

Creating Transmedia Narratives:
The Structure and Design of Stories
Told Across Multiple Media

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ABSTRACT

Transmedia narratives are a rapidly emerging form of communication in which stories are told across multiple media. Transmedia narratives are being developed for a wide variety of applications including entertainment, education, marketing, advertising, organizational change, and activism. The integration of several different media into a cohesive and coherent narrative is a major challenge for the creators of transmedia narrative. Among those challenges are keeping readers/viewers interested in a narrative scattered across multiple media and providing a comprehensive framework to guide transmedia project design and development teams.

The research question of this thesis focuses on how transmedia narrative designers and developers can tell effective stories across multiple media. An effective transmedia narrative is more than a collection of story elements or stories scattered across a number of different media and the process of creating them is a relatively uncharted area.

Six online projects that use transmedia techniques were reviewed in order to develop a list of questions that identified key areas of transmedia narrative design. This preliminary list of questions was used to develop a framework for transmedia narrative design. Concept mapping—a graphical tool used to organize and represent knowledge—was employed to identify the concepts embedded within the questions and the relationships between those concepts and develop a hierarchical structure of transmedia concepts and their associated properties. The final round of data collection consisted of a set of online interviews with three professionals experienced in the creation of transmedia narratives. They were asked to review these materials and provide feedback that was used to validate the set of concepts identified and determine if the design-related questions sufficient for creating a transmedia narrative design framework.

This thesis develops an ontology for transmedia narrative design that defines the objects, entities, and concepts and their interrelationships. This ontology provides a framework that links together the diverse elements of narrative, user engagement, and interaction design. The ontology provides a common set of concepts and interrelationships that will allow the members of a multi-disciplinary team to “speak a common language” while working on various aspects of transmedia narrative design and development.

A four-level process (transmedia project, storyworld, story, and scene/sequence levels) is also developed to document the steps involved in designing a transmedia narrative. The four-level process provides a structured framework that will help teams standardize their design and development approaches to transmedia narrative projects. This should help improve quality and efficiency and reduce costs associated with the development of transmedia projects.

A comprehensive set of key design questions, when used in conjunction with the four-level process identified, provides a detailed framework for the design of transmedia narratives.

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INTRODUCTION

Each advance in information and communications technology (ICT) has brought with it an increase in the sophistication of our storytelling. Transmedia narratives are emerging as a major new form of communication. Transmedia narratives – also called transmedia storytelling – present multiple components of a story across several different media in a closely integrated manner. (Miller, 2008) The term “transmedia” describes the way communication technologies are used to extend storytelling onto multiple media and shift audiences across distinct but interconnected media platforms (Evans, 2008). A transmedia story might, for example, present a character’s story as a series of tweets using Twitter.com, a number of still images posted to Flickr, written narrative posted to a blog, video clips posted to YouTube, and texts sent to mobile phones.

Transmedia storytelling uses the tools of the storyteller – emotion, engagement, universal themes, personal connection, and relevance – to create a communication experience instead of a message. (Rutledge, 2011)

Transmedia narratives have attracted the attention of the film, television, and publishing industries because of the creative and business opportunities they present.

The transmedia approach is such a powerful storytelling technique because it enables the user to become involved in the material in an extremely deep way and sometimes in a manner that eerily simulates a real-life experience...By spanning a number of media, a project can become far richer, more detailed, and multifaceted. (Miller, 2008, p. 152)

Richer, deeper experiences that rise above the “digital noise” are helping drive the adoption of transmedia storytelling as the “new standard for 21st century communication” (Rutledge, 2011). The use of transmedia narrative approaches can be a powerful

form of storytelling that lets users delve more deeply into the world of the story. Ed Sanchez, a member of the *Blair Witch* production team, said:

What we learned is that if you give people enough stuff to explore, they will explore. Not everyone will but some will. The people who do explore and take advantage of the whole world will forever by your fans, will give you an energy you can't buy through advertising...It's this web of information that is laid out in a way that keeps people interested and keeps people working for it. If people have to work for something they devote more time to it. And they give it more emotional value. (Jenkins, 2006, p. 103)

One indication of the growing importance of transmedia narrative is the recognition of the title "Transmedia Producer" by the Producers Guild of America (PGA). The emergence of transmedia narratives is likely to significantly disrupt the entertainment and communications industries (Kohn, 2011).

Each increase in the complexity of our communications vehicles – the moves from pictographic languages to abstract alphabets or from cave painting to digital image manipulation – has been motivated by the desire to improve the range and richer of meaning we can share. (Macy, Anderson, & Krygier, 2000)

The emergence of transmedia narratives has taken the process of creation of communication to an unprecedented level of sophistication, significantly increasing the complexity of information design. While the technology of transmedia is 21st century, the content it carries is as old as the human ability to communicate about the things that are meaningful to us.

Statement of Problem & Research Questions

The basic question facing designers and developers of transmedia narratives is "How do you tell an effective story across multiple media?" While the transmedia approach has

the potential to deliver powerful and effective narratives, the process of creating them is a relatively uncharted area.

An effective transmedia narrative is more than a collection of story elements or stories scattered across a number of different media. There have not yet been any creators of transmedia works that have been able to successfully construct a *unified* project that harnesses the power of each medium (whether through the producer's skills or collaboration with other creative people) to its largest potential (Leavitt, 2010). The nature of transmedia narratives brings with it a host of information design challenges. The individual elements of a transmedia narrative – text, images, audio, video, and other forms of media – present their individual opportunities and challenges.

Each medium has its own affordances, its own systems of representation, its own strategies for producing and organizing knowledge. Participants in the new media landscape learn to navigate these different and sometimes conflicting modes of representation and to make meaningful choices about the best ways to express their ideas in each context. (Jenkins, Purushotma, Weigel, Clinton, & Robison, 2009, pp. 87-88)

The creation of transmedia narrative involves not just how to work with different media, but also working with the production cultures associated with those media. For example, there are significant production culture differences between film, TV and theater production, digital media production, and book production (Jeffery-Poulter, 2001, p. 155).

In transmedia projects that involve distinct media which are part of existing creative production cultures, a practitioner needs to not only understand the affordances of the medium, but be able to negotiate the associated industries. (Dena, 2009, p. 64)

In addition to the affordances of the individual media in a transmedia narrative, a whole new set of challenges occur when trying to integrate several different media into a cohesive and coherent overall narrative. The diverse set of knowledge and skills required to author a transmedia narrative is a major challenge.

These works require a different kind of knowledge and skill. A creator may be well versed in writing novels and screenplays, but not necessarily skilled in writing stories that begin in a novel and continue in a film, in the rhetoric necessary to guide their reader to become a player, and even in understanding the combined effort these media platforms have on experience. (Dena, 2009, p. 5)

More experience with transmedia narratives will help content creators develop new ways of combining media platforms and producing exciting new storytelling experiences (Miller, 2008, p. 162). Much is still unknown about the process of creating effective transmedia narratives. The current stage of transmedia narrative has been compared to the silent film era when new creative approaches for moving pictures were being developed (Kohn, 2011). From a creative perspective, transmedia narrative projects will transform the art of storytelling (Hoefs, 2011). The aesthetic criteria for evaluating transmedia works are still poorly defined (Jenkins, 2006, pp. 96-97), presenting another challenge as the field develops.

The diverse media used in a transmedia narrative challenges the ability of individual readers/viewers to understand the meaning of the narrative. For example, a person familiar with reading a book and using a computer may not be familiar with using both in a way that enables them to effectively engage the work in its entirety (Dena, 2009, p. 5). How to keep readers/viewers interested in a narrative scattered across multiple media is a critical concern for transmedia designers and developers.

There is still a lot we don't know about what will motivate consumers to seek out those other bits of information about the unfolding story...and we still know little about how much explicit information they need to know those other elements exist or where to look for them. (Jenkins, 2009)

The process of creating a coherent story or set of stories across multiple media is significant.

One very large and persistent problem has always been creating authentic transmedia stories – natural story arcs and bridges that lead you onward through a long format, multi platform experience. (Hayes G. P., 2010)

The purpose of this thesis is to address the question of how to create stories that are effectively communicated via transmedia narratives. Answering this question requires:

- Identifying key theories, methodologies, concepts, techniques and tools that can be applied to the creation of transmedia narratives.
- Developing an ontology that represents the key concepts within the field of transmedia narrative design and identifies the properties of and relationships between those concepts.
- Developing a practical framework that can be used to design and develop the narrative, the interconnections between elements of the narrative, and the interfaces that facilitate users' navigation through the transmedia narrative.

The study of transmedia narratives should also examine the relationship between narrative and media (Ryan, Introduction, 2004, p. 35). Doing so raises a number of secondary research questions, including:

- How are effective transmedia narratives structured?
- How can specific concepts and theories from information design theory be applied to narratives that integrate multiple media?

- How do the intrinsic properties of a particular medium shape the form of the narrative and affect the transmedia narrative experience?
- What properties of a particular medium are favorable or detrimental to the creation of a transmedia narrative?
- What can one medium do that another can't when used to create a transmedia narrative?
- How can narrative genres, approaches, and techniques be adapted to transmedia narratives?

Significance of the Problem

Transmedia narratives are becoming increasingly common as mobile computing and communications technologies make it easier to develop and distribute information across a variety of media. The commercial opportunities presented by transmedia narratives are very significant. It has been noted that “any screenplay or project developed in primetime television or feature film today” must look at how it can be sold to consumers in as many different ways as possible (Caldwell, 2008, p. 222). Over the next decade, there will be a rapid expansion of the influence of transmedia narratives across a range of areas including the media and entertainment, publishing, and advertising industries. A common language and the standardization of concepts and terms are essential to the production of complex transmedia narratives (Dena, 2009, p. 133). Documenting a production process would provide a framework for the creation of transmedia narratives.

Entertainment

The transmedia approach emerged over the past decade in the entertainment industry. *The Matrix* franchise was one of the early transmedia narrative successes. The use of transmedia narratives is now moving from the industry's innovators and into the mainstream.

An increasing number of television programs have been using transmedia techniques to extend their storylines. For example, *Covert Affairs*, a television series on the USA Network cable channel, uses video clips, games, texts, and tweets to extend the secret world of its main characters, who are CIA agents (USA Network, 2011). The program used a "tweetcast" to involve audience members in a secret mission involving one of the main characters. While set in the same "world" as the TV program, the storyline for the tweetcast mission was completely separate from the episodes that appeared on television.

Burn Notice, another action-adventure spy show on USA Network, uses a similar combination of videos, games, and electronic messaging to pull viewers more deeply into the TV series. Its transmedia approach also includes a graphic novel in which weekly chapters are available online or for download to mobile devices (USA Network, 2011).

The Floating City (www.floatingcity.com) is a transmedia game in which players access a world envisioned by musician and five-time Grammy award winner Thomas Dolby via the Web, social media, smart phones, and other devices like the iPad. The game integrates characters, places, and objects named in Dolby's music since the beginning of his career. Players explore a fictional Google map, form tribes, trade relics, and try to unravel the mystery of the Floating City—all while earning merchandise, credits

for music downloads for songs from Dolby's new album, and concert tickets for his tour (Harwood, 2011).

MTV's *Valemont* and *Savage County* series blended TV, web video, social media platforms, an iPhone app and a newspaper-like website that reported on the stories as if they were real (Fahle, 2011).

Marketing and branding

Transmedia narratives are being used in marketing and branding as a way to engage consumers in new ways, enhance user experiences, and to strengthen customer loyalty. To do this, organizations incorporate their brand into a storyline that is social, co-created with consumers, delivered across multiple platforms, dynamic, and changes to fit the user's engagement level (Fahle, 2011). More and more examples are beginning to emerge.

Coca-Cola explored the theme of happiness with a transmedia narrative connecting its brand to this theme for several years. The project started in 2007 with a series of commercials "depicting a storyworld centered on the idea that happiness is what we create for ourselves in our everyday lives" (Sonnenfeld, 2011). More recently it continued to explore the "metastory" of happiness with mobile apps, games, blogs, online music videos, podcast, etc.—with each telling its own version of Coca-Cola's "Open Happiness" narrative (Sonnenfeld, 2011).

Starbucks used transmedia techniques in an alternate reality game in early 2011 as a promotional strategy. *SRCH by Starbucks* featured singer Lady Gaga in a game that had participants search for clues in video clips, songs, tweets, and on mobile devices. Successful participants had the opportunity to win Starbucks gift cards and other prizes (Starbucks, 2011).

While relatively little of the “official” *Harry Potter* content produced until 2011 would be considered transmedia, the announcement of Pottermore in June 2011 is likely to change that. Pottermore is an extension of J.K. Rowling’s *Harry Potter* universe and will feature a website that provides an interactive online reading experience. It will also feature unpublished content by Rowling and will enable users to purchase *Harry Potter* digital audio and e-books (Fahle, 2011).

Education

Transmedia narratives are being looked at by innovators in education. Their hope is that the transmedia approach will become a powerful new tool for teaching, because of the level of engagement and depth of experiences transmedia narratives offer.

In July 2011 an alternate reality game called *RevQuest: Sign of the Rhinoceros* was released by the Colonial Williamsburg Foundation to attract visitors. For the price of an admission ticket, players could use cell phones and text messaging to complete a fictional spy mission set in Colonial Williamsburg’s Historic Area. Playing the game involved exploring secret hiding places, meeting mysterious characters, unlocking clues, and deciphering codes to solve a mystery that could change the course of the American Revolution. (Marketwire, 2011). *RevQuest* spanned the line between education and entertainment by using the physical environment of historic Williamsburg and historical facts in a storyline designed to educate visitors about the sacrifices made by individuals during the American Revolution (Marketwire, 2011).

Inanimate Alice (<http://inanimatealice.com/>) was a transmedia project designed to be easily assimilated into learning environments. It used images, sounds, text, and user inte-

ractions combined with a collaborative environment to help students develop their literary, cinematic, and artistic skills (Pullinger & Thomas, 2011).

The New York Public Library developed *NYC Haunts*, which used mobile location-based alternative reality gaming techniques to teach young people about the neighborhoods they lived in. The game's key character was a detective who woke up in the NYC Public Library with no memory. Players uncovered clues that helped them solve the game's mystery by moving back and forth between physical, online, and mobile environments (e.g. iPad, smartphones) (Martin, 2011).

Activism

Transmedia narratives are also beginning to be put to use promoting ideas and encourage activism. *Collapsus*, a transmedia project released in 2011, used a combination of animation, interactive fiction, and documentary film to raise awareness of the implications of peak oil and potential future energy supply shocks. The project integrated video blogging, interactive maps, fictional news casts, live action footage, and animation to draw participants into a world in which they needed to access and analyze information about global energy production and consumption. The narrative was given a human touch by looking at the lives of individual characters caught up in the events portrayed in the story (Submarine Channel, 2011).

Transmedia narrative techniques were also used in *Animism: the Gods' Lake* (Aboriginal Peoples Television Network, 2011). The project, developed by Canada's Aboriginal Peoples Television Network, looked at environmentalism, capitalism, and spirituality through the eyes of characters drawn from Canada's aboriginal peoples. The project used high quality animation, a "blog" by a fictional professor of anthropology,

and companion websites that extended the projects' storyline (e.g., Iron Clad Properties which portrays a fictional company in the story world and The Gods Lake Post website which is a newspaper in the story world).

Organizational Change

The use of storytelling as a tool to facilitate organizational change is growing as the role stories in sharing, creating, and changing how people think is recognized by organizations (Ahmad & Thompson, 2009). Jim Parker, when serving as CEO of Southwest Airlines, said storytelling can play an important role in communicating within an organization.

People remember stories a lot better than they remember lectures, so I try to make my point through stories. It's important to give people a connection to the past so they feel like they have more than just a job, and instead feel like they are part of a mission. (Marshall & Adamic, 2010)

Storytelling is useful in a number of organizational situations, including (Ahmad & Thompson, 2009):

- Enculturation of new employees, managers, and other stakeholders in the organization
- Launching and brainstorming innovation
- Complex problem solving

The use of digital media like podcasts and blogs for storytelling can have a significant multiplier effect within an organization (Ahmad & Thompson, 2009).

Assumptions

A key assumption in this thesis is that a narrative – transmedia or otherwise – is intended to communicate a message created by the author or authors (the sender) via one or more media (channels) to one or more readers/viewers (the receivers). In this process, the author(s) encodes the message in one or more forms (words, images, gestures, etc.) and transmits it via the channels to the reader/viewer. Upon receipt, the reader/viewer decodes the message and extracts meaning from it. It is also assumed that at each stage of this process the meaning of the message may be obscured for any number of reasons.

It is also assumed that the transmedia narrative is created by a single author or a team that uses a well coordinated authoring process. The creation of narratives by groups that place very few constraints on participants – known as collaborative narratives (Rettberg, 2005) – is not considered in this thesis.

Definition of Terms

The term “transmedia practice” encompasses a variety of theories, concepts, methodologies, techniques, and tools drawn from transmedia storytelling (Jenkins, 2006), distributed narratives (Walker, 2004), cross-sited narratives (Ruppel, 2005), pervasive games (Montola, 2009), ubiquitous gaming (McGonigal, 2006), networked narrative environments (Zapp, 2004), superfiction (Hill, 2001), very distributed storytelling (Davenport, 1998), and augmented reality games (Szulborski, 2005).

“Transmedia” as a term is used in a number of research areas but describes different phenomena (Dena, 2009, p. 16). For this thesis, the terms “transmedia” and “transmedial” use the definition provided by Wolf:

Transmedia phenomena are phenomena that are non-specific to individual media. (Wolf, 2005)

Miller notes that because the field is so new, a number of different names, including “multiplatforming”, “cross-media producing”, and “integrated media” have been used to describe what she calls transmedia. Miller adds that no matter what the terminology, transmedia works adhere to the same principles (Miller, 2008, p. 151):

- The project exists over more than a single medium
- It is at least partially interactive
- The different components are used to expand the core material
- The components are closely integrated

Miller specifically states that transmedia productions “must combine at least two media (Miller, 2008, p. 151). This thesis will use that definition of “transmedia”.

The term “story” has been defined as a sequence of events involving characters and settings (Szulborski, 2005, p. 37), an account of an event or series of events that are fictional or non-fictional (Simmons, 2006, p. 31), and a portrayal of characters caught in a dramatic situation, with a series of events being depicted from a beginning to a conclusion (Miller, 2008, p. 5).

“Narrative” has been defined as an “account of events, experiences, or the like, whether true or fictitious” (Dictionary.com, n.d.). Miller defines as narrative as an account of events that are interesting or exciting in some way (Miller, 2008, pp. 4-5). Ryan provides a more comprehensive view of what qualifies as a narrative:

A narrative text must create a world and populate it with characters and objects...The world referred to by the text must undergo changes of state that are caused by nonhabitual events: either accidents (“happenings”) or deliberate human actions. These changes create a temporal dimension

and place the narrative world in the flux of history. The text must allow the reconstruction of an interpretive network of goals, plans, causal relationships, and psychological motivations around the narrated events. This implicit network gives coherence and intelligibility to the physical events and turns them into plot. (Ryan, Introduction, 2004, pp. 8-9)

The terms “narrative” and “story” are often used interchangeably (Miller, 2008, p. 5) and the Collins English Dictionary uses the term story within the definition of “narrative” (Dictionary.com, n.d.).

Some researchers make a distinction between the two terms, with a “story” being a collection of facts (events, actions, character, etc.) whereas a “narrative” is a particular way in which those facts have been arranged and presented to the audience (Wolff, Mulholland, Zdrahal, & Joiner, 2007). By their definition, the same story (i.e. set of facts) can be presented as one or more narratives based on different viewpoints, different selection of facts, or different media.

In this thesis, the terms “story” and “narrative” will be used broadly as synonyms rather than the more restricting definition that makes a distinction between the two.

The definition of “transmedia narrative” is still being hotly debated, with some defining it as a single story told across multiple media platforms, while others see it as many stories based in a single “story world” being told on multiple media platforms (Clarke, 2011). Adding to the confusion is a proliferation of terms that describe many of the same elements that characterize a transmedia narrative. These terms include multi-platform storytelling, interactive storytelling, cross-platform, deep media, cross-media, multi-platform, genre-mash, new media storytelling, reading mashups, chaotic reading, format independent, immersive games, collaborative fiction, hybrid, media enhancements, and

participatory media are all associated with multi-platform storytelling (Lamb & Johnson, n.d.).

A broad definition of “transmedia narrative” is the “process of conveying messages, themes, or storylines to a mass audience through the artful and well-planned use of multimedia platforms” (Gomez, 2011). The term “transmedia storytelling” has been used synonymously with “transmedia narrative”. Jenkins states that “transmedia storytelling represents a process where integral elements of a fiction get dispersed systematically across multiple delivery channels for the purpose of creating a unified and coordinated entertainment experience. Ideally, each medium makes its own unique contribution to the unfolding of the story” (Fahle, 2011). Another definition of “transmedia storytelling” requires a story that can be told in a way that seamlessly blends technology and story (Krozser, 2010).

The number of stories told in a project involving multiple media has been used as the basis for some definitions of what constitutes a transmedia narrative. For example, the terms “multimedia”, “crossmedia”, and “transmedia” have been defined as (Holme, 2011):

- Multimedia – a single story is told using different media, with the core narrative being supported by story elements spread across several types of media.
- Crossmedia – a single story interpreted independently in different media.
- Transmedia – multiple stories set in a single universe (or storyworld), with different stories being told via different media.

The Producers Guild of America (PGA) defines a transmedia narrative based on the number of narrative storylines the project involves:

A Transmedia Narrative project or franchise must consist of three (or more) narrative storylines existing within the same fictional universe on any of the following platforms: Film, Television, Short Film, Broadband, Publishing, Comics, Animation, Mobile, Special Venues, DVD/Blu-ray/CD-ROM, Narrative Commercial and Marketing rollouts, and other technologies that may or may not currently exist. These narrative extensions are NOT the same as repurposing material from one platform to be cut or repurposed to different platforms. (Kinke, 2011)

Transmedia narratives have been categorized as *intracompositional*, which are works that use multiple media to create a single story, and *intercompositional*, which are works that create interrelationships between multiple narratives across multiple media (Dena, 2009, pp. 97-98).

This thesis defines “transmedia narrative” broadly as any works with one or more stories set in a single “storyworld” and told via at least two different media.

The term “fiction” has been used in a number of definitions of transmedia narratives (Dena, 2009; Fahle, 2011; Kinke, 2011). Transmedia narratives, however, are not restricted to fiction; non-fictional narratives can also use transmedia techniques (Miller, 2008, p. 161). The issue of what constitutes fiction and non-fiction becomes even more blurred when a transmedia narrative integrates fictional settings, characters, and events with this in real-life. The term “panfictionality” has been proposed as a way to describe the merging of fiction and non-fiction (Ryan, 1997). Because of these issues with the term “fiction” this thesis defines transmedia narratives as fictional, non-fictional, and hybrid narratives.

The term “storyworld” is commonly used in the discussion of transmedia narratives and is an integral part of their definition. A “storyworld” refers to the shared universe within which the settings, characters, objects, events, and actions of one or more narra-

tives exist. The term “fictional world” is sometimes used in place of “storyworld” (Dena, 2009, p. 21). Dena specifically rejects the use of the term “storyworld” because some transmedia products incorporate game elements that are not narratives (Dena, 2009, p. 23).

Because transmedia narratives can be fiction, non-fiction, or a hybrid of both, the use of the term “fictional world” could be misleading. Narrative/story is an integral element of a transmedia narrative. Therefore, this thesis will use the term “storyworld” rather than “fictional world”.

“Social computing applications” are defined as computer applications that support social behavior by groups of people and foster interaction, content co-creation and sharing, and participation among communities of users (Wang, Carley, Zeng, & Mao, 2007).

The term “immersion” when used in the context of various forms of media has been defined as:

- The feeling of being deeply engaged when participants enter into a make-believe world as if it is real (Coomans & Timmermans, 1997)
- A metaphorical term derived from the physical experience of being submerged in water. We seek the same feeling from a psychologically immersive experience that we do from a plunge in the ocean or a swimming pool – the sensation of being surrounded by a completely other reality as different as water is from air. That takes over all our attention, our whole perceptual apparatus (Murray, 1997)

- The experience through which a fictional world acquires the presence of an autonomous, language-independent reality populated with live human beings (Ryan, 2000)

“Agency” is a phenomenon in which a media user feels empowered to take whatever actions he or she wants and get a sensible response (Szulborski, 2005, p. 27).

Information design is defined as the “art and science of preparing information so that it can be used by human beings with efficiency and effectiveness” (Horn, 2000, pp. 15-16). Information design has also been described as a systematic approach that results in a framework (or skeleton) of content to be expressed through a particular medium (Thwaites, 2000, p. 224). What distinguishes information design from other types of design are “efficiency and effectiveness at accomplishing the communicative purpose” (Horn, 2000, pp. 15-16). The primary objectives of information design are to (Horn, 2000, pp. 15-16):

- Develop documents that can be easily comprehended, rapidly and accurately retrieved, and easily translated into effective actions.
- Design human-machine interactions that are easy, natural, and as pleasant as possible.
- Enable people to navigate three-dimensional space – real or virtual – easily and comfortably.

Information design emphasizes two interrelated concepts (Jacobson, 2000, p. 1):

- Edification – the process of personal enlightenment
- Commutativity – the process of mutual change

Graphic design is the most closely associated discipline to information design, but there are significant differences between the two. Graphic design emphasizes appearance and expression of aesthetic values, while information design emphasizes communication and is concerned with both content and form. (Passini, 2000, p. 84).

REVIEW OF LITERATURE

Changes in information technology are affecting how content is delivered to consumers. Transmedia narratives are an emerging form of digital storytelling that presents multiple components of a story across different media in a tightly integrated manner.

