How often did you want to or did you speak to a person you saw/heard in the media environment?

| Never | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Always |
For items 28-34, please circle the number that best describes your evaluation of the media experience.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>28.</td>
<td>Remote</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Immediate</td>
</tr>
<tr>
<td>29.</td>
<td>Unemotional</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Emotional</td>
</tr>
<tr>
<td>30.</td>
<td>Unresponsive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Responsive</td>
</tr>
<tr>
<td>31.</td>
<td>Dead</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lively</td>
</tr>
<tr>
<td>32.</td>
<td>Impersonal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Personal</td>
</tr>
<tr>
<td>33.</td>
<td>Insensitive</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sensitive</td>
</tr>
<tr>
<td>34.</td>
<td>Unsociable</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sociable</td>
</tr>
</tbody>
</table>

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APPENDIX C

UNIVERSITY COLLEGE LONDON QUESTIONNAIRE

(Slater, Steed & Usoh, 1993)

Please circle the response that most correctly reflects your experience.

1. To what extent did you experience a sense of “being there” in the environment of the comic book?
   Not At All 1 2 3 4 5 6 7 Very Much

2. To what extent did the comic book become the dominant reality while you were reading it?
   Not At All 1 2 3 4 5 6 7 Very Much

3. To what extent did the comic book become a place rather than just images?
   Not At All 1 2 3 4 5 6 7 Very Much
APPENDIX D

PERSONAL EXPERIENCE QUESTIONNAIRE FOR CONDITION 1

Please circle or check off the response that best describes your experience.

1. What was the name of the comic you just read?

2. Have you ever read this particular issue before?
   - Yes
   - No

3. How many other issues from this comic title/series have you read before?
   - None
   - 1-4
   - 5-9
   - 10-14
   - 15-19
   - 20-24
   - 25 or more

4. How would you rate your level of enjoyment of this issue?
   Low Enjoyment 1 2 3 4 5 6 7 High Enjoyment

5. How would you rate your level of enjoyment of this comic title/series?
   Low Enjoyment 1 2 3 4 5 6 7 High Enjoyment

6. Have you ever seen a film adaptation based on this comic title/series before?
   - Yes
   - No
2. If you answered yes to the last question (question 6), how would you rate your level of enjoyment of the film adaptation?
   - I have never seen a film adaptation of this comic title/series before.

3. Have you ever been exposed to other media (e.g. television, videogames, radio, theater, music, t-shirts, etc.) based on (or relating to) this comic title/series before?
   - Yes
   - No

4. If you answered yes to the last question (question 8), how would you rate your level of enjoyment of the other media (e.g. television, videogames, radio, theater, music, t-shirts, etc.)?
   - I have never been exposed to other media based on (or relating to) this comic title/series before.

5. How would you rate your level of enjoyment of comics generally?

11. How would you rate your level of enjoyment of films generally?
APPENDIX E

PERSONAL EXPERIENCE QUESTIONNAIRE FOR CONDITIONS 2-4

Please circle or check off the response that best describes your experience.

7. What was the name of the film you just saw?
   ____________________________________________

8. Have you ever seen this particular film before?
   ✓ Yes
   ☐ No

9. How would you rate your level of enjoyment of this film based on what you have seen?
   Low Enjoyment 1 2 3 4 5 6 7 High Enjoyment

10. Would you consider yourself a “fan” of any of the actors you saw in this film clip?
    ✓ Yes
    ☐ No

11. If you answered yes to the last question (question 4), how much of a “fan” would you consider yourself to be?
    ✓ I do not consider myself a “fan” of any of the actors I saw in this film clip.
    ☐

12. Were you aware that this film is based on a comic title/series?
    ✓ Yes
    ☐ No
13. How many issues from the comic title/series (upon which this film is based) have you read before?

- None
- 1-4
- 5-9
- 10-14
- 15-19
- 20-24
- 25 or more

14. How would you rate your level of enjoyment of the comic title/series upon which this film is based?

- I have never read the comic title/series upon which this film is based.

Low Enjoyment 1 2 3 4 5 6 7 High Enjoyment

15. Have you ever seen a different film adaptation based on this comic title/series before?

- Yes
- No

6. If you answered yes to the last question (question 9), how would you rate your level of enjoyment of the other film adaptation?

- I have never seen a different film adaptation of this comic title/series before.

Low Enjoyment 1 2 3 4 5 6 7 High Enjoyment
7. Have you ever been exposed to other media (e.g. television, videogames, radio, theater, music, t-shirts, etc.) based on (or relating to) this film before?
- Yes
- No

8. If you answered yes to the last question (question 11), how would you rate your level of enjoyment of the other media (e.g. television, videogames, radio, theater, music, t-shirts, etc.)?
- I have never been exposed to other media based on (or relating to) this comic title/series before.