Aesthetic and narrative structures have largely been determined by the limits and affordances of film, records, television, books, and other media. However that is changing as audiences encounter mobile media, interactive media, and transmedia. (Li, 2010)

... it's more apparent transmedia's potential isn't a question of technology or platform, but of creating stories across aesthetic forms and narrative practices, across different creative industry structures that limit and enable their products differently. That's why a comic book and a novelization are different despite being both bound, printed matter — the differences in formal storytelling capabilities, the history of the art forms, as well as the differences between novel publishing and comic book industries and audience expectations all determine which stories can be told and how. (Li, 2010)

Uses and Gratifications Approach in the Internet Age

The uses and gratifications approach to media research was developed in order to answer the core question of why people choose to use specific media and what they use those media for. The question of what motivates people to select different media channels

(LaRose, Mastro, & Eastin, 2001) is particularly relevant to making transmedia narratives an effective form of communication.

The role of the audience in selecting which media to use is based on the following assumptions (Katz, Blumler, & Gurevitch, Utilization of Mass Communication by the Individual, 1974):

- Individual audience members are active in selecting the medium they view
- Audience members' make media selections based on how a particular medium gratifies their individual needs
- Each medium competes with others to satisfy the individual audience members' needs

Basic needs, social situations, and individual experiences, education, and interests affect the choices people make when selecting the media they use. Selection of media is made for highly individual reasons, and different people may use the same media content to meet different needs (Blumler & Katz, 1974).

Human motivation is organized around a system of interlocking needs. A person can easily identify the conscious ones. It's those unconscious needs that constitute "the thing." When people become passionate, even obsessed with an activity or person, it is because that activity or person addresses some important desire, often an unconscious one (Suler, 1999).

Basic human physiological, intrapersonal, interpersonal, and spiritual needs that influence a user's choice of media include (Suler, 1999):

- The need for altered states of consciousness
- The need for achievement and mastery
- The need to belong

- Intimate and sexual needs
- The need for relationships
- The need for self-actualization and transcendence of self
- The need for spirituality

Five categories of media gratifications were identified in studies of television audiences in the 1970s (McQuail, Blumler, & Brown, *The Television Audience: A Revised Perspective*, 1972):

- Diversion – escape from routine or problems or to provide an emotional release
- Personal relationships – enhance companionship and social relationships
- Personal identity – reflections on oneself, explorations of reality, and reinforcing existing values
- Surveillance – various forms of information seeking

Another way to categorize audience motivation was proposed by William J. McGuire. He identified two types of needs – cognitive and affective – and added three dimensions – “active” versus “passive” initiation, “external” versus “internal” goal orientation, and “growth” versus “preservation” of emotional stability (McGuire, 1974). Placing these factors in a matrix yielded 16 “general paradigms” of human motivation related to media use (McGuire, 1976).

Five categories of needs were proposed by Katz, Gurevitch, and Haas (Katz, Gurevitch, & Haas, 1973):

- Cognitive needs – including acquiring information, knowledge, and understanding

- Affective needs – including feelings and emotions
- Personal integrative needs – including status, credibility, and stability
- Social integrative needs – including interaction with family, friends, and others
- Tension release needs – including escape and diversion

A similar classification system was proposed by McQuail (McQuail, 1983):

- Information – including finding out about events and conditions, seeking advice or opinions on practical matters and decision choices, satisfying curiosity or general interests, learning and self-education, and gaining a sense of security through knowledge
- Personal identity – including finding reinforcement of personal values, discovering models of behavior, identifying with others, and gaining insight into oneself
- Integration and social interaction – including gaining insights into the circumstances of others, identifying with others and gaining a sense of belonging, finding a basis for conversation and social interaction, having a substitute for real-life companionship, helping carry out specific social roles, and enabling one to connect with family, friends, and others
- Entertainment – including diversion from problems, relaxing, getting intrinsic cultural or aesthetic enjoyment, fill time, and emotional release

The expectations audience members have about a particular medium and its content can have a significant impact on the selections made. McQuail noted that beliefs and ex-

pectations about benefits offered by the media will shape specific acts of media choice and consumption (McQuail, 1994, p. 235).

The expectance-values model of media gratifications sought (GS) and gratifications obtained (GO) suggests particular media offer gratifications expected by audience members (Palmgreen & Rayburn, An Expectancy-Value Approach to Media Gratifications, 1985). Where the gratifications obtained (GO) are significantly higher than the gratifications sought (GS), overall audience satisfaction and ratings of appreciation and attention are likely to be higher (McQuail, 1983).

Media dependency theory builds on the users and gratifications approach. This theory proposes that the more dependent an individual is on a particular medium for fulfilling his or her needs, the more important that medium will be to that person (DeFleur & Bale-Rokeach, 1989). It has been suggested that people who actively select media to achieve their goals are more likely to become dependent on the media (DeFleur & Bale-Rokeach, 1989). People are also likely to become more dependent upon media that meets a number of their needs than media that meets only a few (Littlejohn & Foss, 2010).

If a person finds a medium that provides them with several functions that are central to their desire, they will be more inclined to use that particular medium in the future. (Rossi, 2002)

The number of media sources available to an individual influences the level of dependency on a specific medium. The more alternatives available to a user, the less he or she depends on and is influenced by a specific medium (Sun, Chang, & Yu, 2001).

Alan M. Rubin identified nine recurring motives for viewing television – relaxation, companionship, social interaction, habit, passing time, arousal, and escape (Rubin, 1981). Additional motives, such as parasocial interactions with news watching (Palmgreen,

Wenner, & Rayburn, Relations Between Gratifications Sought and Obtained, 1980), and surveillance and voyeurism (Bantz, 1982) have been identified.

Reality television has dominated television for a number of years. Reality television shows are any television programs that feature “non-actors under constant surveillance, reacting in spontaneous and unscripted ways to their environment, and ultimately seeking to outperform or outlast their opponents in some sort of competition” (Barton, 2009). What makes reality television interesting from the perspective of transmedia narrative design are audience perceptions of reality. Reality television blurs the distinction between real and fictional programming and the audience’s perception of fiction and reality (Fetveit, 1999; Mendelson & Papacharissi, 2007).

Six factors identified as motivators for viewing reality TV were (in order of significance) reality entertainment, relaxation, habitual passing time, companionship, social interaction, and voyeurism (Papacharissi & Mendelson, 2007). The most salient motive for reality TV viewers was the reality entertainment factor based on a perception of real content and characters (Papacharissi & Mendelson, 2007).

The uniqueness of the reality genre rests on its ability to adopt the realism of news content with the incredulity of fictional content; and this is reflected in the felt needs and involvement individuals develop toward reality content. (Papacharissi & Mendelson, 2007)

Engagement with reality TV was rather passive and primarily used to fill time when the viewer had nothing else to do. This engagement became habitual and was integrated into the daily life of the viewer to the point of becoming a ritual (Papacharissi & Mendelson, 2007). Voyeurism as a motivating factor was present but not the most important motivation for watching reality TV (Papacharissi & Mendelson, 2007).

Personal utility was another motivating factor in terms of gratifications obtained from reality TV programming. The emergence of this factor could be the result of reality programs becoming more individualized and specific in terms of content. As programs became differentiated, their appeal to a mass audience was reduced and they began to cater more and more to niche audiences. These viewers were motivated less by the need for social unity and more by the gratification of individualized or specific needs (Barton, 2009).

The gratifications associated with music were primarily the management/regulation of their moods and as a diversion to pass time or distract listeners from everyday boredom. Social foundations of music (i.e. personal relationships and personal identity) were of secondary importance. Least important was the use of music to learn about others and the world in general (i.e. surveillance) (Lonsdale & North, 2011).

When compared with other media forms – computer games, television, film, books, radio, and newspapers/magazines – listening to music ranked the highest for negative mood management, personal identity, positive mood management, and diversion. Music scored lower in meeting surveillance and interpersonal relationship needs (Lonsdale & North, 2011).

Uses and gratifications theory has been employed in numerous studies of Internet users since the late 1990s. Early studies found the Internet gratified entertainment and escape needs, just a television did (Ferguson & Perse, 2000; Flanagan & Metzger, 2000; Kaye, 1998). This, however, has changed as the World Wide Web matured and new capabilities emerged.

A unified list of seven gratification factors – information seeking, aesthetic experience, monetary compensation, diversion, personal status, relationship maintenance, and virtual community – was developed in a study that looked at Internet addiction (Song, LaRose, Eastin, & Lin, 2004). These were divided into process gratifications, which focus on the consumption of the medium itself and pull the user away from the outside world, and content gratifications, which inherently connect the user to the outside world. Information seeking and monetary compensation were identified as content gratifications; aesthetic experience and diversion were identified as process gratifications; and virtual community, personal status, and relationship maintenance were predominantly process-oriented but had some characteristics of content gratifications (Song, LaRose, Eastin, & Lin, 2004).

Internet users are more actively involved in the selection of media and content than users of more traditional media (Ruggiero, 2000). A number of studies of Internet users and the users of specific elements of the Internet found that while uses and gratifications may vary among individuals, situation, and media vehicles, the dimensions of motivation present included:

- Relaxation, companionship, habit, passing time, entertainment, social interaction, information/surveillance, sexual arousal, and escape (Lin, 1999)
- Heightened interaction through discussion groups, e-mail, direct ordering, and links to information (Schumann & Thorson, 1999)
- Group support by providing a safe venue for the exchange of information and a meeting place without fear of persecution (Tossberg, 2000) and a readily ac-

cessible environment where people with similar interests and goals can easily find each other (Korenman & Wyatt, 1996)

The uses and gratifications of specific types of content appear to differ:

- Entertainment content is used for enjoyment, passing time, relaxation, escape, and social information (Ferguson & Perse, 2000)
- Political information is used primarily for surveillance and voter guidance, with entertainment, social utility, and excitement being secondary (Johnson T. J., 1998), becoming empowered to act, communicate, and participate in the political process (Pavlik, 1996), and increase in self-esteem, self-efficacy, and political awareness (Lillie, 1997)
- Social media content is used for learning and socialization (James, Wotring, & Forrest, 1995) and personal involvement and continuing relationships (Eighmey & McCord, 1998)
- Motivating factors for content creation and sharing include social (i.e. gaining attention) and personal (i.e. future retrieval) reasons (Ames & Naaman, 2007), utilitarian or opportunistic behaviors (Flanagan & Metzger, Internet Use in the Contemporary Media Environment, 2001), and altruism and social exchange norms (Lui, Lang, & Kwok, 2002).
- Users who retrieve and consume user-generated content are motivated by trust and reputation (Bolton, Katok, & Ockenfels, 2003), the characteristics of the message (Hong, 2006), and the characteristics of the content creator, consumer, and community (Lee, Goh, Razikin, & Chua, 2009).

More recent research found that the uses and gratifications of social media on the Internet were consistent with the categories identified by McGuire, McQuail, and others.

A study of blogs noted that personal journal blogs and filter blogs were the most common types. Personal journal blogs typically focus on events in the blogger's life and the blogger's internal thoughts and emotions, whereas filter blogs are devoted to linking to external content (Hollenbaugh, 2011). Motives for maintaining personal journal blogs were helping and informing others, maintaining social connections, passing time and relieving boredom, exhibitionism, archiving and organizing information, getting feedback or advice from the blog's audience, and projecting a professional image.

While some of these motivating factors were seen across various types of media, a number – sharing of information and communicating a sense of caring and support for audience members, exhibitionism by revealing information that might help the blogger gain popularity, fame, or attention, organizing and archiving the blogger's thoughts and ideas, and getting feedback and advice – were unique to blogging (Hollenbaugh, 2011). Older bloggers were more likely to want to help and inform others, while younger bloggers were more likely to pass time and relieve boredom. Women were more likely than men to archive and organize their thoughts. Lonely participants were less likely to blog to establish and maintain social relationship, but were more likely to use blogging for exhibitionism. People who were more willing to disclose details in their personal lives were more interested in creating and maintaining relationships through their blogs (Hollenbaugh, 2011).

Users of political blogs were motivated by surveillance and information seeking, convenience, and social utility (Flanagan & Metzger, Perceptions of Internet Information

Credibility, 2000; Graf, 2006). Because of the unique properties of blogs, a number of additional motivations including personal fulfillment, social surveillance, expression/affiliation, self-documentation, letting off steam, and anti-media sentiment were identified (Johnson & Kaye, 2010).

The use of MySpace and Facebook, both considered to be friend networking websites, has been categorized along three dimensions (Bonds-Raacke & Raacke, 2010):

- Information dimension – including posting information about social functions, learning about events, sharing information about oneself, for academic purposes, and posting or viewing pictures
- Friendship dimension – including sustaining friendships, keeping in touch with old and current friends, and locating old friends
- Connection dimension – including dating purposes, making new friends, and feeling connected

Another study that examined Facebook Groups users' gratifications found four primary needs – socializing, self-status seeking, entertainment, and information seeking (Park, Kee, & Valenzuela, 2009). Facebook Groups is a module within Facebook that allows discussion forums and threads based on common interests and activities.

Seven gratification factors were identified for applications that integrate mobile content sharing and games. Five of the seven had a significant positive impact on users' intentions to play with the application. These five, in order of impact, were information discovery, entertainment, information quality, socialization, and relationship maintenance. The leisure and personal status gratifications did not have a significant effect on intentions to use the game (Lee, Goh, Chua, & Ang, 2010).

The gratifications associated with transmedia and transmedia narratives have not yet been well studied. New media often create new gratifications and motivations among various audience groups (Angleman, 2000), raising questions about what the gratifications associated with transmedia narratives will be.

Information Design & Transmedia Narratives

Developments in information and communications technologies (ICT) have enabled the development of an increasing number of transmedia narratives (Warschauer & Ware, 2008). Six key features of ICT have enabled transmedia narratives:

- Interactive communication that bridges the divide between text and speech
- Global many-to-many communication
- Creation of hypertexts that challenge traditional forms of narrative
- Democratized media (audio, video, etc.) creation
- Easy publishing of text and other media to a global audience
- Linking published information in an interconnected global database

Concepts and theories drawn from the field of information design could be useful in the design, development, and implementation of transmedia narrative projects. Key concepts drawn from information design that are applicable to transmedia narratives include:

- **Human-centered design.** Well designed human-centered systems display a number of characteristics. (Cooley, 2000, pp. 68-70) These characteristics provide a good starting point for the analysis of transmedia narratives and can be used to guide certain aspects of transmedia narrative design.
- **Wayfinding.** The concept of wayfinding originally referred to the “cognitive and behavior abilities associated with purposefully reaching a desired physical

destination” (Passini, 2000, p. 88). However, techniques describing the use of information for wayfinding may also be applicable to transmedia narratives that seek to direct users from one piece of content to another across a variety of media.

- **Information design for informal settings.** Information design for informal settings also originated from studies into how people acquired information in physical settings like museums and other public places (Screven, 2000, pp. 131-135). Again, the concepts and techniques described may also be applicable to the design of transmedia narratives.
- **Information interaction design.** Information interaction design — based on the intersection of sensorial design, information design, interaction design, and the content itself (Shedroff, *Information Interaction Design: A Unified Field Theory of Design*, 2000, p. 268) — is directly relevant to the design of transmedia narratives.
- **Visual design.** The presentation of information in visual form can be extremely effective, but the creation of an image involves using a set of social and aesthetic conventions that serve as codes that help viewers make sense of that image (Sturken & Cartwright, 2009, p. 26). Because transmedia narratives can contain highly complex visual information, an understanding of how people look at images and extract meaning from them is important when designing transmedia narratives. For example, the use of visual language (the tight integration of words, images, and shapes) is common in media like comic books, video, film, and animation (Horn, 2000, p. 27). However, “translating” visual

language from one medium to another could diminish or destroy the information being communicated. Studying the use of visual language across different media could provide insights into how to use visual language in transmedia narratives.

Narrative can play a significant role in the information design process by pulling together many different pieces of information.

In the Information Age, narrative and description have changed roles. If traditional cultures provided people with well-defined narratives (myth, religion) and little ‘stand-alone’ information, today we have too much information and too few narratives that can tie it all together. (McClellan, 2007, p. 18)

Narratives can bring order to the chaotic flow of events in the world around us, enabling us to comprehend what is happening.

Narrative is a form of human comprehension that is productive of meaning by its imposition of certain formal components on a virtual chaos of events, which themselves cannot be said to possess any particular form at all, much less the kind we associate with stories. (White, 1961)

Narratives are a form of “mental imprint” that can mold perceptions and touch the unconscious mind (Simmons, 2006, p. 29). Stories create patterns and structures of life events, provide insights into life and human nature, and reflect the unconscious needs of human beings (McClellan, 2007, pp. 18-21). Narratives are the way humans perceive everything in our world (Szulborski, 2005, p. 42) and have been an essential part of all human cultures.

“Stories are basic to all human cultures, the primary means by which we structure, share, and make sense of our common experiences.” (Jenkins, *Convergence Culture: Where Old and New Media Collide*, 2006, p. 118)

From an information design perspective, narratives can be enormously useful in preparing information for human use.

One of the best ways to communicate knowledge is through stories, because good stories are richly textured with details, allowing the narrative to convey a stable ground on which to build the experience, and often allowing multiple interpretations. (Shedroff, 2001, pp. 27-29)

The ability of narratives/storytelling to provide insights, mold perceptions, and structure information is tightly aligned with information design's emphasis on the concepts of edification and commutativity as discussed by Jacobson in the introduction *Information Design* (Jacobson, 2000, p. 1). Narrative/storytelling is also aligned with information design's emphasis on both the form and content of communication (Passini, 2000, p. 84).

Jenkins states "we still know little about how much explicit information they need to know those other elements exist or where to look for them" (Jenkins, 2009). The question of what information readers/viewers of transmedia narratives need to navigate the connections between various elements of the narrative is quite clearly an information design issue.

The "understanding spectrum" (Shedroff, 2000, p. 271) looks at understanding as a continuum leading from data through information and knowledge to wisdom (see Figure 1). The transformation of data into information requires context, which may be global, local, or personal. Transforming information into knowledge and knowledge into wisdom requires the integration of experience – universal or individual – and context.

From an information design perspective, storytelling uses "emotion, engagement, universal themes, personal connect, and relevance to create a communication experience instead of a message" (Rutledge, 2011). It has been noted that the transmedia approach is "such a powerful storytelling technique because it enables to user to become involved in

a manner that eerily simulates a real-life experience” (Miller, 2008, p. 152). The role of storytelling in presenting both context and experience makes narrative, and particularly transmedia narrative, a powerful tool for information design when the objective is the creation of knowledge and wisdom.

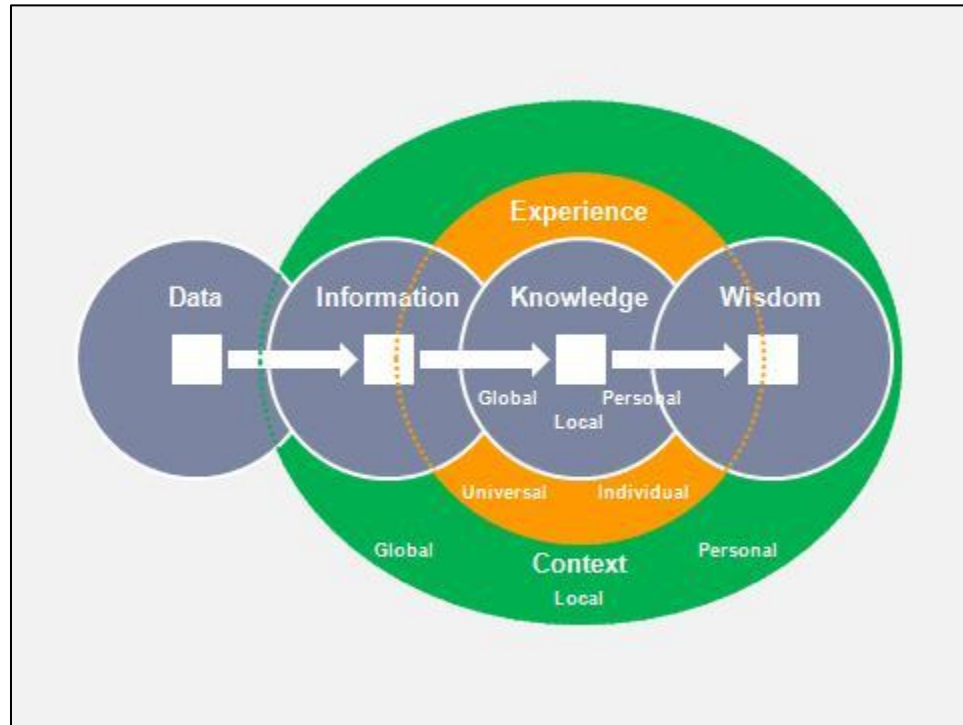


Image: Peter von Stackelberg, adapted from Shedroff (Shedroff, 2000)

Figure 1: The Understanding Spectrum is a continuum from data to information to knowledge to wisdom

Human-Centered Design

Nine characteristics of human centered design have been identified (Cooley, 2000, pp. 68 - 70):

- *Coherence:* Embedded meanings, if not immediately evident, at least are not cloaked or obscured. A related concept is *transparency*, which means rendering highly visible what is happening and what is possible.

- *Inclusiveness*: The system should be inviting, welcoming users in and making that them feel like they are part of a community of activities that are familiar and friendly.
- *Malleability*: The system should mold the situation to suit the users, allowing them to modify the environment to suit their individual aesthetics, skills, and needs.
- *Engagement*: The system invites users to participate in the process and creates a feeling of empathy.
- *Ownership*: The system encourages the users' sense of having created something, thereby creating a sense of ownership and belonging.
- *Responsiveness*: The system responds to users' individual needs, wants, and ways to doing things by making the system's own rules visible and then encouraging the users to learn and change them
- *Purpose*: The system is capable of responding to the purpose users have in mind and encouraging them to go beyond it.
- *Panoramic*: The system provides "windows" or "apertures" through which users can take a wider or more panoramic view. This encourages the acquisition of "boundary knowledge" and allows users to act more effectively and competently by providing them with an understanding of the wider context.
- *Transcendence*: The system encourages, entices, or provokes users to transcend their immediate requirements.

Navigation in Digital Environments

Navigation in a digital environment is tied to both the user's understanding of the system's navigational behavior (i.e. link selection and sequence) and the semantic information during meaning making (i.e. evaluation of information, what and how it is processed) (Lawless & Schrader, 2008, p. 269).

Effective navigation through virtual environments requires users to know where they are, where they need to go, how to get there, and when they have arrived. Navigation, conceived in this manner, describes not only the behavioral actions of movement (i.e. locomotion from one destination to another) but also elements of cognitive ability (i.e. determining and monitoring path trajectory). (Lawless & Schrader, 2008, p. 269)

Humans develop a cognitive map or schema for the virtual worlds they are navigating. These cognitive maps have both generic and situation specific information that facilitates the user's movement, helps implementation of problem-solving strategies, and aids in knowledge acquisition and comprehension (Lawless & Schrader, 2008, p. 270). While there are some significant differences between navigation in the physical and virtual worlds (i.e. the "landscape" can change continually and arbitrarily in virtual worlds) (Lawless & Schrader, 2008, p. 269), approaches used for navigating the physical world may also be applicable to virtual worlds and transmedia narratives.

Wayfinding is a process that analyzes how users move from one point to another, the decision making processes they use along the way, and how they use information at each of the decision points in their journey. Wayfinding emerged from the field of architectural design as a problem-solving technique for dealing with the challenges of how people make decisions as they move from one place to another – literally finding their way from

place to place. While wayfinding has its roots in how people navigate in the physical world, it can also be applied in information design for transmedia narratives.

There is a distinct difference when people are wayfinding in familiar settings versus unfamiliar settings. In familiar settings, they already have a “record of required decisions” and therefore don’t need to go through the decision making/action planning process. Rather, they can often move to the decision/action execution process. This is because executing decisions is more automatic and involves less conscious activity than making decisions (Passini, 2000, p. 89).

While wayfinding originated in studies of how people navigated physical space, its key concepts can also be applied to the navigation of complex collections of information such as websites or for navigation in virtual worlds such as Second Life.

Whenever people set goals and use information to attain those goals in novel conditions, they engage in a mental activity that can be conceptualized as problem solving...Providing information for problem solving is on the major tasks of information design. (Passini, 2000, pp. 85 - 86)

Decisions are not isolated events but rather a series of linked decisions that form a *decision plan* – a blueprint of the decisions that need to be made when moving from the point of origin to the ultimate destination. It is this decision plan that makes problem solving possible (Passini, 2000, p. 92). The interlinked decisions in a decision plan form a hierarchical structure consisting of:

- Task decision – the highest level decision being made
- Higher-order decisions – intermediate level decisions
- Behavioral decisions – the lowest level decisions, which are directly related to the behaviors that execute the decision plan

Passini states that wayfinding concepts can be used “not only for determining what information is necessary, where it should be, and what form it should take, but also for establishing the underlying design logic” (Passini, 2000, p. 88). Wayfinding information should consist of (Passini, 2000, p. 90):

- Signs
- Architectural features
- Spatial features

Wayfinding consists of three interlinked processes (see Figure 2) (Passini, 2000, p. 88):

- Perception and cognition – the process used to take in and process the information needed to make and execute decisions
- Decision making and action planning – the process used to make the decision to go to a destination and plan the actions needed to reach that destination
- Decision/action execution – the process used to transform the plan into behaviors at the appropriate points along the route

Key findings drawn from wayfinding theory include:

- Decision making amongst users tends to be similar for a given task (Passini, 2000, p. 89).
- Information is needed when people make and execute decisions during their journey (Passini, 2000, p. 89).
- The environmental setting is a key factor in the decision making process, and have a greater impact than the characteristics of the individual (Passini, 2000, pp. 89 - 90).

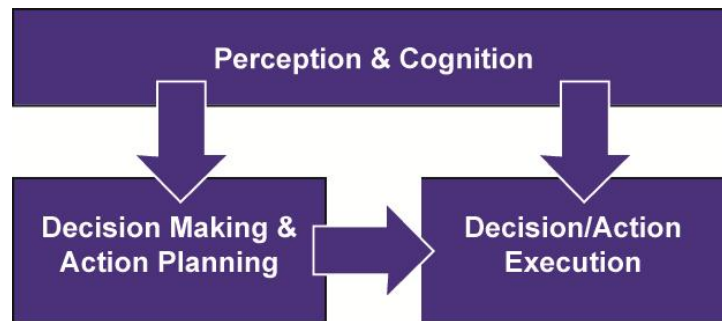


Image: Peter von Stackelberg, adapted from Robert Passini (Passini, 2000)

Figure 2: Wayfinding consists of three major processes – perception and cognition; decision making and action planning; and decision/action execution

- Information needs to be located where people are making and executing those decisions (Passini, 2000, p. 91).
- Each decision in the decision plan requires information that is appropriate for both the decision to be made and the setting in which the decision making occurs (Passini, 2000, p. 94)
- When cognitive mapping of the environment is difficult, users will tend to fall back to a linear, sequential presentation of information (Passini, 2000, p. 90).
- Some users prefer the linear, sequential presentation of information, while others prefer a broad picture of the spatial area that they are trying to navigate (Passini, 2000, p. 90)
- The architectural and spatial characteristics of the user's environment impacts which mode of information processing is preferred, with linear, sequential presentation of information being preferred when cognitive mapping of the environment is difficult (Passini, 2000, p. 90).
- The amount of information needed at the beginning of a journey varies among individuals; some – improvisational wayfinders – need only a little informa-

tion while others – who will do a lot of up-front planning – will need a lot of information (Passini, 2000, pp. 90 - 91).

The type of users can have a significant impact on the navigation process in virtual environments. A study of hypertext users found that they exhibited three basic profiles (Lawless & Schrader, 2008, p. 271):

- Knowledge seekers – characterized by those who looked for information related to a specific topic. They typically navigated to screens that contained information that enhanced comprehension and were more strategic in their selection of links.
- Feature explorers – spent a disproportionate amount of time interacting with the most noticeable features (i.e. sound effects, movies, and animation) of the environment. They typically spent more time learning the features of the environment than in understanding the content presented.
- Apathetic hypertext users – engaged with the environment in a superficial way, spending little time navigating and visiting relatively few screen. Their navigational paths tended to be linear and short, often being the quickest route through the environment.

Other user characteristics that influence navigation are meta cognition, spatial ability, cognitive style, and motivation and affect (Lawless & Schrader, 2008, pp. 273-278). Characteristics of the environment that influenced user navigation included domain structure, site maps and overviews, hypertext structure, and design issues (Lawless & Schrader, 2008, pp. 278-282).

Information Design for Informal Settings

Screven's theories on information design for informal settings suggest numerous principles that can be applied not just to museums, parks, and other information settings, but to information design more generally. His identification of what visitors like and dislike can be applied to a number of information design issues beyond informal learning environments.

Screven notes that the primary components of communication in informal settings involving unguided viewers are (Screven, 2000, p. 138):

- *Information field*: all information within the immediate environment of the viewer
- *Intended message(s)*: the objective of the communication – the intended knowledge, concepts, behavior, or feelings the designer wants viewers to receive
- *Other message(s)*: non-targeted and perhaps unintended communication that shares some elements with the intended messages but also consists of various irrelevant elements (for example, crowds, companions, ambient noise, etc.)
- *Exhibit or display*: the content of the information field (for example, artifacts, paintings, dioramas, and other objects and materials)
- *Delivery media*: the channel(s) through which messages are transmitted (for example, film or video, audio, graphics, and docents)
- *Perceived message*: the message received by the viewer, which may or may not be the message that the exhibit designer intended

- *Viewer action*: the viewer's behavior at the exhibit, including selective versus random viewing, time spent at the exhibit, involvement levels, and tasks performed

Screven notes that the exchange between viewer attention and observation and the exhibit's content is a feedback loop that determines the ultimate message the viewer receives. Screven further refines the elements of communication in exhibits with the addition of perceptual filters that impact the transmission of messages to viewers

The perceptual filters that surround the information field consist of the viewer's prior knowledge, attitudes, preconceptions, and beliefs and influence the degree and types of distortion that may occur as the intended message is communicated to individual viewers. Communication can break down or be distorted at any one of three steps (Screven, 2000, p. 143):

- Detection of patterns in the stream of incoming information
- Interpretation of those patterns
- Action based on those interpretations

A key challenge for designers is to minimize these distortions (Screven, 2000, p. 138). Attention and behavior in exhibit spaces were affected by several common predispositions among viewers (Screven, 2000, p. 138):

- *Linear disposition*: Viewers resisted moving through the exhibit space as it was arranged and needed to be prompted as to the most appropriate path to follow

- *Exploratory disposition:* Viewers paid attention to the exhibit content, but also explored other areas of the space and engaged in activities unrelated to the message and actions the designer's goals
- *Visual orientation:* Viewer attention was readily captured by visual media such as objects, movement, graphics, and color readily captured the viewer's attention
- *Action orientation:* Viewers were attracted by the opportunity to touch and physically manipulate elements of the exhibit space and participate in activities that involved control, goal achievement, competition, and challenging of skills
- *Social orientation:* Viewers liked to engage, perform, and participate in shared social activities
- *Time orientation:* Viewers were conscious of the amount of time needed to explore an exhibit, adjusting their actions in the exhibit space based on their expectations on how long it would take to view

Some of the physical characteristics that reduce the efficiency of an exhibit in communicating the designer's intended message are (Screven, 2000, p. 147):

- Label text that is hard to find or read
- Long, poorly spaced paragraphs
- Visual clutter
- Information overload
- Labels and graphics that are disconnected from the exhibit's content
- Too much unneeded information in proportion to needed information

- Lack of information-free spaces
- Carelessly designed interactive formats, questions, graphics, or colors that focused attention away from the primary elements of the exhibit

Exhibits could be made more efficient by (Screven, 2000, p. 148):

- lowering information density
- removing distracting visuals
- improving thematic orientation at entrances
- removing or relocating secondary and nonessential information, topics, media, and other potential distractions

Visitors who did not know a topic well or with learning styles that made them resistant to “big picture” thinking were the most likely to resist conceptually oriented materials. Screven says this resistance might be reduced by increasing the personal relevance of the information (Screven, 2000, p. 145).

Screven states that viewer holding time can often be increased when viewers are “aware that objects, data, relationships, ideas, or other exhibit information have some application to their social, emotional, or utilitarian lives (Screven, 2000, p. 149). The learning rate for exhibit viewers can be affected by the amount of time those viewers need to find and process information. High design efficiency can produce much higher levels of learning than low design efficiency.

Viewer’s levels of attention range from focused and active (mindful) to casual and unsystematic (mindless). Screven says the identifying feature of mindful attention is selectivity, where the viewer focuses on some elements of the exhibit while ignoring others (Screven, 2000, pp. 151 - 152). Mindful attention is characterized by viewer behaviors

that include making comparisons, raising questions, looking for interdependent relationships, making connections to personal knowledge or experience, noting contradictions, searching for specific information or categories of information, looking back and forth between text and reference objects, carrying out actions, pointing out features to companions, and moving closer for a better view (Screven, 2000, p. 152).

Mindless attention (also called casual attention) is more scattered, focusing randomly on a variety of items without apparent purpose or direction until something catches the viewer's eye. Attention is brief and erratic and viewers are easily distracted (Screven, 2000, pp. 152 - 153). "Fun formats" like visual media, games, flipping labels, and computers are ineffective in motivating exhibit viewers to spend the time to meaningfully interpret the intended messages in the information field (Screven, 2000, p. 157).

A key lesson from Screven is that efforts to add "fun" to exhibits by making them participatory and entertaining have at times diminished their educational value. The most common reason for this is that the entertaining qualities occur whether or not the viewers pay attention to or understand the intended messages of the exhibit.

(M)any designers apparently have not grasped the importance of making the "fun" aspects of educational displays contingent on understanding or using the information they contain. Many participatory exhibits suffer from the same problem – visitors can operate them without paying attention to or understanding the point of their exhibit messages. (Screven, 2000, p. 165)

Setting achievable, tangible goals can help viewers focus attention on unfamiliar information and integrate it with the knowledge, attitudes, and predispositions they already have. Successful use of a goal-setting approach requires viewers have the ability to use information from the exhibit to achieve the goals set. This approach "must put viewers

into contact with message-related information that, without a goal, might be abandoned too soon” (Screven, 2000, pp. 167 - 169).

A framework for designing a goal-centered approach includes (Screven, 2000, p. 174):

- developing clear and measurable objectives for each task and message component in the exhibit
- developing goals and sub goals for intermediate tasks and pretesting them
- selecting goals that viewers perceive as having personal value
- ensuring tasks are clearly linked to the target message

Exhibit efficiency is improved by using these features and formats (Screven, 2000, pp. 174 - 175):

- Leading questions that focus attention on relevant message elements
- Animated and simulated processes that help viewers visualize complex processes
- Directive text and graphics that provide clues by pointing out key information
- Matching and sorting tasks that help visitors connect new concepts with existing knowledge
- Information maps that help viewers visualize information and interrelationships

Information Chains

The *information chain* consists of three basic elements – the information source, transmission conditions, and responding receiver (Thwaites, 2000, p. 225). Each element of this information chain contains pieces of the final message. Therefore, if any element

of the information chain is altered, the information is also altered (Thwaites, 2000, p. 225).

The incoming information acts as a catalyst to other mental processes, which occur in the receiver's brain as a result of the processing and storage of earlier information and can thus affect the impact of the presentation. (Thwaites, 2000, p. 225)

From a transmedia perspective, paying attention to the information chain and information design of the software/hardware interfaces will become more important as the sophistication of transmedia narratives increases.

This overlapping of information is typically the result of an *information cascade*. Two types of information cascades are identified (Thwaites, 2000, p. 226):

- Horizontal (linear) cascades – sequences of information that receivers can control the pace at which information is presented, enabling them to receive and process information at a pace they are able to handle (for example, reading a book or walking through an art gallery)
- Vertical (structural) cascades – sequences of information that have a fixed succession of pieces of information, limited time to process those pieces, and little or no receiver control of the pace at which the information is presented (for example, a film or play)

The concepts of perceptual time and information cascades have significant implications for information design and the practices used to produce effective information systems. Designers and developers of transmedia narratives, which use a combination of media that have both horizontal and vertical information cascades, need to be mindful of

how much control they allow readers/viewers to have over the pace at which they process information.

Visual Design

Because visual information is such a powerful form of communication, information designers must fully understand how to use images to transmit meaning. Deriving meaning from an image is a complex task, although we often do so automatically without much conscious awareness of the process we are engaged in. Images can be used either as the primary content or, in an interactive setting, to provide cues that allow the user to navigate a real or virtual space. Sometimes images can serve both purposes simultaneously.

Images are produced according to social and aesthetic conventions that provide clues from which we make sense of them (Sturken & Cartwright, 2009). These conventions can use colors, shades of black and white, tone, contrast, composition, depth, perspective, and other elements to provide clues as to the meaning of the image. Each medium has its own set of conventions.

It is important to remember that each new form of visual technology builds on the codes of previous technologies but that each constitutes as well a kind of epistemic shift. Cinema borrows codes of photographic realism and fantastical imagination from photography and adds motion and the layered meanings of sequential action. Television borrows many of the sequential, narrative, and genre conventions from cinema, yet its electronic technological nature changes its distribution and viewing contexts and presents the possibility of the live image. Digital technologies borrow from all of these media, yet present a new set of meanings through their capacity for reshaping and malleability. (Sturken & Cartwright, 2009, p. 189)

Constant exposure to images that use these conventions results in specific interpretations becoming second nature to us (Sturken & Cartwright, 2009, p. 26).

All images have meanings encoded into them at the time of their creation. Those and other meanings may be decoded from the image when it is viewed. The meaning viewers decode may be one of three types (Sturken & Cartwright, 2009, pp. 72-73):

- Meanings that align with the dominant message encoded into the image (dominant-hegemonic reading)
- Meanings that may interpret the dominant message through a form of “negotiation between the image and the viewer (negotiated reading)
- Meanings that are contrary to or which reject the dominant message of the image (oppositional reading)

Viewers’ decoding of an image’s meaning can be affected by a number of factors including the cultural associations viewers bring with them (Sturken & Cartwright, 2009, p. 55). Viewers of the same image may derive completely different meanings from it based on their social and cultural background.

Images that have wide appeal across a broad spectrum of viewers and cultures become icons “perceived to represent universal concepts, emotions, and meanings” (Sturken & Cartwright, 2009, p. 36). However, iconic images should be used carefully as what is assumed to have a universal meaning might not, in fact, have a universal connotation (Sturken & Cartwright, 2009, p. 42).

Multimedia Design

The design of information intended for delivery using both visual and auditory media (a multimedia approach) should consider three principles of cognitive science (Mayer, 2008, p. 363):

- Dual channels – people have separate visual/pictorial and auditory/verbal channels for processing information
- Limited capacity – people can process a limited amount of information in each channel at any given time
- Active processing – meaningful learning happens through cognitive processing involving attending to incoming information, mentally organizing that information, and mentally integrating it with knowledge from long-term memory.

The use of multimedia messages requires users to engage in five major cognitive processes (Mayer, 2008, p. 363):

- Selecting relevant words
- Selecting relevant images
- Organizing words
- Organizing images
- Integrating the words and images

Three types of cognitive loads have been identified (Mayer, 2008, pp. 363-364):

- Extraneous processing – cognitive processing that does not support the user's construction of knowledge.
- Essential processing – cognitive processing needed to receive the basic information (selection of words and images).
- Generative processing – cognitive processing needed to make sense of the basic information (i.e. organizing and integrating the words and images).

The challenge when designing multimedia messages is to ensure that the user's cognitive system is not overloaded (Mayer, 2008, p. 363). Ten principles for multimedia design organized into three categories have been identified (Mayer, 2008, pp. 364-374):

- Principles for Minimizing Extraneous Processing
 - Coherence Principle: Eliminate extraneous words, sounds, and pictures.
 - Signaling Principle: Highlight the essential material.
 - Spatial Contiguity Principle: Place corresponding words and pictures near each other on the page or screen.
 - Temporal Contiguity Principle: Present corresponding narrative and pictures simultaneously.
 - Redundancy Principle: Do not add printed on-screen text to a narrated animation.
- Principles for Managing Essential Processing
 - Segmenting Principle: Break an explanation into bite-sized pieces.
 - Pretraining Principle: Begin by explaining the operation of each part.
 - Modality Principle: Present words in spoken form rather than printed form.
- Principles for Fostering Generative Processing
 - Personalization Principle: Present words in a conversational style rather than a formal style.
 - Voice Principle: Present narration with a standard-accented human voice.

Information Interaction Design

Interactivity has been described as “a simple, mechanical measure of inputting controls or commands in order to influence on-screen action” (Newman, 2004). Interactivity exists as a spectrum that encompasses different forms of media and different types of interactions (Evans, 2008). The aesthetics of interactive media have been characterized as (Earnshaw & Vince, 2001):

- Agency – the ability of the user to set goals, plan their attainment, and be rewarded by sensing appropriate changes in the virtual environment as a result of the user’s actions
- Narrative potential – the sense that the virtual environment is rich and consistent enough to facilitate purposeful and meaningful experiences that will lend themselves to creation of the user’s own narrative accounts of those experiences
- Presence – the perceptual illusion that the user is not being mediated
- Transformation – the perception that the user has temporarily become someone or something else as a result of interacting with the virtual environment

The concept of the narrative paradox describes the compromise between authorial control over the story flow and the freedom of interaction allowed for the user. Control is the ability of the reader to influence the course of the story, by making decisions at important junctures in the story, or even taking control of one of the characters (Mulholland & Collins, 2002). There are different approaches to addressing the narrative paradox, ranging from plot-driven to character-based approaches (Rank & Petta, Appraisal for a Character-based Story-World, 2005, p. 496). In practice, control offered to the reader of a

story generally has to be severely limited. Otherwise the coherence of the story cannot be guaranteed, as the reader may wish to lead the digital narrative in a direction not supported by the computational story mechanisms (Mulholland & Collins, 2002).

Additionally, studies of readers (Murray, 1997) have often found them disaffected by stories over which they have partial control, as they feel a more satisfying story ending may have been available to them if they had controlled the story in a different way.

The concept of the narrative hub can provide a framework that allows satisfactory reader interaction with a story. With a narrative hub the reader is initially presented with the ending of the story (e.g. a dramatic incident) and then is able to explore how and why this occurred by tracing the earlier movements of the characters involved. However the reader has no control over the plot itself and all readers are presented with the same story conclusion. Digital narrative therefore offers the potential for immersion and control, but does not guarantee reader satisfaction and must be carefully deployed (Mulholland & Collins, 2002).

Digital media affords more active roles for users than traditional narrative forms. Examples of user agency include spatial navigation, problem solving, incorporating game play within narratives, and traversing links in hypertext narrative.

Narrative-driven computer and console games are forms of interactive narrative that have most captured the popular consciousness even though they often sacrifice narrative in favor of gaming conventions such as goal orientation, competition, winning/losing conditions, mechanisms to support these, and other strictly ludic elements. In these games, a sense of free will is often conveyed to the user by means of enabling robust forms of spatial navigation and interaction with objects in the game world. This construal

of agency inevitably leads to an obsession with the idea that “the more agency, the better” (Mulholland & Collins, 2002).

Agency is mediated by (1) the full range of player actions possible, (2) the range of effects of player actions both in the story world and in the narration or presentation of the story, and (3) the system’s capacity to constrain and modify the story world (Harrell & Zhu, 2009).

Agency Play

Agency play engages multiple aspects of agency during runtime to reinforce the author’s intended meanings of the narrative. Agency play does not merely strategically limit user control; it focuses on leveraging the relationship between the user and system in order to create a storyworld that is meaningful and engaging for users to participate in. Incorporation of a range of agency effects in interactive narrative is similar to the step that film makers took last century when they discovered that camera angle, framing, and take length were all effective storytelling mechanisms, not just coincidental properties of the medium. (Harrell & Zhu, 2009) Layers of agency play can be used expressively to convey meaning (Harrell & Zhu, 2009):

- Agency Relationship: User actions and system actions operate in relation to one another and can vary in relative magnitude and degree of dependency on one another (e.g. an inverse relationship or independent operation).
- Agency Scope: Results of either user or system actions may have immediate and local impact (e.g. turning a character left or right) or longer term and less immediately apparent results (e.g. a series of actions may determine narrative structure itself)

- **Agency Dynamics:** The relationship between possible user and system actions and scope can vary dynamically during runtime
- **User Input Direction:** The user may establish a pattern of input that directs agency dynamics and/or agency scope

Agency play carries with it significant narrative risk. User expectations for transparent control over user characters can be violated. Dynamic agency may cause agents to seem unpredictable in response to user direction. Under such circumstances user direction may seem less meaningful if it is often seemingly ignored by the system. Users may need an indication of exactly when their agency has given way to system agency and why. However, agency play is still considered a promising expressive tool for interactive narrative because, as the field of interactive narrative has matured, users are becoming accustomed to many conventions of interaction and user agency (Harrell & Zhu, 2009).

Two dimensions of interactivity have been identified by Ryan (Ryan, *Beyond Myth and Metaphor - The Case of Narrative in Digital Media*, 2001):

- **Internal/external interactivity:** In the *internal* mode the user projects himself as a member of a virtual world either through an avatar or from a first person perspective. In the *external* mode, the user situates himself outside the virtual world.
- **Exploratory/ontological interactivity:** In *exploratory* mode the user is free to move around the virtual world but has no impact on any significant aspect of that world. In *ontological* mode the user can make decisions which determine the path taken through the virtual world and how actions taken impact that world.

When these two dimensions are combined, four categories are identified (Ryan, *Beyond Myth and Metaphor - The Case of Narrative in Digital Media*, 2001):

- *External/exploratory* – best suited for self-referential narratives – narratives that expose their own structure to readers. An example is classic hypertext fiction in which the reader selects the path between chunks of the story to reveal information but the path taken does not affect the narrative’s outcome.
- *Internal/exploratory* – best suited for narratives where the users takes a virtual body into the virtual world and is able to move, examine objects, view the action from different points of view, investigate, and attempt to reconstruct events in the virtual world’s past. Appropriate plots for this type of interactivity include:
 - Travel and exploration (spatial) narratives in which the user moves around the virtual world and imagines a story that holds the screens together.
 - Narratives of place that focus on the in-depth exploration of a specific location through a number of “little stories” that allow the user to discover the secrets of that virtual world.
 - Narratives focused on interpersonal relationship with the user seeing the story from the point of view of the characters in the relationship.
 - Narratives with parallel plots, typically resulting from a large cast of characters acting simultaneously in different locations and forcing the user to move from one place to the next in order to see every thread in the story.

- Mystery story with two levels of narrative – one based on the actions of the character of a detective, for example, and the other story being the one the user is trying to reconstruct.
- *External/ontological* – best suited for game-like situations in which the user controls one or more characters and their environment. Decisions the user makes can send the characters towards different destinies. The computer game *Sims* is an example of a game that uses this approach.
- *Internal/ontological* – best suited for games in which the user is a character in the virtual world and controls his/her own fate by acting within the time and space of that virtual world. First-person “shooter” video games are an example of this form.

Ryan’s approach to categorizing interactivity points to the user’s activities being more than simple physical activity like moving a game controller or clicking with a mouse. There is a mental component to interactivity, as Darley notes:

...meaning-making in the traditional sense is radically reduced in computer games and simulation rides. In this sense the much maligned ‘passive’ spectators of conventional cinema might be said to be far more active than their counterparts in the newer forms. (Darley, 2000)

The concept of interactivity covers subtle distinctions between different activities based on both physical interactivity and meaning-making (interpretive interactivity). Television, for example, relies on interpretive interactivity while games require physical interactivity (Evans, 2008).

The mental processes of users are seen as the feature that separates “passive participation” from “interactive participation”. Interaction without attention or understanding is

passive participation. With this type of participation, users are able to manipulate items, but have no real options for making any significant choices and users are able to tittle or nothing with the information they are presented (Screven, 2000, pp. 166 - 167).

Interactive participation, on the other hand, allows users to experience different results when they make choices between two or more actions. To be effective, interactive participation must engage the viewer's thinking processes before or at the same time they choose a course of action (Screven, 2000, pp. 166 - 167).

The concept of interactivity has been linked to the concepts of agency and control, and it is these three linked concepts that provide users with pleasure when engaged with interactive works (Evans, 2008).

Perhaps the primary pleasure of interactivity is that of control, which is why the thwarting of audience control, or the realization of 'token' control, is a site of such displeasure. (Graham, 1996)

A study of viewers of the British television series *Spooks*, which had elements of the storyworld on interactive digital television and the web, found that audience wanted both active and passive elements simultaneously, "complicating the idea that a medium can be one or the other or that the audience values one over the other" (Evans, 2008).

While audience members do desire a more 'active' role, to see their actions have a direct influence on what occurs on screen, it is twinned with a desire to retain what might be seen as the more 'passive' qualities associated with television viewing, to be positioned as a spectator outside a fictional world and not as an active agent in the narrative. Instead of wanting to gain complete control over the fictional world and insert their own identity into it as an active agent, they want to maintain a detached position and enjoy the transmedia text as a separate, fictional world to explore. (Evans, 2008)

Perceptual Opportunities

The concept of perceptual opportunities (POs) is a content model developed to assist the design of interactive media generally and virtual environments (VEs) in particular. The PO model addresses the psychological and communication issues associated with gaining and holding the attention of visitors to a VE. Perceptual opportunities arise from the logic of the virtual environment and involve the visitor both consciously and unconsciously, with unconscious involvement – accepting a place or activity without thought – being particularly desirable (Earnshaw & Vince, 2001, p. 27).

Earnshaw and Vince (Earnshaw & Vince, 2001, pp. 27-34) identified a hierarchical structure consisting of a number of elements underneath the perceptual opportunities:

- Perceptual Opportunities
 - Sureties
 - Surprises
 - Attractors
 - Connectors
 - Choice Points
 - Deflectors
 - Axes
 - Retainers
 - Local
 - Peripatic
 - Shocks

- **Sureties** – These perceptual opportunities are the mundane, highly predictable details of the virtual environment. It is their predictability that makes them attractive and useful. They provide cues about scale, distance, and other parameters of the VE and their perceptual noise enhances the fidelity and immersiveness of a virtual environment.

- **Surprises** – These are perceptual opportunities that arise from the logic of the virtual environment to provide emphasis to a specific piece of information.

There are three types of surprises:

- *Attractors* – seek to gain the attention of visitors and draw them to areas of interest and conscious activities. They are the means by which users are tempted to set their goals within the VE and rely on the users' natural curiosity. A variety of narrative and information design techniques are applicable to the design of attractors.
- *Connectors* – direct users into following a particular course by assisting them in making the “mental” and “physical” connections between the *attractors* that stimulate goal formation and *retainers* that allow users to attain those goals. There are three types of connectors:
 - *Axes*, which lead the user into a position where an attractor becomes perceivable and makes it possible to follow the connector to a previously undiscovered retainer.
 - *Choice points*, which are points at which the user must make a decision between two or more options. Choice points should be used to provide perceptive users with clues about making a particular choice. They also present an opportunity to develop dramatic potential by presenting users with difficult choices.
 - *Deflectors*, which are the counterparts to choice points in that they lead the user into making an unconscious decision that lead to a loaded choice.

- *Retainers* – deliver specific objectives of the VE. They consist of major sets of interactions and should deliver a memorable experience of the VE.
- **Shocks** – These perceptual opportunities are byproducts of the design and construction of the virtual environment – basically perceptual “bugs” that need to be identified and eliminated.