  Low Enjoyment 1 2 3 4 5 6 7 High Enjoyment

9. How would you rate your level of enjoyment of comics generally?

  Low Enjoyment 1 2 3 4 5 6 7 High Enjoyment

12. How would you rate your level of enjoyment of films generally?

  Low Enjoyment 1 2 3 4 5 6 7 High Enjoyment
APPENDIX F

ITEMS AND FACTOR LOADINGS FOR TPI FACTOR ANALYSIS

Engagement and Social Richness

<table>
<thead>
<tr>
<th>Factor Loading</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>.766</td>
<td>How involving was the experience?</td>
</tr>
<tr>
<td>.758</td>
<td>Unemotional or Emotional?</td>
</tr>
<tr>
<td>.746</td>
<td>Dead or Lively?</td>
</tr>
<tr>
<td>.726</td>
<td>How engaging was the story?</td>
</tr>
<tr>
<td>.714</td>
<td>To what extent did you feel mentally immersed in the experience?</td>
</tr>
<tr>
<td>.711</td>
<td>Unresponsive or Responsive?</td>
</tr>
<tr>
<td>.710</td>
<td>To what extent did you experience a sensation of reality?</td>
</tr>
<tr>
<td>.690</td>
<td>How completely were your senses engaged?</td>
</tr>
<tr>
<td>.681</td>
<td>Remote or Immediate?</td>
</tr>
<tr>
<td>.668</td>
<td>How relaxing or exciting was the experience?</td>
</tr>
<tr>
<td>.640</td>
<td>Impersonal or Personal?</td>
</tr>
<tr>
<td>.585</td>
<td>Unsociable or Sociable?</td>
</tr>
<tr>
<td>.576</td>
<td>How much did it seem as if the objects and people you saw/heard had</td>
</tr>
<tr>
<td></td>
<td>come to the place you were?</td>
</tr>
<tr>
<td>.568</td>
<td>Insensitive or Sensitive?</td>
</tr>
</tbody>
</table>

Spatial Presence and Parasocial Interaction

<table>
<thead>
<tr>
<th>Factor Loading</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>.832</td>
<td>How often did you want to try to touch something you saw/heard?</td>
</tr>
<tr>
<td>.786</td>
<td>How often did you have the sensation that people you saw/heard could also see/hear you?</td>
</tr>
<tr>
<td>.784</td>
<td>How often when an object seemed to be headed toward you did you want to move to get out of its way?</td>
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<tr>
<td>.781</td>
<td>To what extent did you feel you could interact with the person or people you saw/heard?</td>
</tr>
<tr>
<td>.666</td>
<td>How much did it seem as if you and the people you saw/heard both left the places where you were and went to a new place?</td>
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<td>.567</td>
<td>Seeing and/or hearing a person through a medium constitutes an interaction with him or her. How much control over the interaction with the person or people you saw/heard did you feel you had?</td>
</tr>
<tr>
<td>.557</td>
<td>How often did it feel as if someone you saw/heard in the environment was talking directly to you?</td>
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<tr>
<td>.556</td>
<td>To what extent did you experience a sense of being there inside the environment you saw/heard?</td>
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<td>.542</td>
<td>How much did it seem as if you and the people you saw/heard were together in the same place?</td>
</tr>
<tr>
<td>.532</td>
<td>To what extent did it seem that sounds came from specific different locations?</td>
</tr>
<tr>
<td>.510</td>
<td>How much did it seem as if you could reach out and touch the objects or people you saw/heard?</td>
</tr>
<tr>
<td>.479</td>
<td>How often did you want to or did you make eye-contact with someone you saw/heard?</td>
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### Social Presence – Passive Interpersonal

<table>
<thead>
<tr>
<th>Factor Loading</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>.848</strong></td>
<td>During the media experience how well were you able to observe the</td>
</tr>
<tr>
<td></td>
<td>body language of the people you saw/heard?</td>
</tr>
<tr>
<td><strong>.747</strong></td>
<td>During the media experience how well were you able to observe the</td>
</tr>
<tr>
<td></td>
<td>changes in tone of voice of the people you saw/heard?</td>
</tr>
<tr>
<td><strong>.658</strong></td>
<td>During the media experience how well were you able to observe the</td>
</tr>
<tr>
<td></td>
<td>style of dress of the people you saw/heard?</td>
</tr>
<tr>
<td><strong>.649</strong></td>
<td>During the media experience how well were you able to observe the</td>
</tr>
<tr>
<td></td>
<td>facial expressions of the people you saw/heard?</td>
</tr>
</tbody>
</table>