Perceptual maps specify the perceptual opportunities and their intended configurations. These maps should contain specifications for a range of sureties and surprises, together with their perceptual interrelationships. When developing perceptual maps, Earnshaw and Vince suggested a number of rules-of-thumb (Earnshaw & Vince, 2001, p. 33):

- Visitors should be rewarded if they follow attractors
- Retainers don't have to have any attractors or may have one or more
- Connectors should lead to an attractor or directly to a surprise
- Connectors should be rewarded if followed
- Limit sureties can backup limit deflectors as the line of defense preventing “end of world” shocks

Effective virtual environments provide users with strongly identified attractors that offer numerous opportunities for planning and goal setting (Earnshaw & Vince, 2001, p. 48). The attractors may be part of the VE itself or can be “alien” attractors (i.e. cursors, arrows, etc.) that provide information without being part of the VE itself. It is important that alien attractors provide information without distracting from the VE or disrupting its internal consistency (Earnshaw & Vince, 2001, pp. 48-49). From a narrative perspective, POs can provide significant opportunities for developing the story. For examples, pat-

terms of retainers can create narrative potential, with attractors and connectors creating suspense and meaningful ordering of events. Patterns of attractors and connectors, when combined with very subtle retainers, can create intense narrative potential (Earnshaw & Vince, 2001, p. 49).

Cross Media Interaction

Cross media interaction design is just emerging as an area of study. The unique characteristics of transmedia narratives make it important to examine why and how to persuade users to move across media and story boundaries. Cross media interaction design focuses on why and how users traverse media and stories. The transmedia experience is different and navigation is more demanding than with single medium experiences. The user may have to “physically move to another location, switch on or sign in, move from click to flick, watch to wrestle, and all of these have not been demanded of audiences before” (Dena, 2007).

Two opposing forces are at play when motivating audiences to move from one platform to another in a transmedia narrative. There is an inherent “friction” that creates a disincentive for users to cross platforms – increased cost, additional keystrokes, diverted attention, low bandwidth, and so on (Pratten, *Getting Started with Transmedia Storytelling*, 2011, p. 34). The countervailing force is the incentive users have to cross platforms. If the incentive to cross platforms is smaller than the friction encountered, the audience will perceive that it is too much trouble for too little reward to move to the next platform of the transmedia narrative. If the incentive to cross platforms is equal to the friction of crossing, the audience will be undecided about what to do next. When the incentive is greater than the friction, the audience will be motivated to cross platforms (Pratten,

Getting Started with Transmedia Storytelling, 2011, pp. 35-36). Pratten states that it is important that the author of a transmedia narrative recognize crossing platforms introduces friction into the narrative and ensure the use of multiple platforms is justified by answering these three questions (Pratten, Getting Started with Transmedia Storytelling, 2011, pp. 31-32):

- What's my objective in having audiences cross platforms?
- How can I motivate audiences to cross platforms?
- What's the reward when they get there?

“Migratory cues” are “a signal towards another medium – the means through which various narrative paths are marked by the author and located by a user through activation patterns” (Ruppel, 2005). These signals, however, are not enough to move a user through a transmedia narrative. Persuasion and guidance are needed to traverse the interconnected media and stories (Dena, 2007).

Transmedia interactions need to provide synergy between the several ways users traverse multiple media. Because users don't always move immediately to linked information, interaction bridges must be designed to provide both immediate and long-term connections (Neto, Roussel, & Filgueras, 2009). Recommendations for designers of transmedia narrative include (Neto, Roussel, & Filgueras, 2009):

- Offer rich, direct, and clear signs so users can recognize a crossmedia interaction
- Decrease the user's cognitive load in the moment of changing from one medium to another
- Indicate the type of information the user will be moving to

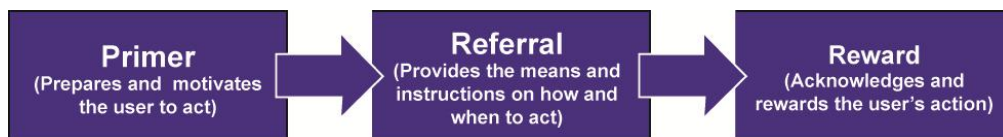
- Consider the context constraints and environment the user will have accessing another medium
- Consider the user’s constraints
- Consider the media constraints and features of each medium

The concept of a “call-to-action (CTA)” has been developed to deal with the challenges of cross media interactions. This CTA can be as simple as a button on a web page that asks the user to “Click Here” or as complex as scattered clues that point to the “rabbit hole” (the entry point) for an alternate reality game (ARG).

It’s a plea for the user to do something and good designers make these calls-to-action appear to be the default choice – you’re nudged to take action through clear layout, positioning of the button, use of colors, and so on. (Pratten, *Getting Started with Transmedia Storytelling*, 2011, pp. 35-36)

A CTA provides the persuasion and guidance needed to motivate users to traverse from one media platform to another. This CTA consists of a three phase process (see Figure 3) (Dena, 2007):

- Primer – prepares and motivates the audience to act
- Referral – provides the means and instructions on how and when to act
- Reward – acknowledges and rewards the user’s action



Source: Peter von Stackelberg (Dena, 2007)

Figure 3. A "call-to-action" (CTA) involves three steps

A number of factors affect the intensity and effectiveness of the CTA. These factors include (Dena, 2007):

- Medial – factors related to the media involved
- Accessibility values – factors related to the choice of platform
- Artforms – factors related to how content is presented
- World relation – factors related to where the user is moving relative to the storyworld
- Dependency – factors related to whether the content the user is moving to is needed in order to understand something about the story or to do something with it
- Time – factors related to the pacing, urgency, and duration of the user's traversal
- Traversal type – factors related to the direction and concurrent timing of movement between units
- Audience address – factors related to who the CTA addresses
- CTA-specific variables – factors related to issues specific to the CTA

Medial Factors

When designing an interaction, the first set of factors to consider is whether the user is moving between units within the same medium or to a different medium. If the move is to a different medium and platform, the designer needs to consider whether it is a shift between (Dena, 2007):

- Networked and non-networked media
- Static and mutable platforms
- Fixed and portable platforms

- Public and private platforms
- Multi-modal and mono-modal media
- Visual and text-based media

Accessibility Value Factors

The choice of platform, type of CTA, and user experience will be influenced by accessibility issues. Examples include (Dena, 2007):

- Availability of platforms in a specific context (e.g. whether a user has access to a particular medium while mobile)
- Conditional use (e.g. subscriptions, cost, geographic, or age restrictions that limit the user's ability to access certain content)
- Skills and knowledge needed to enter and use a platform (e.g. does the user have the skills needed to move from a book to a virtual world)

Artform Factors

In a transmedia narrative, a user is likely to move between art forms (i.e. computer-based text to video clip). Among the questions the interaction designer should consider are (Dena, 2007):

- Representative arts and simulations
- Narrative and non-narrative
- Static, interactive, generated, or emergent
- Long-form, short-form, or micro-content

World Relation Factor

Where the user is moving relative to the storyworld creates a number of possible combinations of movement (Dena, 2007):

- Meta-world to world (e.g. moving between a commentary about the story-world into the storyworld itself)
- Extra-world to world (e.g. moving between fictional websites and real-life websites)
- Inter-world (e.g. moving between different storyworlds, such as *Batman* to *The Matrix*)
- Intra-world (e.g. moving between stories or “eventRealms” within a story-world)
- Intra-eventRealm (e.g. moving between units or platforms within a story or eventRealm)
- Intra-unit (e.g. moving within a unit to a different narrative element or media platform, such as a book, website, or DVD)

These movements have significant implications on the design of the CTA, aesthetics of the narrative, and copyright and other legal issues (Dena, 2007).

Dependency

Determining whether the unit of content is essential for the user to experience is an important design consideration. For example, does the content ensure narrative coherence, is it simply an addition to the storyworld, or is it essential to unlocking or freeing up other content in the narrative (Dena, 2007).

Time Factors

The designer needs to consider the time factors associated with the interaction, including (Dena, 2007):

- Pacing – the amount of time that elapses between CTAs
- Urgency – whether the interaction a) requires an instant action; b) is scheduled and requires an action at a specified time; or c) is a free movement that allows the users to take action at any time
- Duration – the amount of time it takes to traverse platforms (i.e. the difference in time it takes to turn on a TV versus going to a movie theater)

Traversal Type Factors

The direction and timing of movement between units is classified as (Dena, 2007):

- Sequential – the user completes one unit and then moves on to the next. This can happen during either a single session or multiple sessions.
- Simultaneous – the user engages with the content on more than one platform at the same time (i.e. listening to music while reading a book).
- Concurrent – the user engages with the content on more than one platform at the same time, but shifts focus back and forth across the various platforms.
- Cycle – the user moves back and forth between units of content on different platforms, re-entering the same content when returning to a platform. This can occur in either a single session or across multiple sessions.
- Spiral – the user moves back and forth between units of content on different platforms, re-entering new content on each return to a platform. This can occur in either a single session or in multiple sessions.

Audience Address Factors

CTAs can differ in who and how they address the audience. The categories of audience address include (Dena, 2007):

- Many-through-one – a single CTA addresses as many users as possible
- Many-through-many – many CTAs target many different users
- Some-through-some – some CTAs target some users while excluding others
- Some-through-none – the lack of a CTA triggers an action by some users

CTA-Specific Variables

The characteristics of the CTAs in a transmedia narrative can have an impact on the user interactions. CTA-specific variables include (Dena, 2007):

- First, repeated, or last CTA
- Fixed or changeable CTA
- CTA that is generalized versus a personalized one that addresses specific users
- In-story CTA presented within the context of the storyworld versus a meta-CTA that is presented outside of the context of the storyworld

Four different types of affordances related to user interactions have been identified by Hartson (Hartson, 2003):

- Cognitive affordance – a design feature that helps users think and/or know something
- Physical affordance – a design feature that helps users perform a physical action with the interface

- Sensory affordance – a design feature that helps users sense something
- Functional affordance – a design feature that helps users accomplish work (i.e. the usefulness of a system function)

Interaction design should consider all four types of affordance in an integrated design for maximum effectiveness.

Each kind of affordance plays a different role in the design of different attributes of the same artifact, including design of appearance, content, and manipulation characteristics to match users' needs, respectively, in the sensory, cognitive, and physical actions they makes at the progress through the cycle of actions during task performance...Considering one affordance role but ignoring another is likely to result in a flawed design. (Hartson, 2003)

Designers must be careful not to use false cognitive affordances that misinform and mislead users. Hartson states: “When cognitive affordances don’t telegraph physical affordances or, worse, when cognitive affordances falsely telegraph physical affordances, users encounter errors.” (Hartson, 2003).

All four affordances play a role in Hartson’s model of the interaction cycle. The steps in that model are (Hartson, 2003):

- Planning – the user determines what task to do with the system in order to achieve a goal or objective
- Translation – the user translates task plans into action specifics, in the process determining how to perform the task
- Physical Actions – the user performs a physical action to carry out the task
- Outcomes – the system reacts to the physical actions of the user
- Assessment – the user assesses the outcomes and determines if the goal or objective has been achieved and determines what follow up is needed

Each step of this process has its own set of affordance needs. Cognitive affordances are the most abundant type used and occur in the planning, translation, and assessment stages. Sensory affordances occur in the planning, translation, physical actions, and assessment stages. Physical affordances occur primarily in the physical actions stage. Functional affordances occur only in the outcomes stage.

A more precise definition of what constitutes a cognitive affordance can be derived from Bloom's taxonomy of the cognitive domain (Bloom, Taxonomy of Educational Objectives Book 1: Cognitive Domain, 1956), which involves knowledge, comprehension, and critical thinking skills. The psychomotor domain involves the ability to physically manipulate something (Harrow, 1972). The perceptual level of the psychomotor domain corresponds closely with Hartson's sensory affordance, while the remaining levels are more closely aligned to Hartson's physical affordances. The affective domain involves awareness of and changes to attitudes and emotions, as well as the emotional responses to various stimuli (Kraftwohl, Bloom, & Masia, 1967). Hartson does not include the affective domain in his list of affordances.

Virtual Reality & Virtual Worlds

While there are substantial differences in the technologies and interfaces used for virtual reality and virtual worlds, they share significant similarities in the processes of navigation and meaning-making. Information and interaction design concepts drawn from these areas could provide insights that are useful for dealing with some of the information design issues associated with transmedia narratives.

“Virtual reality” is defined as the user perceived environment created by a computer or other media (Biocca, 1992). Virtual reality (VR) typically allows users to see, hear,

move, manipulate objects, and perform other actions in a computer generated three-dimensional virtual world.

The term “virtual worlds” is defined more broadly than virtual reality. It is relatively easy to provide examples of virtual worlds but a concise definition is more challenging. Online systems like Second Life, World of Warcraft, Eve, and others have all been categorized as virtual worlds. However, the question has been raised as to whether books, text-based multi-user worlds, dreams, or other phenomena can be defined as virtual environments or virtual worlds (Schroeder, 2008). It has been argued that virtual worlds existed in religious texts and art, mythology, novels, and the cinema long before the invention of computers (Bittarello, 2008). On the other hand, some definitions of virtual worlds specifically reject anything that includes non-computer, non-networked media (Bell, 2008). Generally, virtual worlds are considered to have the following characteristics (Schroeder, 2008):

- Persistent over time
- Provide a sensory experience
- Allow or compel a sense of being present in a different environment
- Enable interaction with the environment
- Include other participants within the same environment

A number of older definitions were combined to create a new definition that states virtual worlds are a “synchronous, persistent network of people, represented as avatars, facilitated by networked computers” (Bell, 2008). Based on Schroeder’s definition, the environment created with virtual reality technology can be considered a sub-set of virtual worlds. The term “virtual environment” is often used synonymously with “virtual world”.

Space, whether it is virtual or physical, is a common element in storytelling. Disney, for example, uses physical space in its theme parks as part of the storytelling (meaning-making) process. David Hench, a Disney designer, stated:

When we design an area of a Disney park, we transform a *space* into a *story* place. Every element must work together to create an identity that supports the story of that place – structures, entrances and exits, walkways, landscaping, water elements, and modes of transportation. Every element must in its form and color engage the guests' imagination and appeal to their emotions. (Hench & Pelt, 2003, p. 69)

These principles are important when designing the virtual space of a transmedia narrative. The author of a transmedia narrative needs to decide whether the environment plays a role in the meaning-making of the narrative itself.

The art of VE (virtual environment) design is to provide users with carefully structured opportunities to allow them to explore, strategize, and generally feel some sense of control over what they are doing...Creative design in VEs is concerned with attracting visitor's attention through patterns of mediated stimuli, which will achieve their purpose if the visitor perceives and responds to them as the design intended. (Earnshaw & Vince, 2001, p. 27)

Virtual environments are typically constructed as a space rather than a storytelling medium (Earnshaw & Vince, 2001, p. 18).

You cannot use a first person viewpoint (and the continuity of time and space) to provide a strong sense of immersion and still expect to tell a strong narrative and move the player emotionally...A powerful and moving narrative will not emerge by adding more detail to the worlds. (Earnshaw & Vince, 2001, p. 18)

The characteristics of virtual environments require a balancing act in which the creator/designer of information and the viewer of that information both play a role in how that information is presented and processed.

(This) point is a delicate one, since it must somehow blend the desire of the author-artist to lead the user on a previously determined path and the user's wish to freely explore the different views, avenues, and niches of the program on his or her own. (Thwaites, 2000, p. 238)

Each representation of a virtual environment represents an *information complex* (Thwaites, 2000, p. 237). Thwaites notes that in traditional information complexes, most of the information load is the result of the author's or artist's work while the viewer has relatively little control over the information content or form. In a VE, however, most parts of the information chain are heavily influenced by the actions of the viewer. As a result, the viewer becomes an important part of the VE presentation and takes on the role of "co-creator" within the VR domain (Thwaites, 2000, p. 237).

The high information density of virtual reality requires information to be designed so that it is delivered in short bursts with a pause between bursts for the viewer to have sufficient perceptual time to process the information and avoid overlapping in the information cascade (Thwaites, 2000, p. 236).

One strategy for controlling the speed at which information is delivered is designing VEs that give users enough interactivity that they control the rate at which information is delivered, turning a vertical information cascade similar to that of a film into a horizontal cascade that is more akin to walking through an art gallery. User control of the information cascade removes from the information designer the burden of trying to accommodate perceptual times that vary from person to person. Instead, individual users can determine how much time they need to deal with the spatial cues in the information cascade. This combination of vertical (program-provided) and horizontal (user-provided) information cascades (Thwaites, 2000, p. 237) provides significant opportunities for an information designer to optimize the transmission and processing of the information stream.

The user's eyes quickly spot strong spatial cues in a two-dimensional image and scan that part of the image more often (Thwaites, 2000, p. 229). From a design perspective, this tendency of the eyes to be drawn to an element that shows strong spatial cues can be used to highlight information and focus viewer attention on specific elements of an image. VE systems require a structure that accommodates both author-artist and the viewer – a situation that designers of transmedia narratives also face.

Augmented reality games (ARG) straddle the boundary between narrative and games. ARGs attempt to mimic the real world in their interactions by using tools and methods – mobile phones, websites, real-world settings, etc. – that are already integrated into the player's everyday life (Szulborski, 2005, pp. 9-13).

In a well-designed and produced ARG, the interactions and in-game events mimic real life and don't announce themselves as elements in a game at all. There is no simulation of a virtual world through a symbolic interface. (Szulborski, 2005, p. 13)

Immersion – the feeling of being totally absorbed and participatory in the fictional world of the game – is a key element of the ARG experience. In traditional video games, the sense of immersion is created by techniques such as placing the player in the center of the main story as a participant, through the use of first-person perspective, and employing photorealistic images and carefully produced sound to create a high fidelity virtual environment. Immersion in ARGs, on the other hand, is created by changing the player's existing world into an alternate reality, not creating an entirely new and fictional reality (Szulborski, 2005, p. 31).

In a successful ARG, the world of the game is immersed into the everyday life and existence of the player. The ultimate goal is to have the player believe the events and character are in his world, not a fictional world. (Szulborski, 2005, pp. 30-31)

As an ARG progresses, it reveals more and more of its “reality” through techniques that include real or fictional web pages, puzzles, text messages, tweets, posts on social media sites, and other forms of interaction with the players.

The interactions in an alternate reality game can take many forms and are generally designed to imitate the kinds of interactions a player might have in his everyday life. In the best games, the characters will use real communication methods, such as e-mails or telephone calls to talk to and guide the players in their adventures. Many ARGs also integrate instant messages with in-game characters appearing online to chat with players. Real-time interactions like this go a long way to helping establish the believability of the characters.

A few ARGs have successfully used real world events and items as part of the game, further transcending the limitations of the Internet and making the games even more immersive. (Szulborski, 2005, pp. 53-54)

As noted, ARGs cross the boundaries that separate narratives and games. They have many similarities to traditional narrative forms of entertainment but the inclusion of interactivity with the audience raises issues if a strict definition of “narrative” is used.

These issues are magnified if the goal of the game developer is to create an immersive experience, because immersion requires the player having a feeling of agency in the game and not just opportunities for mechanical and meaningless interaction. (Szulborski, 2005, p. 59)

Interactivity provides a significant challenge in the creation of transmedia narratives. Interactivity and narrative are considered to be contradictory. Narrative writers traditionally controlled both sides of any fictional interaction within a work, choosing how characters interact with each other. In ARGs and interactive fiction, the reader/player takes on the role of a character in the story (Szulborski, 2005, p. 64) and, as such, controls one side of the interaction. As a result, the author loses control of the interaction and the ability to direct the course of the story. ARGs are seen as a way for authors to retain some

control while allowing users to engage in meaningful interactions in a fictional setting (Szulborski, 2005, p. 65).

Reading versus Navigating

Transmedia narratives require the user to engage in two different modes of cognitive work:

- viewing the content of text, images, and other forms of information presented
- processing the informational clues needed to navigate through the narrative

The concept of modal shifts was suggested in the late 1990s by Finnemann (Finnemann, 1999), who suggested that the process for reading web texts was very similar to that of traditional texts; in printed texts information is filtered, skimmed and fragmented (resulting in a non-linear reading) and in web texts the reading process could be characterized as linear because the user must process each node of information in turn.

In an ordinary text you are supposed to move from chapter 1 to chapter 2 while in a hypertext you are supposed to choose your own serial order at various stages on the journey. But even so, you still have to choose, you have to determine the order in which you will read the text and this order will always have to be sequential. The optional freedom in hypertext systems is not a freedom from sequentialized linearity, since the user cannot make more than one choice at a time. (Finnemann, 1999, p. 25)

Finnemann suggests that the reading process for hypertext be regarded as having at least two modal shifts (Finnemann, 1999):

- the reading mode, in which the user is engaged in sequential reading
- the navigating (or linking) mode, in which the user is engaged in constructing a path through one or more nodes of information

Web users employ two different sets cognitive capacities and demonstrate two different types of behavior when shifting from the reading to the navigating mode and vice versa (Finnemann, 1999). The pattern of modal shifts is cyclical, with a constant change between reading and navigating. When in the reading mode, the reader zooms in on the text and uses the web document as if it was a “printed” text (i.e. basically reads the text). When in the navigating mode, the navigator zooms out of the text and uses the web document as a medium, exploiting its navigation possibilities (Askehave & Nielsen, 2005). When the user is in the reading mode, the text must be characterized in terms of its communicative purpose, moves, and rhetorical strategies; when navigating mode, the medium must be characterized in terms of its communicative purpose, links, and rhetorical strategies (Askehave & Nielsen, 2005).

Core Characteristics of Transmedia Narratives

A number of characteristics that define transmedia narratives have been proposed. Jenkins identified what he called core principles that should be included in every transmedia narrative (Jenkins, 2009):

- Spreadability – the capacity of the public to engage actively in the circulation of media content through social networks and in the process expand its economic value and cultural worth
- Drillability – the capacity of the public to dig deeper into a narrative, probing beneath the surface to understand the complexity of a story and its telling.
- Continuity – the result of a unifying, consistent and coherent experience that is systematically developed across multiple texts.

- Multiplicity – the use of alternative versions of the characters or parallel universe versions of the stories that are deliberately inconsistent and, in fact, may be contradictory.
- Immersion – the ability of fans to enter into fictional worlds and leave the real world behind.
- Extractability – the ability of fans to take aspects of the story away with them as resources they use in their everyday life.
- Worldbuilding – the construction of interconnecting settings within a storyworld that links together individual stories scattered across multiple media
- Seriality – the chunking of a story into meaningful and compelling chunks that are dispersed across multiple installments and multiple media systems
- Subjectivity – multiple perspectives of the storyworld through transmedia narrative extensions that may focus on unexplored dimensions of the fictional storyworld, a broader timeline of the narrative material, or revelation of the experiences and perspectives of secondary characters
- Performance – the active role played by fans participation and their own contributions to the storyworld.

Jenkins suggested that transmedia narratives needed to be designed in a way that (Jenkins, 2006, p. 105):

- Allows new character background
- Allows the introduction of entirely new characters
- Allows new plot development

- Does not duplicate experiences in different media (i.e. creates a unique experience in the most appropriate medium)
- Has core consistency across the storyworld and avoids contradictions

Temporal Ordering in Narratives

Most definitions of “narrative” and “story” refer to a sequence of events. This implies a temporal order to the events – this happened, then this happened, and then this. A defining characteristic of narrative is that there is a sense of the precedence of the event; that the event or events occurred prior to the telling of the story and that the story was already there, in place to be rendered (Abbott, 2005, p. 535).

As a form of telling, narrative exists in time; a narrative takes time to tell and tells about a sequence of events in time. (McClellan, 2007, p. 193)

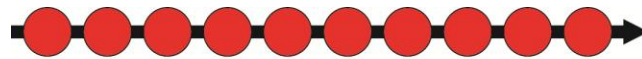
Because traditional narrative has been structured on the sequential recounting of events, the traditional narrative form is essentially linear (see Figure 4).

Although some have considered the notion of nonlinearity as a narrative form, the dominant structure in commercial feature-length film remains faithful to Aristotle’s beginning-middle-end, even if in some instances the *syuzhet* is such that only in the last frames is the spectator in a position to make the linkages form the whole. In commercial cinema, the whole itself, however its problems are presented, most often will conform to the classical narrative structure. (McClellan, 2007, p. 29)

A variety of techniques have been developed to modify the apparent temporal ordering of events and manipulate the sense of time in both written and cinematic forms of narrative. These techniques include the “flashback” and “flashforward” used in both novels and film. Film, a linear form of narrative because its very nature requires the projection of a sequence of frames at a specific number of frames per second, has developed a

number of techniques for manipulating the sense of temporal ordering in a narrative. In addition to flashbacks and flash forwards, these techniques include (Van Sijll, 2005):

- Slow motion (time expansion)
- Fast motion (time compression)
- Freeze frame (stopping time)
- Intercutting (showing simultaneous events in sequential time)



Source: Peter von Stackelberg

Figure 4. Events in a linear narrative are in a fixed temporal order.

The flexibility of transmedia narratives makes it possible to present events in any order. Interfering with the linear sequencing of a narrative, however, can impede the viewer's ability to understand the meaning of the narrative. Issues of temporal ordering in narratives are tightly linked with user interactivity. Ryan stated: "Interactivity breaks the linear flow of narrative and removes control from the designer." (Ryan, 2005, p. 515).

Nonlinear narratives give readers options of where to go and what to do within the narrative. There are two main categories of nonlinear narratives – open world (see Figure 5) and branching (McIntosh, Cohn, & Grace, 2010) – that are often incorporated into games.

The open world often means the player is able to encounter different parts of the overall story in whatever order they choose, or the player is able to access smaller, more isolated side stories in whatever order they choose. (McIntosh, Cohn, & Grace, 2010)

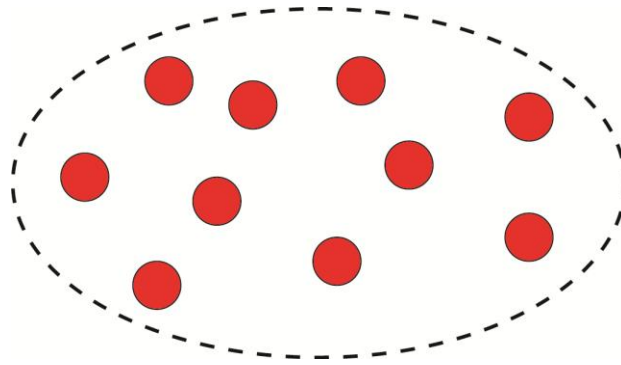
The open world approach is typically used in “quest” type games in which missions can be carried out in any order.

Branching nonlinear stories are generally thought of as one of two styles: 1) a tree that branches out with different end points; or 2) plot lines that converge or diverge like parallel roads to the same destination. (McIntosh, Cohn, & Grace, 2010)

Stories that branch to different end points (see Figure 6) are difficult to implement because the combination of possible endings rapidly multiplies as the number of decision points increases, causing significant programming and asset management challenges (McIntosh, Cohn, & Grace, 2010). Stories that use the parallel narrative approach (see Figure 7) can provide users with numerous options but because the story lines converge back to key plot points, the number of possible paths and end points are more easily controlled, making programming and asset management significantly easier (McIntosh, Cohn, & Grace, 2010).

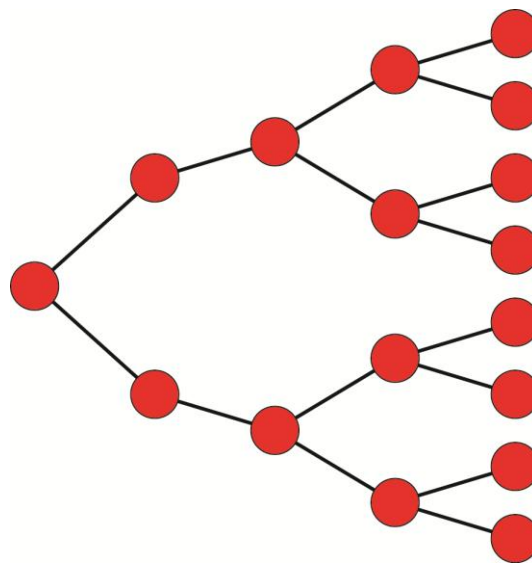
Nonlinear narratives have a number of inherent challenges. From a production perspective, nonlinear narratives require more time and resources to design and develop because they need to accommodate every possible choice made available to the user, resulting in more difficult development and greater expense (McIntosh, Cohn, & Grace, 2010). Experiments with hypermedia in the 1980s and 1990s produced a number of attempts at non-linear narratives, but as a form of writing they were not a great commercial success.

Hypertexts sacrifice [a] dimension of literary narrative, namely the reader’s immersion in the stream of narrative time. The fragmentation of the hypertext format stands in the way of the feverish anticipation that we call ‘reading for plot’. There are no thrillers, no suspense stories, no dramatic curves of rising and falling tension in hypertext fiction. (Ryan, 2005, p. 522)



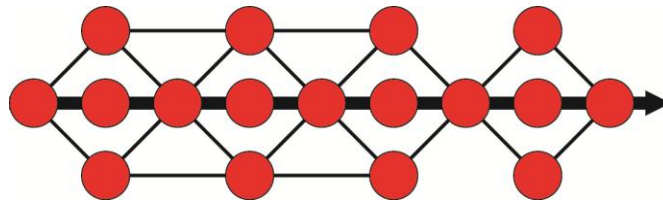
Source: Peter von Stackelberg

Figure 5. Open worlds allow readers to access the events in the narrative in any order.



Source: Peter von Stackelberg

Figure 6. Branching narratives have a temporal sequence but users are able to make choices at certain decision points.



Source: Peter von Stackelberg

Figure 7. Parallel narratives allow users choices but eventually converge back to key events.

The creation of suspense in narrative is “highly dependent on the management of what the reader knows and does not know at each moment of the reading experience”

(Ryan, 2005, p. 522). When the reader decides the sequence in which the narrative is read, the author loses the ability to control the disclosure of information and the revelation of the story's plot.

Since it is regulated by the one-directional relations of causality, psychological motivation, and temporal sequence, narrative meaning cannot be freely created by the reader, and it cannot emerge from a partially random combination of textual fragments. (Ryan, 2005, p. 523)

The control of information – what is disclosed to the reader and when – is considered a key aspect in the creation of interesting transmedia experiences.

The key to an interesting transmedia experience is to not give anything away. Rather than providing the entire website, begin by reading the book. Then provide the website and see if they can figure out the password to get in. Once they learn about shipbreaking today, get them to think of other topics that could be used as the foundation for a story. (Lamb & Johnson, n.d.)

Spatial ordering of events is an important aspect of creating a narrative. Spatial ordering entails the creation of places, entities, and paths of motion in space. In order to make sense of the story, use spatial information to build and update cognitive maps of the storyworld (Ryan, Introduction, 2004, p. 64). Ryan said that authors of narratives need to rely on the reader's "basic capacity for spatial navigation and their general knowledge of how to navigate particular aspects of the world" (Ryan, Introduction, 2004, p. 66).

While games give users considerably more flexibility in terms of interactions, temporal ordering is still an important consideration. Games are almost always structured to play out chronologically.

Flash-forwards are highly problematic, since to describe events-to-come would mean the player's actions did not really matter. Using cut-scenes or in-game artifacts, it is possible to describe events that led to the current fictional time, but an *interactive* flashback leads to the time machine

problem: The player's actions in the past may suddenly render the present impossible. This is the reason why time in games is almost always chronological. (Juul, 2005, p. 148)

Richard Saul Wurman said there was a finite number of ways – five specifically – to organize information: time, location, alphabetically, by category, and in hierarchies (Wurman, 2001, pp. 40-41).

Each way of organizing permits a different understanding; each lends itself to different kinds of information; and each has certain reassuring limitations that will help make the choices of how the information is presented easier. (Wurman, 2001, pp. 40-41)

Time works best as a way to organize information about events that happen over fixed durations. Time is also an easily understood framework from which changes can be observed and comparisons made (Wurman, 2001, pp. 40-41). Location is “the natural form to choose when you are trying to examine and compare information that comes from diverse sources of locales” (Wurman, 2001, pp. 40-41).

When you arrange information, the structure you create will save you the frustration of juggling unconnected parts...Understanding the structure and organization of information permits you to extract value and significance from it. (Wurman, 2001, p. 42)

Jenkins said that any given product in a transmedia storyworld should be able to serve as a “point of entry into the franchise as a whole” (Jenkins, 2006, p. 96). However, he notes that too much may have been made of the “non-linear nature of the transmedia experience” (Jenkins, Purushotma, Weigel, Clinton, & Robison, 2009).

Although transmedia technology makes it possible to express a story in any temporal or spatial order, the demands of narrative may push many transmedia narratives to a more linear structure.

If you are going to take a world and express it through multiple media at the same time, you might need to express it sequentially. You may need to lead people into a deep love of the story. Maybe it starts with a game and then a film and then television. You are building a relationship with the world rather than trying to put it all out there at once. (Jenkins, 2006, p. 126)

Structural Elements of Transmedia Narratives

The structure of a story has a significant impact on how users extract meaning from it. By controlling the order in which information is presented to the reader, by providing or withholding pieces of information, the author is able to affect the extent of the reader's involvement and how the reader perceives events and characters (Hodgins, 2001, p. 172). A narrative's structure should serve to pull it together into a unified and coherent whole.

Narrative representations must be thematically unified and logically coherent. Their elements cannot be freely permuted, because they are held together in a sequence by relations of cause and effect, and because temporal order is meaningful. The propositions of a narrative representation must be about a common set of referents (= the characters). (Ryan, 2001)

While transmedia technologies provide tremendous opportunities to scatter elements of a story across multiple media, authors should use those opportunities judiciously.

The story should model itself in ways that readers consume stories – meaning that to simply fragment a story across multiple platforms won't work...Dragging readers/audience from one platform to another simply "because you can" won't work. There's a danger of overkill and hosting 'parties' at venues where nobody will turn up. (Norrington, 2010)

Ryan noted that while there are differences between different types of media, there are "significant similarities in the processes of narrative communication" (Ryan, Introduction, 2004, p. 59). Abbott notes that there are elements that are common across

narratives and media, but the things in stories that have always engaged people are (Abbott, 2005, p. 531):

- Linked strings of cause and effect
- Characterization and motivation
- The dense interweaving of micro- and macro-plots

The narrative structure of a transmedia narrative should consider three different types of content consumers (Scolari, 2009):

- **Single Story Consumers:** Users who interpret the individual units of the storyworld (for example, a video game or a book or a television episode) without paying attention to the total scope of the storyworld
- **Single Media Consumers:** Users who enter the storyworld through a single medium and stay with that medium (for examples, those who watch only weekly TV episodes or read only books in a series)
- **Transmedia Consumers:** Users who move across different media to view multiple aspects of the storyworld.

Storyworlds

The fundamental purpose of a storyworld is to provide a universe within which multiple stories can be told. Storyworld creation should involve a systematic approach that sets out a grand vision. The success of transmedia narrative has been attributed to the richness of the storyworld upon which it is based.

Utilizing a host of Web 2.0 platforms isn't the key to a successful transmedia project. Any transmedia property must be supported by a strong framework and architecture of strategy and awareness of audience demographics. In creating a transmedia storyworld it is important to look at ways

to create experiences that allow the reader/audience to step into the protagonists, considering both “lean back” and “lean forward” behaviors and triggers. (Norrington, 2010)

The core features that can be found in all transmedial worlds are what Klastrup and Tosca call “mythos”, “topos”, and “ethos”.

Mythos is the established conflicts and battles of the world, the characters of that world, its stories and rumors, and its creatures. This is the “back-story of all backstories” – the “central knowledge needed *to interact with or interpret the events in the world successfully*” (Klastrup & Tosca, 2004).

Topos is the setting of the world in a specific period and detailed geography (a futuristic technological world in science fiction, the middle ages with magical elements in fantasy, or a crime-ridden underworld in a detective/gangster story). “The space and time of an actualization of the transmedial world can be changed, but the general space and time of the universe is normally unchangeable” (Klastrup & Tosca, 2004). Worlds “will always be set in the past or future according to the time of the ur-actualization. However, newer actualizations of a world might often be set either before or sometime after the mythic time of the ur-transmedial world in order not to interfere with the mythos (Klastrup & Tosca, 2004).” From a reader’s perspective, knowing the topos is knowing what is to be expected in the world (Klastrup & Tosca, 2004).

Ethos is the “explicit and implicit ethics of the world and (moral) codex of behavior which characters in the world are supposed to follow” (Klastrup & Tosca, 2004). It is the knowledge needed to “know *how to behave* in the world” and that defines what is acceptable or inappropriate behavior in that world (Klastrup & Tosca, 2004).

Ryan has proposed that the content of storyworlds consists of a number of elements (Ryan, 2011):

- Existents – characters and objects of special significance
- Setting – a space with certain geographic features
- Physical laws – laws that govern the behavior of objects in the storyworld.
These can vary from genre to genre.
- Social laws and values – the social, moral, and ethical elements of the storyworld.
- Events – which provide a temporal dimension by creating a history of the changes that occur in the time span framed by the narrative.
- Mental events – which are the goals, plans, emotional reactions, and other psychological aspects of the characters.

The creator of a storyworld should consider how it can be realized across a variety of media.

Ask questions such as “shall it be set in a busy small town or across an entire country?” “Shall it be set in some fantastical world where people can travel to locations around the universe or through time?” “Is it a place where players would want to spend forty, sixty, or hundreds of hours in?” “Can I depict these settings in more than one medium?”

Vastness does afford greater dramatic possibilities in that there is more for writers, designers and players to explore. (Dena, 2009, p. 205)

Four strategies identified for expanding a storyworld were creation of (Scolari, 2009):

- Interstitial micro stories – stories that have a close relationship to the macro story. These can be presented using comics, online video and audio clips, video games, mobisodes, and similar approaches.

- Parallel stories – stories that unfold at the same time and have a strong relationship to the macro story. These parallel stories may evolve over time and become spinoffs.
- Peripheral stories – stories that have a weak relationship to and may not occur at the same time as the macro story. Peripheral stories may also evolve over time and spin off.
- User-generated content platforms – environments such as blogs and wikis that facilitate user-generated stories and other user-generated content related to the storyworld.

Events, Scenes & the Structure of Story

Stories come in a variety of shapes and sizes, with each (ideally) being unique. However, stories typically fit into an identifiable form or type. These categories or groups of stories are called *genres* and have similar settings, content and subject matter, themes, plots, central narrative events, styles, structures, recurring icons, situations, and characters (Dirks, 2011). Examples of genres include action/adventure, comedy, crime and gangster, drama, epic and historical, horror, science fiction, musical or dance, war/anti-war, and westerns. Within these genres are a numerous sub-genres and hybrid story types. There is no single “official” list of genres; rather, a number of different lists from a variety of sources exist. While there may be differences across media, the main genre types have many similarities.

Each genre has a unique set of conventions that shape the story design, and the audience for a particular genre has a set of expectations based on those conventions

(McKee, 1997, p. 89). The challenge with transmedia narratives is that some genre conventions may differ from medium to medium.

The structure of stories has been analyzed since the time of Aristotle, who proposed a basic Beginning-Middle-End model. Since the time of the ancient Greeks, many other story structures have been proposed. One of the most commonly used was developed in 1863 by German critic Gustav Freytag. In his book *Technique of the Drama*, Freytag took Aristotle's basic structure and proposed what has come to be known as Freytag's Triangle or Freytag's Pyramid (see Figure 8) (McManus, 1998).

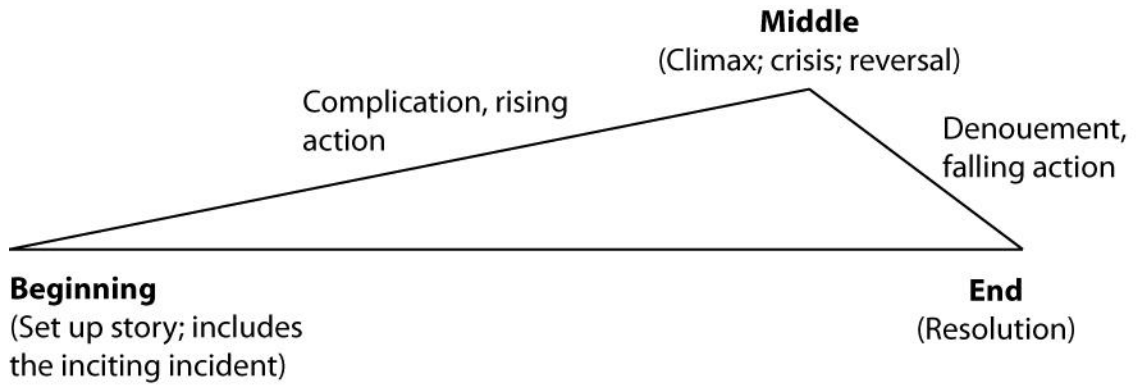
Hodgins identifies eight common story “shapes” used by authors of short stories and novels (Hodgins, 2001, pp. 161-164). Three of these story shapes are variations of Freytag's Triangle (see Figure 8 through Figure 11). Five additional shapes depart significantly from the structure represented by Freytag's Triangle (see Figure 12 through Figure 16).

Ryan suggests three basic elements of a narrative – states, events, and actions.

Narratives establish particular facets of the storyworld into *states*, *events* that happen without being deliberately initiated and deliberately initiated *actions*. (Ryan, Introduction, 2004, p. 62)

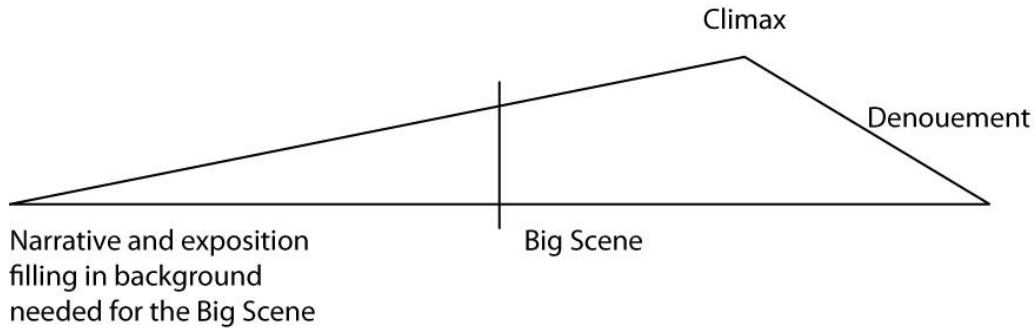
The type of story being told can determine what *states*, *events*, and *actions* are the focus of attention and how they are used. Ryan gives an example:

Psychological narratives typically use a coding strategy that emphasizes the interior (psychological) states of the characters rather than the events that befall them or the actions they initiate. (Ryan, Introduction, 2004, p. 62)



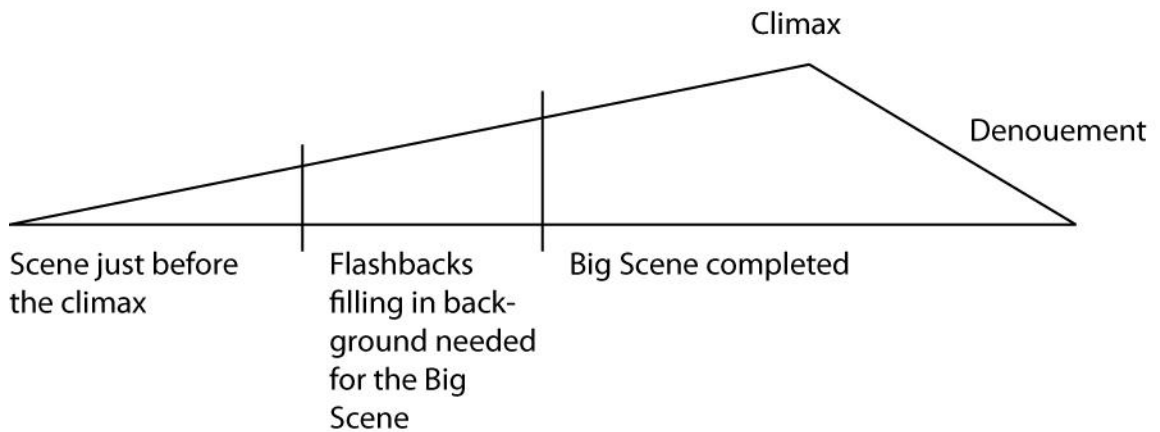
Source: Adapted from Gustav Freytag

Figure 8: Freytag's Triangle using Aristotle's Beginning-Middle-End structure



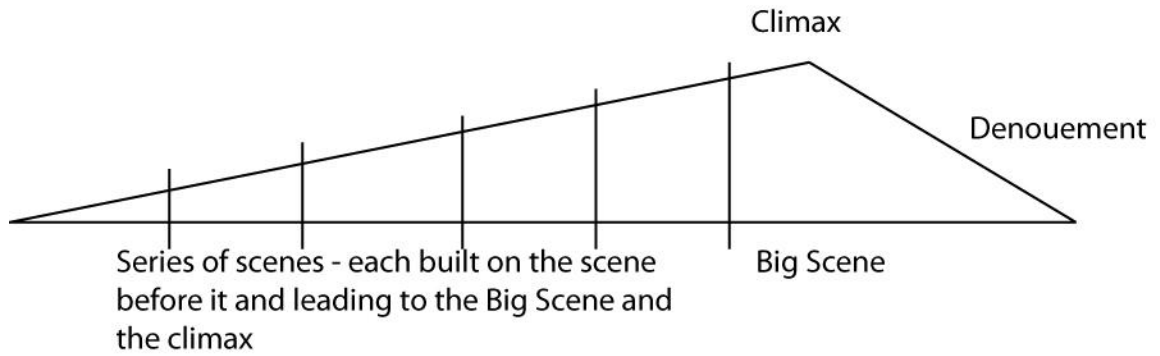
Source: Adapted from Jack Hodgins

Figure 9: Freytag's Triangle adapted for short stories with a single "big scene"



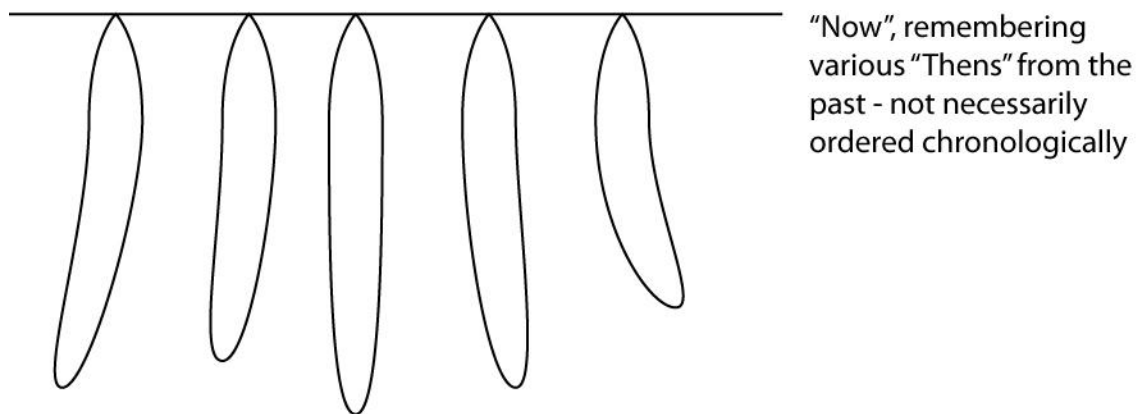
Source: Adapted from Jack Hodgins

Figure 10: Freytag's Triangle adapted to incorporate flashbacks.



Source: Adapted from Jack Hodgins

Figure 11: Freytag's Triangle adapted to incorporate multiple scenes



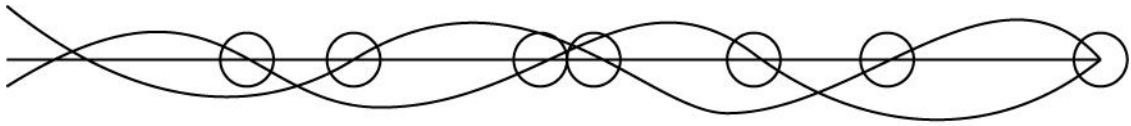
Source: Adapted from Jack Hodgins

Figure 12: Multiple "side trips" branch from and return to the primary thread of the story



Source: Adapted from Jack Hodgins

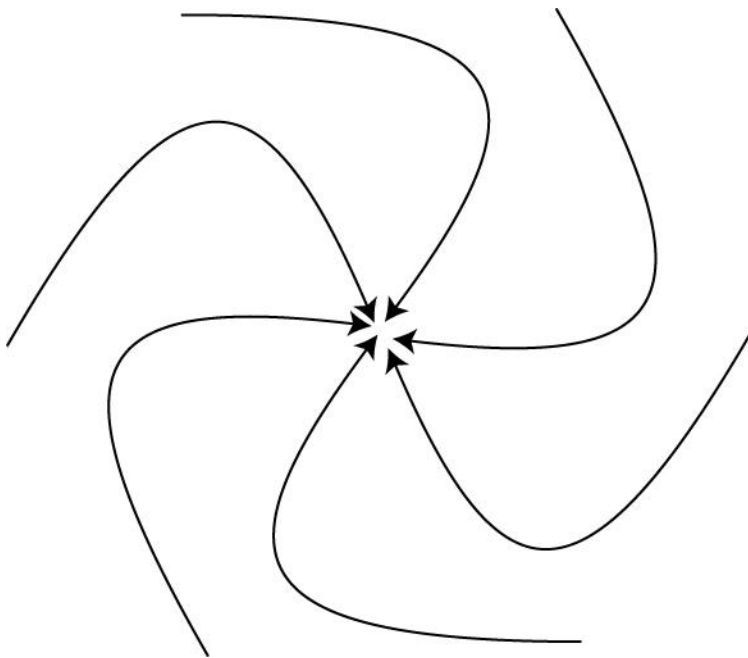
Figure 13: The story spirals inward, reaching a conclusion when the story reaches a critical central point



A number of threads - separate sequences of events in chronological order - weave around each other, crossing at times until they come together at the conclusion of the story.

Source: Adapted from Jack Hodgins

Figure 14: The horizontal story structure has a number of threads that weave around each and sometimes cross paths until they come together at the conclusion of the story.



A number of threads based on individual characters and events converge on a single time and location at the end of the story.

Source: Adapted from Jack Hodgins

Figure 15: The converging story structure has a number of separate threads that converge at the conclusion of the story.



A number of narrative “shafts” set in a sequence that is not chronological penetrate a character’s memory while a unifying narrative pulls the story together.

Source: Adapted from Jack Hodgins

Figure 16: The vertical story structure has a primary thread that pulls together a series of narrative “shafts” that provide additional detail at certain points. These “shafts” are *not* organized chronologically

Robert McKee has identified a number of elements that are organized in a hierarchy consisting of story, act, sequence, scene, and beat (see Figure 17) (McKee, 1997, pp. 34-42). McKee describes these elements as:

- Story – A series of acts that build to a last act climax or story climax that brings about an absolute and irreversible change in the protagonist (McKee, 1997, p. 42).
- Act – A series of sequences that peak in a climactic scene which causes a major reversal of values, more powerful in its impact than any previous sequence or scene (McKee, 1997, p. 38).
- Sequence – A series of scenes – typically two to five – that culminate with greater impact than any previous scene (McKee, 1997, p. 38).
- Scene – An action involving conflict that occurs in (more or less) continuous time and space. It turns the value-charged condition of a character’s life on at least one value with a degree of perceptible significance (McKee, 1997, p. 35).

- Beat – An exchange of behavior in an action/reaction mode that, beat by beat, shapes the turning of the scene (McKee, 1997, p. 37).