### Social Presence – Active Interpersonal

<table>
<thead>
<tr>
<th>Factor Loading</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>.723</strong></td>
<td>How often did you smile in response to someone you saw/heard in</td>
</tr>
<tr>
<td></td>
<td>the media environment?</td>
</tr>
<tr>
<td><strong>.436</strong></td>
<td>How often did you make a sound out loud (e.g. laugh or speak) in</td>
</tr>
<tr>
<td></td>
<td>response to someone you saw/heard in the media environment?</td>
</tr>
</tbody>
</table>
APPENDIX G

ITEMS AND FACTOR LOADINGS FOR TPI CONFIRMATORY FACTOR ANALYSIS

Engagement

<table>
<thead>
<tr>
<th>Factor Loading</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>.875</td>
<td>How involving was the experience?</td>
</tr>
<tr>
<td>.838</td>
<td>To what extent did you feel mentally immersed in the experience?</td>
</tr>
<tr>
<td>.830</td>
<td>How completely were your senses engaged?</td>
</tr>
<tr>
<td>.827</td>
<td>To what extent did you experience a sensation of reality?</td>
</tr>
<tr>
<td>.804</td>
<td>How engaging was the story?</td>
</tr>
<tr>
<td>.780</td>
<td>How relaxing or exciting was the experience?</td>
</tr>
</tbody>
</table>

Spatial Presence

<table>
<thead>
<tr>
<th>Factor Loading</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>.834</td>
<td>How much did it seem as if you could reach out and touch the objects or people you saw/heard?</td>
</tr>
<tr>
<td>.820</td>
<td>To what extent did you experience a sense of being there inside the environment you saw/heard?</td>
</tr>
<tr>
<td>.792</td>
<td>How often when an object seemed to be headed toward you did you want to move to get out of its way?</td>
</tr>
<tr>
<td>.761</td>
<td>How much did it seem as if the objects and people you saw/heard had come to the place you were?</td>
</tr>
<tr>
<td>.720</td>
<td>How often did you want to try to touch something you saw/heard?</td>
</tr>
</tbody>
</table>
To what extent did it seem that sounds came from specific different locations?

Did the experience seem more like looking at the events/people on a movie screen/comic book or more like looking at the events/people through a window?

### Parasocial Interaction

<table>
<thead>
<tr>
<th>Factor Loading</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>.853</td>
<td>To what extent did you feel you could interact with the person or people you saw/heard?</td>
</tr>
<tr>
<td>.799</td>
<td>How much did it seem as if you and the people you saw/heard both left the places where you were and went to a new place?</td>
</tr>
<tr>
<td>.791</td>
<td>How often did you have the sensation that people you saw/heard could also see/hear you?</td>
</tr>
<tr>
<td>.778</td>
<td>How much did it seem as if you and the people you saw/heard were together in the same place?</td>
</tr>
<tr>
<td>.756</td>
<td>How often did it feel as if someone you saw/heard in the environment was talking directly to you?</td>
</tr>
<tr>
<td>.696</td>
<td>How often did you want to or did you make eye-contact with someone you saw/heard?</td>
</tr>
<tr>
<td>.689</td>
<td>Seeing and/or hearing a person through a medium constitutes an interaction with him or her. How much control over the interaction with the person or people you saw/heard did you feel you had?</td>
</tr>
</tbody>
</table>
### Social Presence – Passive Interpersonal

<table>
<thead>
<tr>
<th>Factor Loading</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>.892</td>
<td>During the media experience how well were you able to observe the body language of the people you saw/heard?</td>
</tr>
<tr>
<td>.870</td>
<td>During the media experience how well were you able to observe the changes in tone of voice of the people you saw/heard?</td>
</tr>
<tr>
<td>.798</td>
<td>During the media experience how well were you able to observe the facial expressions of the people you saw/heard?</td>
</tr>
<tr>
<td>.780</td>
<td>During the media experience how well were you able to observe the style of dress of the people you saw/heard?</td>
</tr>
</tbody>
</table>

### Social Presence – Active Interpersonal

<table>
<thead>
<tr>
<th>Factor Loading</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>.805</td>
<td>How often did you smile in response to someone you saw/heard in the media environment?</td>
</tr>
<tr>
<td>.767</td>
<td>How often did you make a sound out loud (e.g. laugh or speak) in response to someone you saw/heard in the media environment?</td>
</tr>
<tr>
<td>.689</td>
<td>How often did you want to or did you speak to a person you saw/heard in the media environment?</td>
</tr>
</tbody>
</table>
### Social Richness