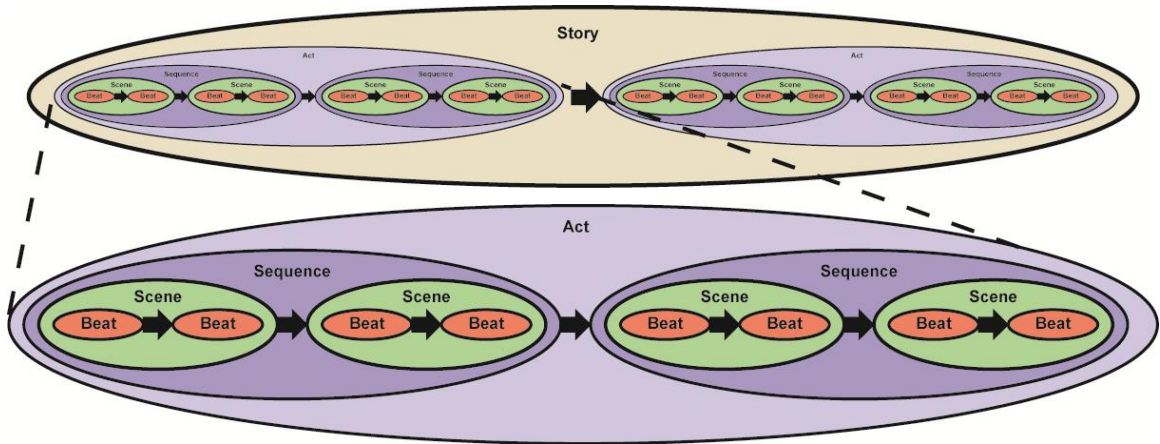


Image: Peter von Stackelberg, based on Robert McKee (McKee, 1997)

Figure 17: A story consists of a number of elements -- beat, scene, sequence, and act -- nested within it.

McKee also states that an event in a story creates meaningful change in the life situation of a character that is expressed and experienced in terms of a value. The change is achieved through conflict that is present in the event (McKee, 1997, p. 34).

Other story structures have also been proposed. Chatman identified two components that comprise a story – the events and the existents (the characters and setting) (Chatman, 1978, p. 19). He further divided events into two categories – kernels and satellites – with kernels being more important to the logic of the story than satellites.

Kernels are narrative moments that give rise to cruxes in the direction taken by events. They are...branching points which force movement into one of two (or more) possible paths. (Chatman, 1978, p. 53)

Removing a kernel from a story would cause substantial changes in the storyline. Satellites focus on character, setting, or incidental actions and, if removed from, don't affect that basic storyline dramatically (Porter, Larson, Harthcock, & Nellis, 2002).

The Scene Function Model adds further detail to Chatman's concept of kernels and satellites. Knowing the function of a scene in a narrative provides a better understanding of the structure of that narrative. Six kernel scene functions have been identified (Porter, Larson, Harthcock, & Nellis, 2002):

- Disturbance – reveals the initiating event (disruption) that upsets the life of the lead character and leads to the ensuing action of the story. The nature of the basic conflict of the story is established. This could occur off-camera and be revealed through dialogue.
- Obstacle – introduces an opposing force. May reveal the antagonist. Answers the question “Who (or what) is standing in the way of the hero achieving his/her goal?”
- Complication – reveals a new course of action; it complicates the situation. Introduces a new angle to an existing complication or may present a new opposing force. Complications can include character, events, mistakes, misunderstandings, discovery, etc.
- Confrontation – is when the hero confronts an obstacle.
- Crisis – when opposing forces are in conflict and the outcome is uncertain. This the decisive confrontation for the story, the turning point in the action, also known as the climax.
- Resolution – the results of the crisis are revealed; the balance is restored. This scene follows the crisis scene; may occur within the crisis scene.

Twelve satellite scene functions have also been identified (Porter, Larson, Harthcock, & Nellis, 2002):

- Exposition – presents background information (back-story).
- Dramatic question – raises the basic question the story will answer; relates to the conflict of the story. May explain the nature of the disturbance.
- Introduction of new character – introduces a new character or set of characters.
- Action – shows the characters as they carry out their plan or perform their job. Most “in-transit” scenes (car-chase scenes, etc.) serve this function.
- Plan revealed – presents the hero’s goal for eliminating the disturbance.
- Relationship affirmation – focus on the interaction between or among characters. No new developments or changes in relationships are presented. Characters may show supportive action for one another. Characters talk about incidental events or personal events unrelated to the main story.
- Clarification – solidifies or repeats the dramatic question by clarifying the basic conflict. May present new information about the conflict or help the viewer to understand the ramifications of the conflict and the pursuant action.
- Conflict continues – Keeps the audience aware of the basic conflict of the story. The scene heightens suspense, anticipation, and tension. It may introduce “minor” revelations in the conflict. The scene “teases” the audience and keeps the viewer interested in the story.
- Relief – provides a release for the audience and a diversion from the preceding story. It is used to provide relief from the emotional intensity of the preceding scene.

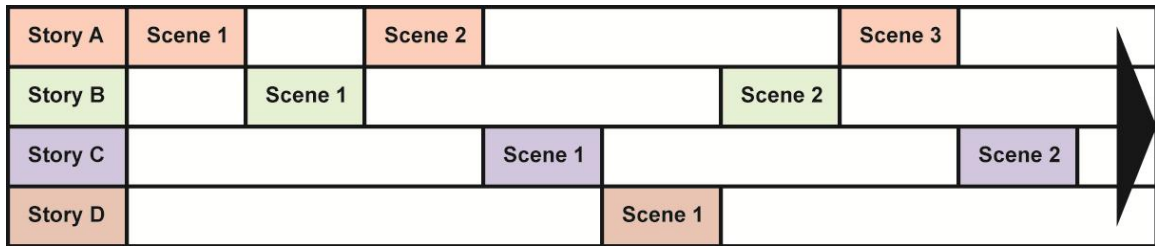
- Theme – the “mallet” scene (you are hit over the head with the “theme” of the story). It is used to explain why the hero has his or her goals and may explain the character’s behavior or attitude. It usually reflects cultural or social issues, values, or beliefs. The sole function of this type of scene is to underscore the theme of the story.
- Foreshadowing – foreshadows a later event or a larger episodic storyline. It gives later events more significance and creates anticipation for future conflict. It may also reveal character traits that factor into the story later and established credibility needed later in the story.
- Ambiance – draws the audience into the story at an emotional level. It adds dimension to the characters by revealing their emotional response to the event or another character. It is usually related to the theme of the story and serves to intensify the emotional response to the story.

A layered approach (see Figure 18) to storytelling has been a key feature of television narratives that span multiple episodes. Many television dramas consist of multiple individual stories, some which are self-contained and others presented elliptically (Porter, Larson, Harthcock, & Nellis, 2002).

Many of today’s dramas can be examined by looking for narrative layers...Television’s dramas include several narrative layers to address the needs of a variety of viewers – primarily devoted fans as well as newcomers...Uninitiated viewers will focus primarily on the first narrative layer, and they will examine the scene functions from this perspective. The regular viewer, on the other hand, will read the narrative’s first layer but also read the text’s additional layer. In the second layer, the narrative focuses on the character development for the viewer. (Porter, Larson, Harthcock, & Nellis, 2002)

The nature of transmedia narratives, with multiple nodes, creates another story element that authors need to be aware of. How story nodes are structured and accessed can create meaning.

Perhaps then one of the deep affordances of transmedia stories is that they operate just not as a collection of texts, but as an intertext, a text that is produced within the interaction between multiple texts. This is part of what differentiates transmedia, media that moves across and between forms and platforms, from static multimedia nodes. Transmedia isn't just about multiple stories or versions, but about creating a rich in-between space, an archive of shared meaning in-between different parts of the story. In short, a universe. (Li, 2009)



Source: Peter von Stackelberg

Figure 18: Many television series use a multi-layered story structure.

Continuity in episodic narratives is added by the development of *story arcs* to create a “sense of the future, of the existence of as yet unwritten events” and a sense that the characters have a history that includes relationships and “life events” (Fisk, 1987).

In many television series there is a continuation of a particular storyline that spans a number of episodes. This continuation is known as a story arc, which means the story may be introduced in one episode, developed in a following episode, and brought to a climax in a later episode. Development can occur over several episodes or span an entire season; hence the name, story arc. (Porter, Larson, Harthcock, & Nellis, 2002)

The emergence of transmedia narratives is adding another level to the structure of stories. McKee notes that a story itself is “on huge master event” that examines the value-

charged situation in a character's life and recounts how it changes from the beginning to the end of the story (McKee, 1997, p. 41). This idea that a story is itself an event makes it conceptually possible to integrate that story into a "macro-story" that takes place in a storyworld and spans both multiple stories and multiple media platforms.

Characters

Characters are a critical element in narratives. Without characters, a story becomes nothing more than a chronological sequence of events. It is characters that provide "a central, if not the central point of engagement" for the audience (Evans, 2008).

Characters are one of the two central features of episodic television narratives, because the emphasis on character helps maintain audience interest between episodes of a series (Porter, Larson, Harthcock, & Nellis, 2002).

One of the most striking components of television programs is that many of the same characters reappear each week. We not only get a glimpse of the characters' worlds, but we remember their past experiences...The regular viewer is interested in what happens to the characters – how they develop relationships, how they cope with various obstacles week after week, season after season. The more interesting television characters grow and change over time, creating layers of depth in their metamorphoses. (Porter, Larson, Harthcock, & Nellis, 2002)

The importance of the characters in a television narrative is emphasized by continuing storylines that "work to resist closure" and "which deemphasize the plot" (Porter, Larson, Harthcock, & Nellis, 2002). Often characters in transmedia stories do not need to be introduced so much as reintroduced because they are known from other sources (Jenkins, 2006, p. 120). The ability of the audience to immediately recognize a character is an advantage in a transmedia narrative. Jenkins noted that if protagonists and antagon-

ists are broad archetypes rather than “individualistic, novelistic, and rounded characters”, they are immediately recognizable (Jenkins, 2006, p. 120).

The Matrix used character archetypes from both popular entertainment games (the hacker protagonist, the underground resistance, and mysterious men in black) and from ancient mythological sources (Morpheus, Persephone, The Oracle). This reliance on archetypal character is particularly important in the case of games in which there is little time for exposition before users grab the controller and try to navigate the world. (Jenkins, 2006, p. 120)

Instead of the in-depth character development that occurs in a novel, characters in a transmedia narrative are typically fleshed out by adding back-story and motivation via story elements that use other media. One of the tasks of the users is to continue to search for additional insights into character they are interested in.

Creating interesting and believable characters is an important part of creating trans-media narratives.

Great characters lead two fascinating lives at the same time. The outer life is their presence in the world and is described by what they do and say...A character’s inner life is his self-awareness, composed of feelings, beliefs, self-image, self-doubts, hunches, intuitions, and millions of other mysterious and often ill-defined and contradictory forces that work within him. (Glassner, 2004)

Information about characters can be introduced using a number of techniques, including:

- Web or blog pages with “About Me” type sections that provide back-story on the character.
- E-mails, tweets, Facebook wall posts, and similar messages that provide character information.

- Online “dossiers” that reveal information about a character as if collected by another party.

Characters play an important role in maintaining continuity in narratives that are episodic. In television series, for example, character developing is carried forward from episode to episode, with many characters beginning as two dimensional but some “evolving into well-rounded, three-dimensional characters with histories, flaws, and unique personalities” (Porter, Larson, Harthcock, & Nellis, 2002).

While characters are transmedial in that they can be realized in a variety of media, the creator of a transmedia narrative must recognize that the role of characters can change with the medium (e.g. films or novels versus games) in which the characters are being used.

When thinking in transmodal terms then, a writer or designer would consider whether their characters can afford being played, and on the other hand, whether their characters are interesting, complicated, and perhaps capable of transformation to afford them being read, watched, or listened to. (Dena, 2009, p. 208)

The role of characters in games that are associated with a transmedia narrative is complex. When fans of the British television series *Spooks* were interviewed about taking control of a central character, the response was negative.

What emerged from the focus groups regarding this shift, however, is that those who particularly engage with the characters do not want to replace them, and the kinds of engagement with characters available through the television episodes would be preferred in the games...They want the fictional characters from the series to remain and therefore they reject the kind of viewing position offered in the games in favor of one more familiar to them from the series. (Evans, 2008)

Dena also notes that game players do not always have to play the role of a central character in the narrative, and in the case of multi-player role-playing games, it may be impractical for all players to take on the role of a limited number of central characters. Instead, classes of characters can be created that allow potential transmedia game players to role-play a member of a certain class of players (Dena, 2009, pp. 208-209). For example, players might take on the role of a hobbit or dwarf from *Lord of the Rings* or a “field agent” in a game based on the *Spooks* program.

When thinking about a fictional world that can be told as well as played, transmedia practitioners would think of characters, and even character classes, that would lend themselves to both modes. (Dena, 2009, p. 209)

The number of main characters created for a transmedia project should be kept small because (Szulborski, 2005, pp. 215-219):

- Creating interesting and believable characters is difficult and time-consuming.
- Users have difficulty keeping track of characters
- Interactions between characters multiple exponentially as the number of characters increases.

The “Rule of Three” has been proposed as a guideline for the ideal number of characters in a story because it provides optimum balance and tension.

One person isn’t enough to get full interaction. Two is possible, but it doesn’t have a wild card to make things interesting. Three is just right. Things can be unpredictable but not too complicated. (Tobias, 1993, p. 51)

The conflicts between the characters in a story and the emotions involved in resolving them are the constituents of a dramatic structure – a plot – used to arrange actions and events.

In its most basic sense, a plot is a blueprint of human behavior...These patterns are so basic to being human that they haven't changed in the last five thousand years and probably won't change in the next five thousand...Plot is more than just a chronicle of events. The listener asks a different question: 'Why does this happen?'...Plot is a chain of cause-and-effect relationships that constantly create a pattern of unified actions and behavior. Plot involves the reader in the game of 'Why?'...Plot requires the ability to remember what has already happened, to figure out the relationships between events and people, and to try to project the outcome. (Tobias, 1993, pp. 10-12)

Just as more than one story can be told in a television episode, more than one plot can be incorporated into an episode. In addition to the central plot, a number of subplots can be developed, with each subplot having its own structure and characters. The advantage of multiple subplots (and their associated stories and characters) can engage the audience by keeping the storytelling moving and deepening the interest, emotions, and involvement of the audience (McKee, 1997, p. 220).

DESIGN, EVALUATION & IMPLEMENTATION OF THESIS

The focus of this thesis is to describe and explain how the transmedia narratives are structured and develop a framework that can be used by transmedia designers and developers to guide the process of creating transmedia narratives. The development of a *substantive theory* about transmedia narrative creation will have significant practical applications in entertainment, education, marketing and advertising, and other areas.

A "substantive theory" is a theory that is applied to specific, everyday situations (Merriam, 2009, p. 30). The creation of substantive theory is a key outcome of the *grounded theory approach* (Merriam, 2009, p. 30). Grounded theory is particularly useful for addressing questions about processes.

The question that underlies this thesis is “How do you tell an effective story across multiple media?” Answering this question requires:

- Identifying key theories, methodologies, concepts, techniques and tools that can be applied to the creation of transmedia narratives.
- Developing a theoretical framework that can be used to design and develop the narrative, the interconnections between elements of the narrative, and the interfaces that facilitate users’ navigation through the transmedia narrative.

While the characteristics of transmedia narratives have been discussed in general terms and individual aspects such as interactions, immersion, and narrative structure have been examined in somewhat more detail, there is not yet a comprehensive framework that can be used as a basis for doing a comparative analysis of a variety of transmedia narratives. This thesis proposes that comprehensive framework, which consists of key conceptual categories, their properties, and the conceptual links between them.

This is consistent with the grounded theory approach to qualitative research, which has been described as consisting of “categories, properties, and hypotheses that are the conceptual links between and among the categories and properties.” (Merriam, 2009, p. 199).

This thesis draws on theories, methodologies, concepts, techniques, and tools from a number of disciplines and subject areas, including information design, narratology, computer science, creative writing, film studies, media studies, visual design, and art studies. This highly diverse range of disciplines and subject areas provides insights into the various forms of media that could be used in a transmedia narrative project. In addition, in-

sights from various disciplines or subject areas complement each other when applied across multiple media used in a transmedia narrative.

The convergence of information and media technologies is resulting in the gradual convergence of areas of study in the areas of information literacy and media literacy. While focused on multimedia, a comparison of the traditions in each area (See Table 1) (Livingstone, Couvering, & Thumim, 2008, p. 122) indicates potential applications of both traditions to the study of transmedia narratives.

The approach used for the research in this thesis is interdisciplinary rather than multidisciplinary. Multidisciplinary research has been described as research across the boundaries of separate disciplines – for example, religious studies, art history, and political science – but with the purpose of gaining knowledge that will be applied within the home discipline of the researcher (Nicolescu, 2002, p. 42). Interdisciplinary research, on the other hand, “concerns the transfer of methods from one discipline to another” (Nicolescu, 2002, p. 42). This thesis is interdisciplinary in that it looks at transmedia narratives from the perspective of multiple disciplines and seeks to apply the theories, methodologies, concepts, techniques, and tools of those disciplines to the design and development of transmedia narratives. Concepts drawn from the field of information design can be applied to the design, development, and implementation of effective transmedia narrative projects, helping overcome some of the challenges transmedia authors face, while concepts and techniques drawn from the creation of novels, films, and other forms of narrative can provide insights into the process of designing and developing effective transmedia stories.

Table 1. Comparison of information literacy & media literacy traditions

	Information Literacy Tradition	Media Literacy Tradition
Technology focus	<ul style="list-style-type: none"> • Telecommunications • Computing • Information Systems 	<ul style="list-style-type: none"> • Broadcasting • Audiovisual media • Print
Definition of literacy	<ul style="list-style-type: none"> • Knowledge of one's information concerns and needs, and the ability to identify, locate, evaluate, organize, and effectively create, use, and communicate information 	<ul style="list-style-type: none"> • The ability to access, analyze, evaluate, and communicate messages in a variety of forms.
Main research focus and gaps	<ul style="list-style-type: none"> • Barriers/enablers to access and use • Evaluation of skills and abilities 	<ul style="list-style-type: none"> • Understanding • Critical literacy • Creative/productive literacy
Disciplinary origins	<ul style="list-style-type: none"> • Engineering/computer science • Library science and education • Design, especially human/computer interaction 	<ul style="list-style-type: none"> • Arts and humanities, especially film studies and cultural studies • Social sciences, especially sociology and social psychology
Strengths	<ul style="list-style-type: none"> • Models of standards, levels, and progression • Separation of competence from performance • Complex analysis of access • Measures of the effectiveness of information literacy education • Accessibility guidelines 	<ul style="list-style-type: none"> • Models of content understanding, for example, encoding/decoding, uses and gratifications • Integrated analysis of production /text/audience • Analysis of literacy at meso- and macrolevels (not just as an individual attribute)
Preferred methods	<ul style="list-style-type: none"> • Quantitative orientation (surveys, experiments, measurement, evaluation) 	<ul style="list-style-type: none"> • Qualitative orientation (interviews, focus, groups, ethnographic observations)
Justification/purpose	<ul style="list-style-type: none"> • Employability and competitiveness in the labor market 	<ul style="list-style-type: none"> • Critical appreciation, cultural participation, and resistance to dominant media

Source: (Livingstone, Couvering, & Thumim, 2008)

Data in grounded theory studies can come from interviews, observations, and a wide variety of documentary materials (Merriam, 2009, p. 30). For this study, the first round of data was obtained through an extensive review of documentary materials and an exten-

sive literature review. As is typical with grounded theory studies, the data collection process was guided by the *theoretical sampling* approach in which data is collected, coded, and analyzed in an iterative process (Merriam, 2009, p. 30).

The results of the first round of analysis led to a second round of data collection involving the observation of a number of transmedia narratives. The selection of transmedia narratives for in-depth review was based primarily on the type of media used for the narratives, how recently the transmedia narratives were produced, and the type of narratives (intercompositional and intracompositional). A broad range of media were sought in the transmedia narratives to be observed in order to determine how various media were used in presenting transmedia stories. The transmedia narratives selected were all created between mid-2009 and mid-2011 so that more recent examples of the “state-of-the-art” were examined. A combination of intercompositional and intracompositional transmedia narratives were selected in order to determine if there were differences between the frameworks for these two different types of transmedia narratives.

The focus of these observations was to get an overall perspective of how each of the transmedia narratives was organized, how navigation worked, the kinds of stories being told, what type of media was used, the narrative structure, and so on. The transmedia narrative sites observed were:

- **Animism: The Gods’ Lake** (<http://animism.com/>), which integrates video clips, live events, augmented reality segments, clues hidden into text that appears on screen, and a number other forms of media.

- **Collapsus** (www.collapsus.com/), which combines documentary video clips, animation, and interactive fiction to portray a world in which an energy crisis is imminent.
- **Must Love Robots** (www.mustloverobots.com/), which uses blogs, YouTube, Twitter, Flickr, iTunes, e-mail, and telephone communications to tell the story of O11iver, a robot seeking love, from a variety of perspectives, including a friend who plays the role of matchmaker, O11iver's love interest, and a fundamentalist preacher who is "anti-robotsexual".
- **Conspiracy for Good** (www.conspiracyforgood.com/index.php), which integrates video clips, webisodes, online and mobile games, Twitter, and real-world activities. The purpose of this transmedia narrative was to use storytelling to "build a community that focuses on changing the world for the better, one person and one action at a time" (Kring, 2010).
- **Burn Notice** (www.usanetwork.com/series/burnnotice/index.html), which is a television series on the USA Network in which the main character is a spy who has been "burned" by his agency. While the television program is the primary narrative vehicle, a graphic online novel and a series of games were developed to encourage greater audience participation.
- **Covert Affairs** (www.usanetwork.com/series/covertaffairs/), which is another television series on the USA Network and also involves a main character who is a spy. The website features episodes from the television series, games, and interactive "missions" that incorporate video clips, tweets that provide clues to

the audience, and audience participation that influences the direction the on-line narrative takes.

The outcome of the first and second round of data collection was the development of a lengthy list of questions that identified key areas related to various aspects of transmedia narrative design. The *Animism: The Gods' Lake* and *Collapsus* transmedia narratives were revisited to help check the usefulness and applicability of the questions developed. Based on this review a number of the questions were revised, some dropped, and some added.

These questions provided the beginning of a framework for transmedia narrative design but the relationships between various elements were unclear. Concept mapping – a graphical tool used to organize and represent knowledge (Novak & Cañas, 2008) – was employed to identify the concepts embedded within the questions and the relationships between those concepts. Based on the concept map, a hierarchical structure of transmedia concepts and their associated properties was developed.

The hierarchical structure of concepts for transmedia narratives that emerged was consistent with the categories, properties, and hypotheses that are the product of grounded theory research. Merriam notes that building a substantive theory involves identification of a core category, which is “the main conceptual element through which all other categories and properties are connected” (Merriam, 2009, p. 31). The core category is like the hub of a wheel, from which all other categories and hypotheses are related or interconnected (Merriam, 2009, p. 200). The categories are the conceptual elements of the theory. Properties define or illustrate the categories. Hypotheses are relationships drawn between categories and properties. The hypotheses are tentative and are derived

from the study, rather than being set out at the beginning of the study to be tested (Merriam, 2009, p. 31). The generation of new categories that emerge from the study's data is an important part of the research process because it is these emergent categories that "usually prove to be the most relevant and the best fitted to the data" (Merriam, 2009, p. 185).

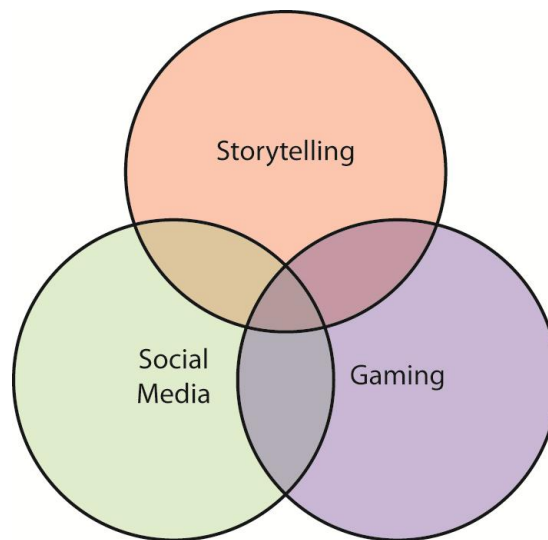
The final round of data consisted of a set of interviews with three professionals experienced in the creation of transmedia narratives. Each of these subjects was e-mailed a copy of the hierarchy of transmedia narratives, a concept map, and a set of design-related questions. They were asked to review these materials and participate in a *semi-structured interview*, which was conducted after they finished reviewing the materials. The focus of the interviews was to validate the set of concepts identified and determine if the design-related questions sufficient for creating a transmedia narrative design framework.

As the interviews were being conducted, an analysis of the data collected during the literature review and viewing of current transmedia narratives was used to develop a preliminary set of hypotheses about a design framework for transmedia narratives. As is typical with grounded theory studies, these hypotheses were tentative and derived from the study itself, rather than being set out at the beginning of the study and then tested as in quantitative research (Merriam, 2009, p. 31). These hypotheses were then presented to the interview subjects to determine how applicable they were to real-world application in the design and development of transmedia narratives and revisions were made based on the feedback received.

FINDINGS

The past few decades have seen significant changes in information technology. Bryan Alexander has identified three broad domains – storytelling, social media, and gaming – that have progressed in parallel since the introduction of microcomputer technology in the late 1970s (see Figure 19) (Alexander, 2011, p. 40). The three domains identified by Alexander are very similar to the three domains of the transmedia experience – story, participation, and gaming – identified by Robert Pratten (see Figure 20) (Pratten, *Getting Started with Transmedia Storytelling*, 2011, p. 7).

These domains are useful for narrowing the focus of research into what is a very broad field. This thesis focuses on the storytelling domain identified by Alexander and Pratten. While Alexander’s game and participation domains can provide users with significant transmedia experiences, they are beyond the scope of this thesis and will be addressed in a limited way only as they occur within the context of the story/storytelling domain.



Source: Bryan Alexander (Alexander, 2011, p. 40)

Figure 19: Several digital movements falling into three broad domains – storytelling, social media, and gaming – have progressed in parallel since the 1980s.



Source: Robert Pratten (Pratten, *Getting Started with Transmedia Storytelling*, 2011, p. 7)

Figure 20: The transmedia experience consists of three domains -- story, gaming, and participation.

Pratten identifies a number of areas that are associated with the development of transmedia entertainment, including platform selection, business models, financing, audience identification, story creation, and audience engagement (Pratten, *Getting Started with Transmedia Storytelling*, 2011).

Transmedia Narrative Design

This thesis takes a narrower, deeper perspective and focuses on those aspects of transmedia narrative design that are relevant to answering the fundamental research question of “How do you tell an effective story across multiple media?” One of the key tasks arising from the research question is the development of an ontology for transmedia narratives. An ontology is a description of objects, entities, and concepts and the relationships that exist between them in a particular domain of knowledge. (Gruber, 1993).

Concept maps are used to graphical represent concepts as nodes (points or vertices) and links (arcs or lines) that show the relationships between those concepts. Concept

mapping is a type of knowledge representation. Representing knowledge in the visual format of a concept map allows one to gain an overview of a domain of knowledge. Concept mapping can be used for several purposes (Plotnick, 2007):

- To generate ideas (brainstorming)
- To design complex structures (long texts, hypermedia, large web sites)
- To communicate complex ideas
- To aid learning by explicitly integrating new and old knowledge
- To assess understanding or diagnose misunderstanding.

The use of a visual representation of transmedia narrative concepts and their interrelationships has several advantages:

- Visual symbols are quickly and easily recognized
- Minimum use of text makes it easy to scan for a word, phrase, or the general idea
- Visual representation allows for development of a holistic understanding that words alone cannot convey.

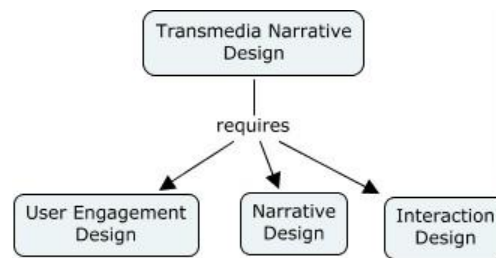
Ontology: Transmedia Narrative Design

This thesis develops an ontology for *transmedia narrative design*. Three key design phases (see Figure 21) have been identified as being critical to designing an effective story using a transmedia approach:

- *User Engagement Design*: The *user engagement design* phase focuses on designing aspects of the transmedia narrative that primarily involve users' engagement with and participation in the narrative.

- *Narrative Design*: The *narrative design* phase focuses on the design of the story elements of the transmedia narrative.
- *Interaction Design*: The *interaction design* phase focuses on how users physically interact with the interface and navigate through the transmedia narrative.

While these three areas involve separate sets of skills and may involve different members of a large production team, they need to be well integrated if the overall transmedia narrative design is to work effectively



Source: Peter von Stackelberg

Figure 21. Concept of transmedia narrative design and linked user engagement, narrative, and interaction design

Ontology: User Engagement

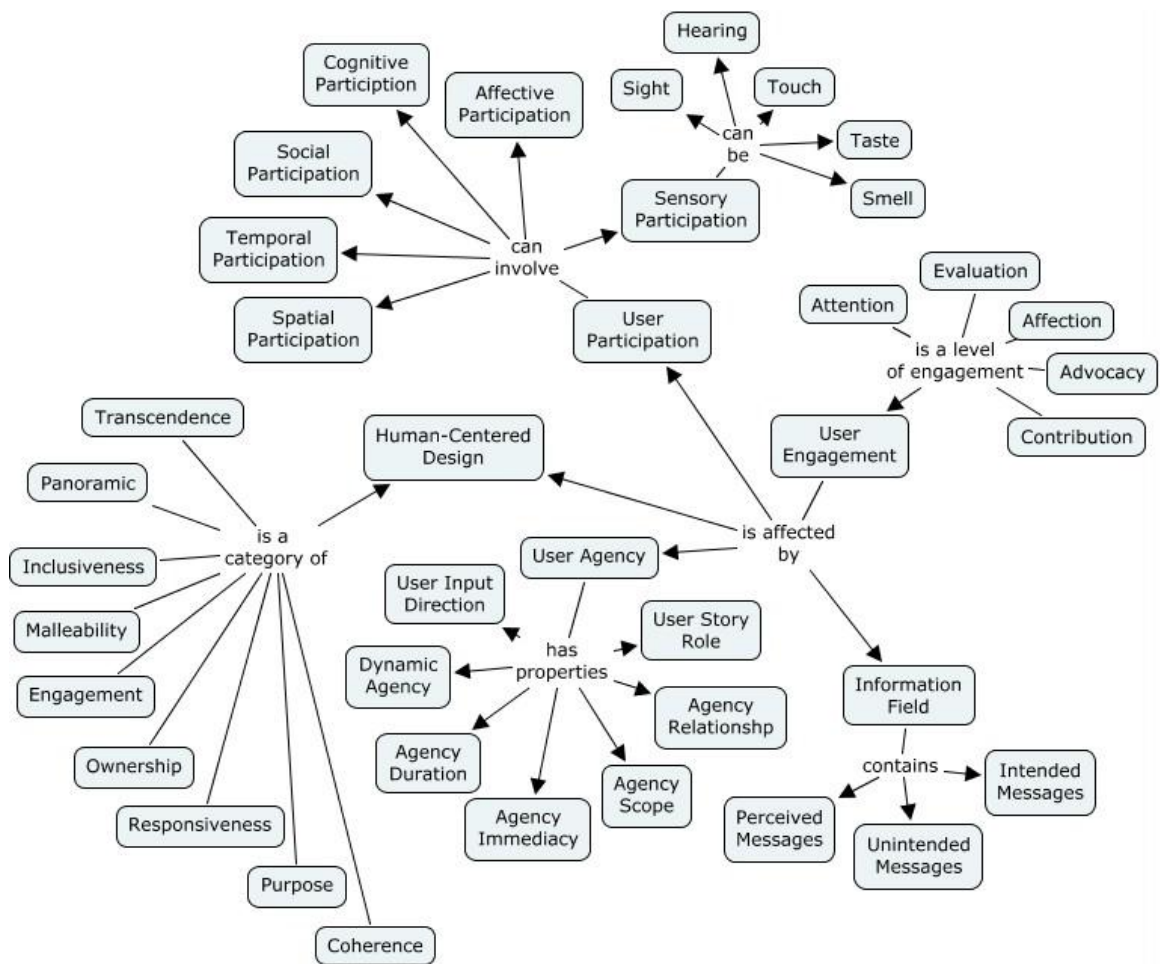
User engagement invites users to participate in the narrative and gains their interest and support. It consists of:

- *Level of User Engagement*: The degree of *user engagement* can span a spectrum from low to high engagement. One measure of user engagement is (Pratten, Audience Engagement & Content Strategy for Transmedia Storytellers, 2010):
 - *Attention*: At the *attention* level, the user reads or watches content from the transmedia narrative but takes no further action. This is the lowest

level of user engagement. At this point, the user is aware of the narrative but has not made a commitment to continued engagement with it.

- *Evaluation:* At the *evaluation* level the user's engagement has increased and there is a definite interest in the transmedia narrative. At this stage, the user is deciding whether to make a commitment to continue engaging with the transmedia narrative, including using resources (e.g. time, money, effort) to further that engagement.
- *Affection:* At the *affection* level the user has made a commitment to spend time, money, effort, and other resources to continue engaging with the transmedia narrative. Engagement includes commenting, writing reviews, joining a community (but maybe only lurking), and posting Facebook and other "likes".
- *Advocacy:* At the *advocacy* level the user's commitment to the transmedia narrative goes beyond individual participation, with the user encourages others to engage with the narrative through online forwards of information, embedding content, and in satisfaction polls and questionnaires.
- *Contribution:* At the *contribution* level the user's engagement includes making contributions to the narrative's fan forums, events, and other activities or adding to the narrative's storyworld through remixes, collaborations, or creation of entirely new stories. This is the highest level of engagement and involves a significant level of commitment by a user.

- *User Agency*: The amount of user control over the narrative is determined by the degree of *user agency*. The greater the ability of users to set goals, plan their attainment, and be rewarded with changes in the narrative environment, the greater the degree of user agency. *Agency relationship, agency scope, agency immediacy, agency duration, dynamic agency, and user input direction* are properties of user agency. User agency is also dependent on the *user story role*.



Source: Peter von Stackelberg

Figure 22. Concept map for user engagement

- *User Story Role*: In the internal mode, the user is projected into the story either through an avatar or in a first person perspective to play a role in the narrative. In external mode the user is situated outside the narrative (Ryan, 2001).
- *Agency Relationship*: The degree of agency relationship is determined by how tightly the user and narrative system actions are linked. This can range from no linkage to being tightly linked. If the agency relationship is low, an action by a user will not cause a response by the system, while a tightly linked agency relationship means that a user action will cause an appropriate and proportional response by the system (Harrell & Zhu, 2009).
- *Agency Scope*: The degree of *agency scope* is determined by the impact of a user action on the narrative world. The impact can range from local (i.e. navigating an avatar) to global (i.e. taking an action that determines the direction the narrative takes) (Harrell & Zhu, 2009).
- *Agency Immediacy*: The degree of *agency immediacy* is determined by how quickly a response to a user action occurs. This can range from an immediate response to a response that occurs after a considerable delay.
- *Agency Duration*: The degree of *agency duration* is determined by how long the impact of a user action lasts. This can range from short-term (e.g. killing a character that is regenerated a few seconds later) to permanent (e.g. permanently eliminating a key character) within the narrative or storyworld.

- *Dynamic Agency*: The degree of *dynamic agency* is determined by whether the *agency relationship*, *scope*, *immediacy*, or *duration* changes as the user progresses through the narrative.
- *User Input Direction*: The degree of *user input direction* is determined by how much control the user has over the narrative's *dynamic agency* (Harrell & Zhu, 2009).
- *User Participation*: A number of factors affect *user participation* in a transmedia narrative:
 - *Cognitive Participation*: The degree of cognitive participation (mental processing) falls on a spectrum from *passive participation* on the low end to *active participation* on the high end (Screven, 2000, pp. 166-167). This spectrum of participation is closely related to user attention, which can range from “mindless” (casual and unsystematic) to “mindful” (focused and active) (Screven, 2000, pp. 166-167).
 - *Affective Participation*: The emotional impact (*affective participation*) is one of the most important qualities of narratives. Transmedia narratives with high affective participation will have a high level of user engagement.
 - *Social Participation*: The level of *social participation* can range from individual to shared activities.
 - *Temporal Participation*: A narrative's *temporal participation* can range from time-agnostic (the user can participate at any time) to time-dependent (the user must participate at a specific time).

- *Spatial Participation*: A narrative's *spatial participation* can range from location-agnostic (it doesn't matter where the user is while participating) to location-dependent (a specific location is important to understanding the meaning of the narrative).
- *Sensory Participation*: A narrative's use of the five senses – sight, sound, touch, taste, and smell – is the basis of *sensory participation*.
- *Information Field*: The *information field* consists of all of the information within the user's immediate environment, not just the information the transmedia narrative itself presents. The information field can contain three types of messages:
 - *Intended Messages*: The *intended messages* are the knowledge, concepts, and feelings that the transmedia narrative designer intends to communicate to the user.
 - *Unintended Messages*: The *unintended messages* are caused by either irrelevant information (e.g. people, ambient sounds, visual distractions, etc.) or messages that come from the juxtaposition of pieces of information that create new and unintended messages.
 - *Perceived Messages*: The *perceived messages* are those that the user extracts from the transmedia narrative. Perceived messages may or may not be the same messages the designer of the transmedia narrative intended to communicate. The perceived messages could be the result of unintended messages overwhelming the intended messages or intended messages that are interpreted in a way the designer did not intend.

- *Human Centered Design*: Transmedia narrative systems created using a *human centered design* approach are characterized by (Cooley, 2000):
 - *Coherence*: A transmedia narrative that exhibits *coherence* ensures that the meaning of information embedded in it, even if it is not immediately evident, is not cloaked or obscured. Coherence includes the concept of *transparency*.
 - *Inclusiveness*: An *inclusive* system welcomes users in and makes them feel like they are a part of a community of familiar and friendly activities.
 - *Malleability*: A system with a high level of *malleability* can mold itself to suit the users, allowing them to modify the environment to suit their individual aesthetics, skills, and needs.
 - *Engagement*: A system creates a sense of *engagement* by inviting users to participate in the process and creating a feeling of empathy.
 - *Ownership*: A system can encourage the user's sense of *ownership* by creating in the users a sense of belonging and enabling users to create something themselves with the storyworld of the narrative.
 - *Responsiveness*: The *responsiveness* of a system – how it responds to the user's individual needs, wants, and ways of doing things – can be enhanced by making the system's own rules visible and then encouraging users to learn and change them.
 - *Purpose*: The system should be able to respond to the *purpose* users have in mind and encourage them to go beyond it.

- *Panoramic*: A *panoramic* system provides “windows” or “apertures” through which a user can take a wider or more panoramic view of what is happening both inside and outside of the narrative. This panoramic perspective encourages the acquisition of “boundary knowledge” and allows users to act more effectively and competently by providing them with an understanding of the wider context of the narrative.
- *Transcendent*: A system that is *transcendent* encourages, entices, or provokes users to transcend the immediate requirements of the narrative and gain a broader understanding of the narrative’s meaning.

Ontology: Storyworld

Ryan’s description of the contents of storyworlds (Ryan, 2011) provides a starting point for the development of a systematic structure for the narrative elements of transmedia narratives. Ryan identified the content of storyworlds as existents, settings, events, mental events, physical laws, and social laws (Ryan, 2011).

Chatman proposed a story structure that also contains events and existents (Chatman, 1978, p. 19), but their interrelationships differ from Ryan’s. In Chatman’s model, characters and setting are contained within the existents, while events are divided into kernels and satellites (Chatman, 1978, p. 19).

The development of a comprehensive and consistent structure for storyworlds is important for the future development of transmedia narratives. Ryan stated that ensuring stories involve the same existents, settings, and other characteristics of the storyworld and that the stories are mutually compatible will allow the development of multiple stories within the same storyworld (Ryan, 2011).

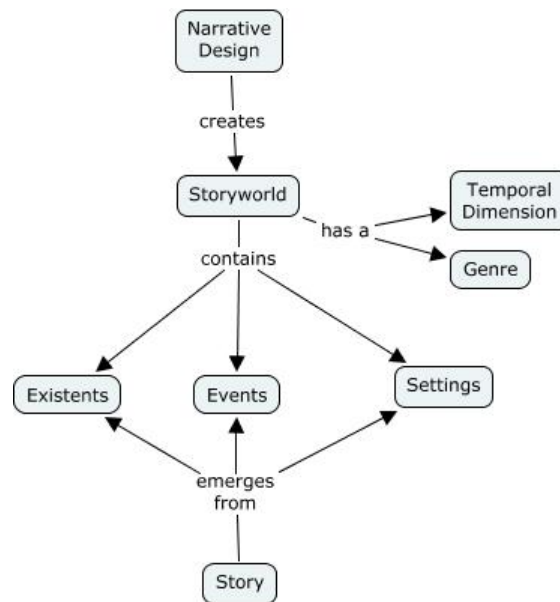
Using the same set of concepts identified by Ryan and Chapman – storyworlds, existents, events, settings, and stories – but reconfiguring the relationships between them slightly makes it possible to create a high level framework that easily accommodates the creation of multiple stories from within the same storyworld.

A few of the concepts offered by Ryan fall into categories lower down on the storyworld hierarchy, while *mental events* is a type of event. Physical and social laws fall within the concepts of mythos, topos, and ethos developed by Klastrup and Tosca. Klastrup and Tosca note that they specifically exclude events from the mythos of a storyworld (Klastrup & Tosca, 2011). This makes it logical to include events immediately below the storyworld in the hierarchy of elements, as Ryan has done.

Establishing the *storyworld* as the highest order category within the narrative design domain (see Figure 23) provides the foundation for a coherent structure with ample opportunity for expansion across the lower level concepts.

- *Storyworld*: A *storyworld* is the structure within which all of the concepts, objects, entities, and relationships needed to construct a narrative exist. Properties of or elements contained within the storyworld are:
 - *Temporal Dimension*: A *temporal dimension* is an inherent property of a storyworld and by extension is part of the existents, events, settings, and stories that are contained within that storyworld. This temporal dimension is called “storyworld time”.
 - *Genre*: The *genre* for a storyworld defines the stylistic conventions for characters, roles, settings, events, and values that are used in the storyworld.

- *Existents*: The *existents* are either significant objects or characters. (Ryan, *Storyworlds Across Media*, 2011) Further details on these two concepts are developed in the section on the ontology of existents.
- *Events*: The *events* in a storyworld are the result of changes in the *state* of elements within the storyworld. Further details on events are developed in the section on the ontology of events.
- *Settings*: A storyworld's *settings* serve as the backdrop against which a narrative occurs. Further details on settings are developed in the section on the ontology of settings.
- *Story*: A *story* emerges from the interrelationship of a storyworld's existents, events, and settings.



Source: Peter von Stackelberg

Figure 23: Concept map of the top levels of the storyworld hierarchy

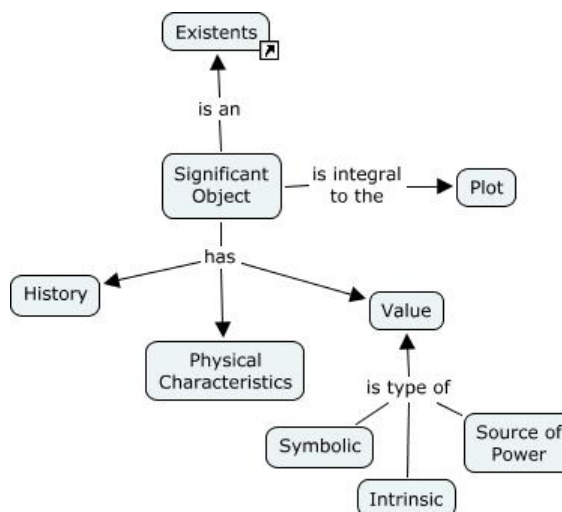
Ontology: Significant Objects

Significant objects are one type of *existent*. There are two types of significant objects:

- *Plot-Significant*: A *plot-significant* object has a substantial impact on the story's plot.
- *Character-Significant*: A *character-significant* object has some sort of significance to a particular character but does not have a significant impact on the story's plot.

The properties of a significant object are (see Figure 24):

- *Physical Characteristics*: The *physical characteristics* of the significant object describe its size, weight, appearance, and other physical aspects.



Source: Peter von Stackelberg

Figure 24. Concept map of the elements and properties of significant objects

- *Value*: The significant object has *value* to the characters in the story. This value may be:
 - *Intrinsic* – it is worth money (e.g. a treasure, money, etc.)

- *Source of power* – it gives the person who possesses it magical, political, or some other form of power
- *Symbolic* – it has spiritual, emotional, sentimental, or similar symbolic value
- *Integral to the Plot*: The significant object is *integral to the plot*; without it the story would change significantly.

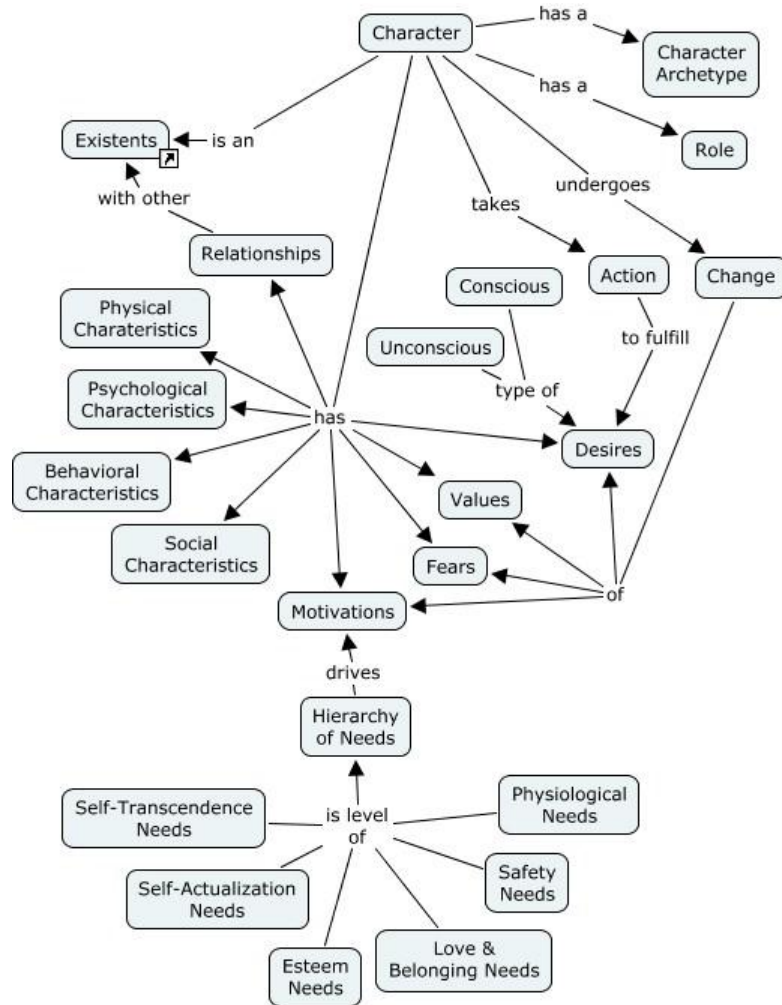
Ontology: Characters

The second category of existent is the characters (human or otherwise), which are sentient beings with the ability to feel, perceive, or to have subjective experiences. Characters have a number of properties that help define them (see Figure 25). These include:

- *Physical characteristics*: The *physical characteristics* are what the character looks like. The physical characteristics are a starting point for developing characters, but don't fully describe a character.
- *Psychological characteristics*: The character's feelings, beliefs, self-image, self-doubts, hunches, intuitions, and "millions of other mysterious and often ill-defined and contradictory forces that work within him" compose the *psychological characteristics* of the character. They make up the internal life that the character leads (Glassner, 2004).
- *Behavioral characteristics*: The character's *behavioral characteristics* are the visible behavior. When contrasted with the character's psychological characteristics, they can tell a lot about that character and make the story much richer.

- *Social characteristics*: The character's *social characteristics* determine the interpersonal and social interactions (e.g. how he/she relates to other characters individually and in general).
- *Motivations*: The character's *motivations* are driven by the needs identified in Maslow's Hierarchy (Maslow, Frager, & Fadiman, 1987):
 - *Physiological needs* – the most basic needs for human survival, without which the human body cannot function (e.g. air, water, food, sleep, sex, etc.).
 - *Safety needs* – include personal security from physical threats, health and well-being, and financial security (e.g. security of body, employment, family, property, resources, etc.).
 - *Love and belonging needs* – love, acceptance, and belonging with family, intimate partners, friends, and larger social groups (e.g. family, sexual and non-sexual intimacy, friends, etc.)
 - *Esteem needs* – lower level esteem needs are met by having the respect of others, status, recognition, fame, prestige, and attention. The higher level esteem needs are the need for self-respect, strength, competence, mastery, self-confidence, independence and freedom.
 - *Self-actualization needs* – pertain to achieving one's full potential and the desire to become everything that one is capable of becoming (e.g. morality, creativity, spontaneity, acceptance of facts, lack of prejudice, etc.)

- *Self-transcendence* – going beyond a prior form or state of oneself (e.g. making spiritual connections) (Frankl, 2006, p. 111)



Source: Peter von Stackelberg

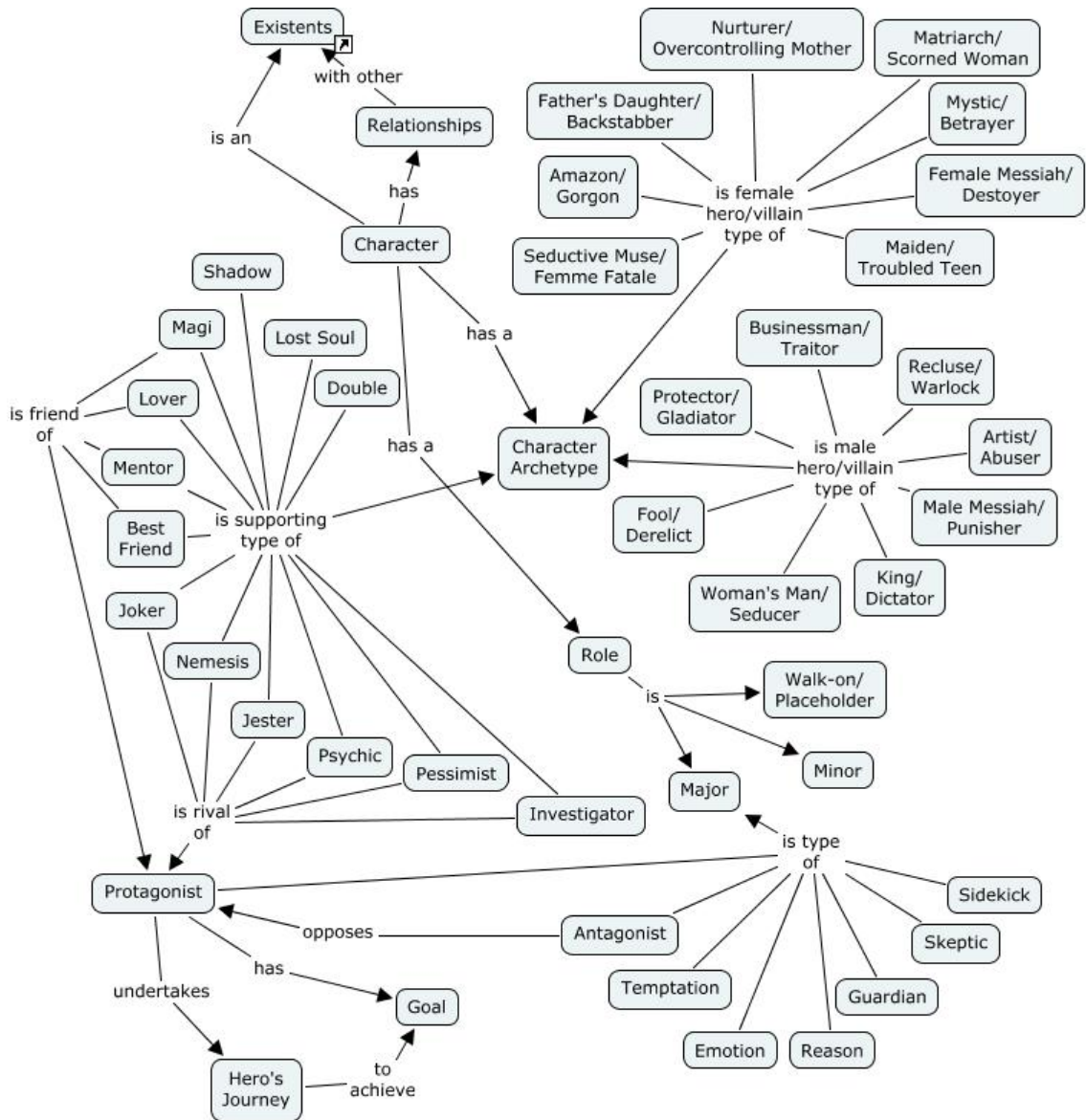
Figure 25. Concept map of character properties

- *Values*: A character's *values* are the important ideas, beliefs or understandings that character holds and uses as a guide for his or her behavior (Scerenko, 1997). These values may change as the character progresses through the story. (See Appendix G for a list of values that can be applied to characters.)