<table>
<thead>
<tr>
<th>Factor Loading</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>.842</td>
<td>Unresponsive or Responsive?</td>
</tr>
<tr>
<td>.828</td>
<td>Dead or Lively?</td>
</tr>
<tr>
<td>.813</td>
<td>Unemotional or Emotional?</td>
</tr>
<tr>
<td>.802</td>
<td>Impersonal or Personal?</td>
</tr>
<tr>
<td>.797</td>
<td>Remote or Immediate?</td>
</tr>
<tr>
<td>.724</td>
<td>Unsociable or Sociable?</td>
</tr>
<tr>
<td>.679</td>
<td>Insensitive or Sensitive?</td>
</tr>
</tbody>
</table>
## APPENDIX H
### ITEMS AND FACTOR LOADINGS FOR TPI CUMULATIVE FACTOR ANALYSIS

**All Items**

<table>
<thead>
<tr>
<th>Factor Loading</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>.772</td>
<td>To what extent did you experience a sense of being there inside the environment you saw/heard?</td>
</tr>
<tr>
<td>.760</td>
<td>How much did it seem as if you could reach out and touch the objects or people you saw/heard?</td>
</tr>
<tr>
<td>.758</td>
<td>How involving was the experience?</td>
</tr>
<tr>
<td>.749</td>
<td>How much did it seem as if the objects and people you saw/heard had come to the place you were?</td>
</tr>
<tr>
<td>.737</td>
<td>Unresponsive or Responsive?</td>
</tr>
<tr>
<td>.730</td>
<td>Remote or Immediate?</td>
</tr>
<tr>
<td>.723</td>
<td>To what extent did you feel mentally immersed in the experience?</td>
</tr>
<tr>
<td>.721</td>
<td>To what extent did you experience a sensation of reality?</td>
</tr>
<tr>
<td>.714</td>
<td>Impersonal or Personal?</td>
</tr>
<tr>
<td>.709</td>
<td>How completely were your senses engaged?</td>
</tr>
<tr>
<td>.699</td>
<td>How relaxing or exciting was the experience?</td>
</tr>
<tr>
<td>.694</td>
<td>How engaging was the story?</td>
</tr>
<tr>
<td>.694</td>
<td>Dead or Lively?</td>
</tr>
<tr>
<td>.686</td>
<td>Unemotional or Emotional?</td>
</tr>
<tr>
<td>.634</td>
<td>How much did it seem as if you and the people you saw/heard were together in the same place?</td>
</tr>
<tr>
<td>.634</td>
<td>Unsociable or Sociable?</td>
</tr>
<tr>
<td>.623</td>
<td>To what extent did you feel you could interact with the person or people you saw/heard?</td>
</tr>
<tr>
<td>.605</td>
<td>How much did it seem as if you and the people you saw/heard both left the places where you were and went to a new place?</td>
</tr>
<tr>
<td>.575</td>
<td>How often when an object seemed to be headed toward you did you want to move to get out of its way?</td>
</tr>
<tr>
<td>.565</td>
<td>How often did you want to try to touch something you saw/heard?</td>
</tr>
<tr>
<td>.563</td>
<td>To what extent did it seem that sounds came from specific different locations?</td>
</tr>
<tr>
<td>.559</td>
<td>How often did it feel as if someone you saw/heard in the environment was talking directly to you?</td>
</tr>
<tr>
<td>.555</td>
<td>How often did you want to or did you make eye-contact with someone you saw/heard?</td>
</tr>
<tr>
<td>.554</td>
<td>During the media experience how well were you able to observe the facial expressions of the people you saw/heard?</td>
</tr>
<tr>
<td>.551</td>
<td>During the media experience how well were you able to observe the changes in tone of voice of the people you saw/heard?</td>
</tr>
<tr>
<td>.535</td>
<td>Insensitive or Sensitive?</td>
</tr>
<tr>
<td>.526</td>
<td>Seeing and/or hearing a person through a medium constitutes an interaction with him or her. How much control over the interaction with the person or people you saw/heard did you feel you had?</td>
</tr>
</tbody>
</table>
| .522 | How often did you have the sensation that people you saw/heard
<table>
<thead>
<tr>
<th>Question</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>How often did you want to or did you speak to a person you saw/heard in the media environment?</td>
<td>.505</td>
</tr>
<tr>
<td>During the media experience how well were you able to observe the body language of the people you saw/heard?</td>
<td>.486</td>
</tr>
<tr>
<td>How often did you smile in response to someone you saw/heard in the media environment?</td>
<td>.441</td>
</tr>
</tbody>
</table>
APPENDIX I

ITEMS AND FACTOR LOADINGS FOR UCL CONFIRMATORY FACTOR ANALYSIS

All Items

<table>
<thead>
<tr>
<th>Factor Loading</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>.911</td>
<td>To what extent did the film become a place rather than just images?</td>
</tr>
<tr>
<td>.910</td>
<td>To what extent did the film become the dominant reality while you were viewing it?</td>
</tr>
<tr>
<td>.888</td>
<td>To what extent did you experience a sense of “being there” in the environment of the film?</td>
</tr>
</tbody>
</table>