- *Desires:* The character's *desires* are what the character cares about or wants. These desires can drive the character to certain actions, including abandoning the character's own values. Desires may be conscious or unconscious and could conflict, resulting in a more complex character. Throughout the course of the story the character will take action to fulfill those desires.
- *Fears:* The character's *fears* are those things he or she is most afraid of. How the character deals with those fears can impact specific plot points by putting in doubt the character's response to specific situations. Fears can be linked to Maslow's hierarchy of needs.

Different characters play different roles in a story. These roles fall into three categories (Card, 1988, p. 59), with the major characters identified in more specific roles (see Figure 26):

- *Major characters:* The *major characters* drive the plot through its twists and turns and move the story forward. The major characters fill a variety roles (Phillips & Huntley, 1996, pp. 36-38):
 - *Protagonist:* The *protagonist* is the main character role in a story and drives the action. The protagonist will have a goal and undergoes a change – the “hero's journey” – in the process of seeking to achieve that goal.
 - *Antagonist:* The character in the role of *antagonist* is in direct opposition to the protagonist. The antagonist may seek the same goal (e.g. find the significant object of the story) as the protagonist or may simply want to prevent the protagonist from achieving that goal.



Source: Peter von Stackelberg

Figure 26. Concept map of archetypal character types and roles

- *Sidekick*: The *sidekick* character role may be linked to the protagonist or antagonist. Each of those character roles may have its own sidekick. The sidekick character provides loyalty and support throughout the story and has unflinching faith in the rightness of the goals and actions of the protagonist or antagonist to which he/she is linked.

- *Guardian*: The *guardian* character role is that of mentor or teacher to the protagonist. The guardian provides knowledge, guidance, support, and protection but also drives the protagonist towards achieving the protagonist's goal.
- *Skeptic*: The *skeptic* character role is linked to the protagonist, but this character's role is to question and doubt everything – the protagonist's thoughts, emotions and actions, the trustworthiness of other characters, anything and everything.
- *Emotion*: The *emotion* character role is linked to the protagonist and responds to story events emotionally without thinking and without concern for the practical implications of a response.
- *Reason*: The *reason* character role is linked to the protagonist and responds to events in the narrative logically, while not letting emotion interfere with the rational.
- *Temptation*: The *temptation* character role is not necessarily directly opposed to the protagonist, but rather tries to hinder, divert, and delude the protagonist from achieving his/her goal, often by tempting and playing on the weaknesses of the protagonist.
- *Minor characters*: The *minor characters* have a limited impact on the story, with their desires and actions causing plot twists but not substantially shaping the overall flow of the story. Typically, minor characters do one or two things before disappearing from the story.

- *Walk-on and placeholder characters:* The *walk-on* and *placeholder characters* exist in the background to add realism or, if they appear in the foreground, it is to serve a simple function and then disappear.

A number of lists of archetypal character have been compiled. Schmidt's list of 45 archetypal characters is one such list (Schmidt, 2001):

- *Male Hero/Villain Types*
 - *Businessman/Traitor*
 - *Protector/Gladiator*
 - *Recluse/Warlock*
 - *Fool/Derelict*
 - *Woman's Man/Seducer*
 - *Male Messiah/Punisher*
 - *Artist/Abuser*
 - *King/Dictator*
- *Female Hero/Villain Types*
 - *Seductive Muse/Femme Fatale*
 - *Amazon/Gorgon*
 - *Father's Daughter/Backstabber*
 - *Nurturer/Over Controlling Mother*
 - *Matriarch/Scorned Woman*
 - *Female Messiah/Destroyer*
 - *Maiden/Troubled Teen*
- *Supporting Types*

- *Friends of Protagonist*
 - *Magi*
 - *Mentor*
 - *Best Friend*
 - *Lover*
- *Rivals of Protagonist*
 - *Joker*
 - *Jester*
 - *Nemesis*
 - *Investigator*
 - *Pessimist*
 - *Psychic*
- *Symbols*
 - *Shadow*
 - *Lost Soul*
 - *Double*

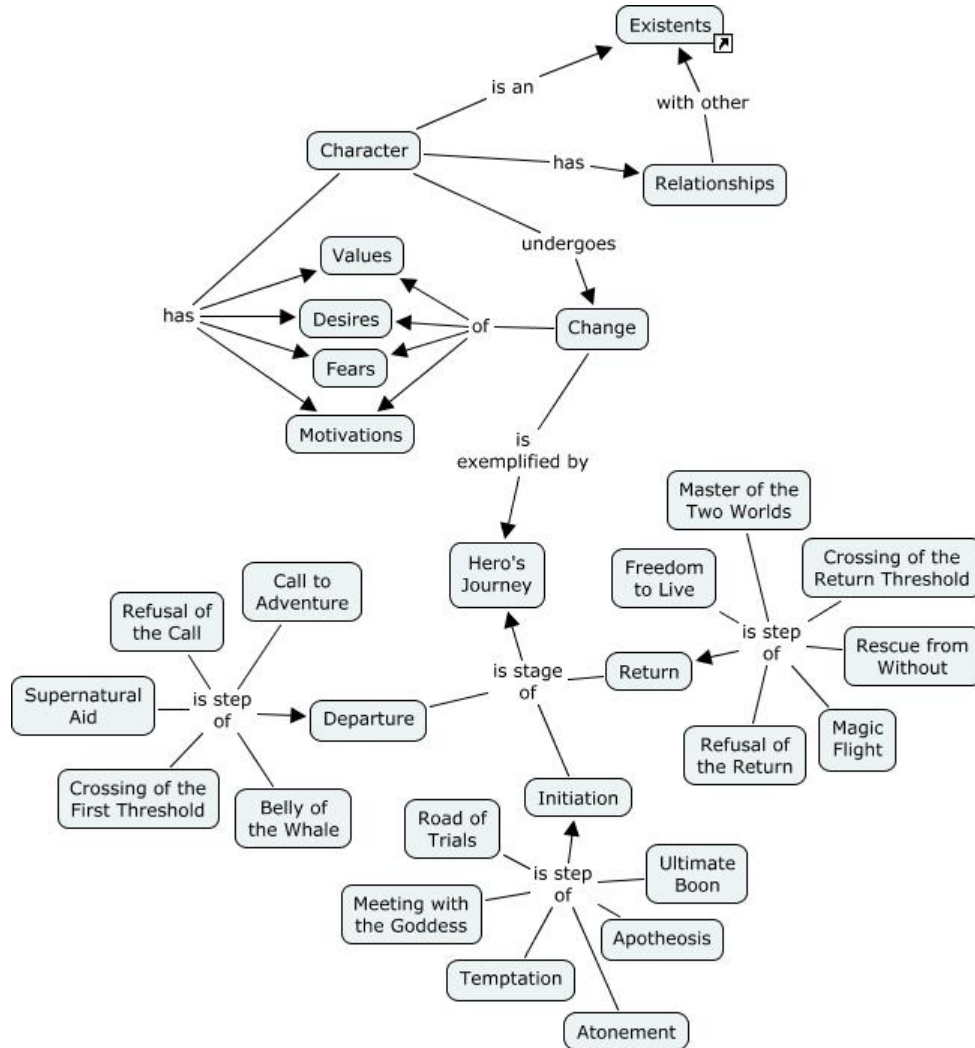
Campbell identified the three stages of the journey as *departure*, *initiation*, and *return* (see Figure 27). Within those three stages, Campbell identified a series of steps (Campbell, 1949, pp. ix-x):

- *Departure*: The *departure* is the first of the three stages of the hero's journey and consists of five steps:

- *Call to Adventure:* The *call to adventure* occurs at the point in a person's life when something important happens, sending the person in a new direction.
- *Refusal of the Call:* Sometimes when a person receives a call to adventure, a *refusal of the call* occurs because of fear, a feeling that he/she can't leave certain responsibilities, or concerns about not being strong enough or smart enough to start an adventure.
- *Supernatural Aid:* Once the hero has started the adventure, *supernatural aid* in the form of a guardian, guide or mystical/magical helper appears to provide help. This character may or may not be human.
- *Crossing of the First Threshold:* When the hero leaves familiar surroundings and normal life behind, this is the *crossing of the first threshold*. It marks the point at which the hero enters into the unknown to truly begin the adventure in dangerous places where the rules are no longer known.
- *Belly of the Whale:* The hero is truly between worlds upon entering the *belly of the whale*. At this point in the adventure, the familiar world has been left behind and the world ahead is unknown, often leaving the hero frightened, feeling alone, and beginning to recognize the magnitude of the task that he/she has undertaken and the challenges that are to come.
- *Initiation:* The *initiation* is the second stage of the hero's journey and consists of six steps:

- *Road of Trials*: The *road of trials* is a series of tests, tasks, or ordeals that a person must undergo as part of becoming a hero.
- *Meeting with the Goddess*: After surviving the road of trials, the hero experiences a *meeting with the goddess*, which takes the form of experiencing a great love – perhaps romantic love, or a love for friends and family, or the experience of a divine love – from which the hero gains strength and a sense of well being.
- *Temptation*: At some point in the adventure, the hero experiences the *temptation* to quit the journey and go home.
- *Atonement*: The *atonement* is the center point of the journey. All the previous steps have been moving in to this place, all that follow will move out from it. At this point in the journey, the hero must face whatever holds the ultimate power in his or her life.
- *Apotheosis*: After facing and surviving the great power in his/her life, the hero may experience the oneness and beauty of the universe. The *apotheosis* is a period of rest and reflection before the return journey is made.
- *Ultimate Boon*: The *ultimate boon* occurs when the hero has achieved the primary goal of the journey.
- *Return*: The *return* is the third and final stage of the hero's journey and consists of six steps.
 - *Refusal of the Return*: The *refusal of the return* occurs if the hero refuses to go back to a normal life. This can occur if the adventure has been a

glorious one or if the hero is concerned that his/her message will not be heard.



Source: Peter von Stackelberg

Figure 27. Concept map of the hero's journey

- *Magic Flight*: The *magic flight* occurs if the hero must steal the boon and make a daring escape that is as adventurous and dangerous as the first part of the journey was.

- *Rescue from Without:* The *rescue from without* occurs when the hero needs the help of a guardian or guide to return to a normal life.
- *Crossing of the Return Threshold:* At the *crossing of the return threshold* the hero returns to the normal and familiar, and the challenge is now to remember what was learned on the journey and use it to improve his/her life and the lives of others in the normal world.
- *Master of the Two Worlds:* The hero has learned to be comfortable in both the everyday world and the world of adventure, including being comfortable with who he/she is and with others. The hero may also be ready to take on the role of guardian or guide for someone else. This makes him or her *master of the two worlds*.
- *Freedom to Live:* In the last step of the journey, the hero has mastered the fears of life and has achieved the *freedom to live* without those fears.

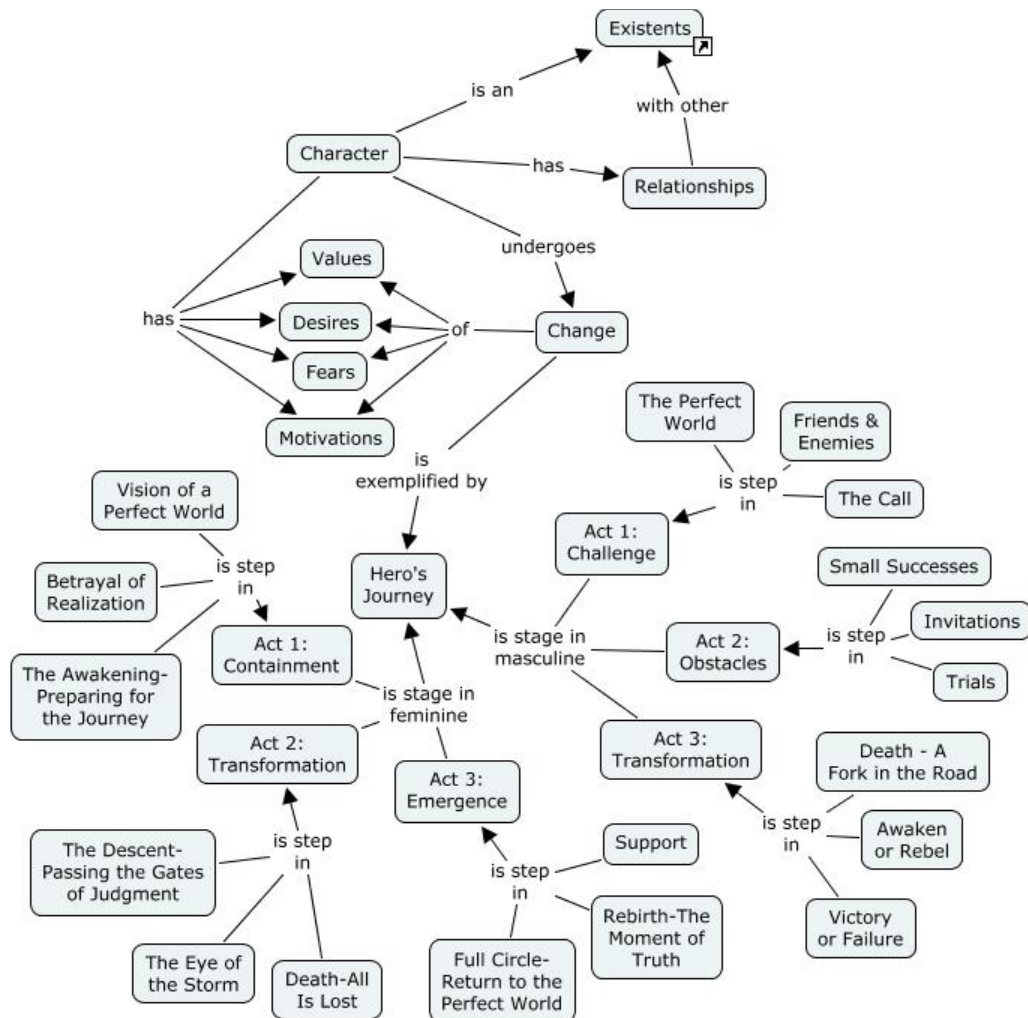
Campbell's structure of the hero's journey has been adapted and used by many writers. Numerous examples of modified versions of the hero's journey exist, but most retain the essential steps identified by Campbell. One such modified version is included in *45 Master Characters: Mythic Models for Creating Original Characters*, which includes a feminine version (Schmidt, 2001, pp. 199-242) and a masculine version (Schmidt, 2001, pp. 243-277) of the journey (see Figure 28). When linked to the three acts in a traditionally structured play or screenplay, the feminine journey is (Schmidt, 2001, pp. 199-242):

- *Act 1: Containment*
 - *The Illusion of a Perfect World*
 - *The Betrayal or Realization*

- *The Awakening – Preparing for the Journey*
- *Act 2: Transformation*
 - *The Descent – Passing the Gates of Judgment*
 - *The Eye of the Storm*
 - *Death – All is Lost*
- *Act 3: Emergence*
 - *Support*
 - *Rebirth – The Moment of Truth*
 - *Full Circle – Return to the Perfect World*

When linked to the three acts in a traditionally structured play or screenplay, the masculine version of the hero's journey is (Schmidt, 2001, pp. 243-277):

- *Act 1: Challenge*
 - *The Perfect World*
 - *Friends and Enemies*
 - *The Call*
- *Act 2: Obstacles*
 - *Small Successes*
 - *Invitations*
 - *Trials*
- *Act 3: Transformation*
 - *Death – A Fork in the Road*
 - *Awaken or Rebel*
 - *Victory or Failure*



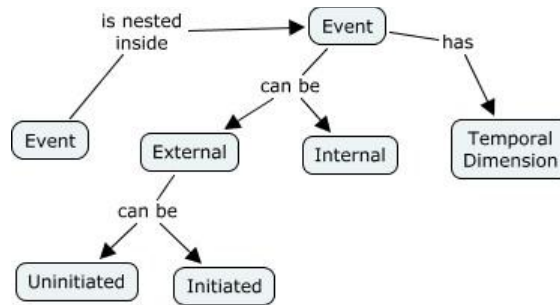
Source: Peter von Stackelberg

Figure 28. Concept map of one variation of the "hero's journey"

Ontology: Events

Events are a change in the state of an entity such as a setting, character, or an element of the larger storyworld. The elements and properties of events are:

- *Internal:* An *internal* event is a psychological change that occurs in a character, typically as a result of an interaction with another character or because of an external event.
- *External:* An *external* event is a change that happens outside of a character in the story. External events can be:



Source: Peter von Stackelberg

Figure 29. Concept map of events and associated properties

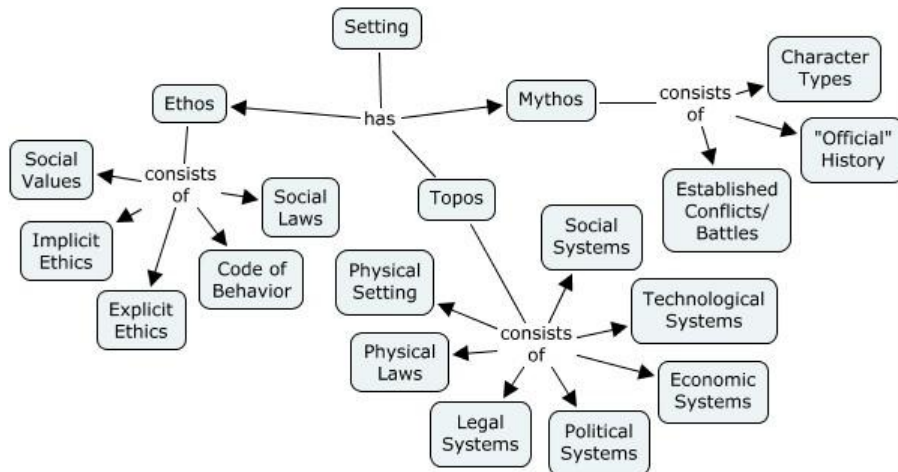
- *Initiated* – the result of the actions of a character in the story
- *Uninitiated* – a change that is outside the control of characters in the story (e.g. a natural disaster or a man-made disaster caused by someone outside the scope of the story)
- *Temporal Dimension*: Events have a *temporal dimension*; they have a start and end point and span a period of storyworld time.
- *Nested Events*: Events can have *nested events* within them. For example, a specific battle would be an event nested within a war, which is a larger event.

Ontology: Setting

A setting is the backdrop within which a narrative occurs, but it goes far beyond the physical characteristics of a place in which events happen. Settings occur on both the storyworld and individual story levels. Settings at both levels are similar, but are differentiated by scope and the level of detail. *Setting* consists of:

- *Mythos*: The *mythos* is the established conflicts and battles of the world, the characters of that world, its stories and rumors, and its creatures (Klastrup & Tosca, 2004). The *mythos* should also include the “official” history of the happenings within the storyworld.

- *Topos*: The *topos* is the setting of the storyworld or world in a specific period and geography. In addition to the physical setting, the *topos* deals with the physical laws that exist in the storyworld (e.g. laws that govern whether faster-than-light travel is possible or whether magic exists).
- *Ethos*: The *ethos* consists of the social values and laws, implicit and explicit ethics, and codes of behavior within the storyworld. The *ethos* provides the knowledge needed to “know *how to behave* in the world” and defines what is acceptable or inappropriate behavior in that world (Klastrup & Tosca, 2004).



Source: Peter von Stackelberg

Figure 30. Concept map of a setting's structure

Ontology: Story

Story emerges from the interrelationships of *existents*, *events*, and *settings*. A *trans-media narrative* is a type of story. A *story* is a series of acts that build to a last act climax or story climax that brings about an absolute and irreversible change in the protagonist (McKee, 1997, p. 42). A story has a number of elements and properties (see Figure 31):

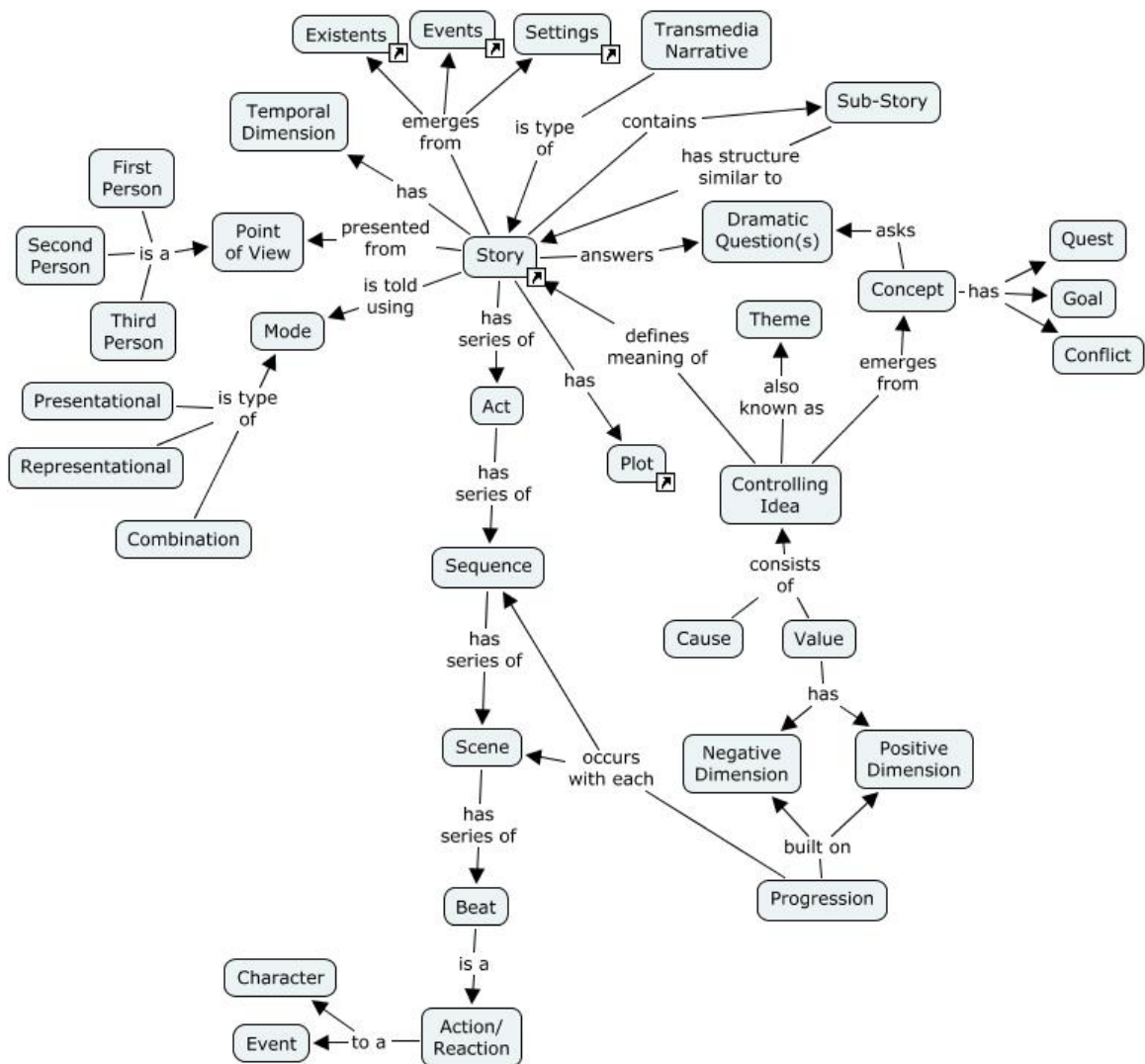
- *Concept*: The story's *concept* asks one or more compelling "what if" *dramatic questions* that the author seeks to answer through the story. The story's concept contains within it a very brief description of a *quest, goal, and conflict* (Brooks, 2011, pp. 36-43).
- *Dramatic Question*: The *dramatic question* is a compelling "what if" question that raises the basic question the story will answer and is directly related to the conflict of the story (Porter, Larson, Harthcock, & Nellis, 2002).
- *Controlling Idea*: A story's *controlling idea* is expressed in a single sentence that describes that describes how and why a character's life undergoes a change in state over the course of the story (McKee, 1997, p. 115). The story's *controlling idea* emerges from the story's concept (Brooks, 2011, pp. 117-120). The term "*theme*" may be used in place of "*controlling idea*". The controlling idea has two components:
 - *Value*: The *value* is the primary value that occurs in the character's life by the end of the story. The value has both a *positive dimension* (e.g. justice, freedom, etc.) and *negative dimension* (e.g. injustice, tyranny, etc.) (McKee, 1997, pp. 115-116).
 - *Cause*: The *cause* is the primary reason the value in the character's life ends up as it does at the conclusion of the story (e.g. justice triumphs because the protagonist is smarter than the villains) (McKee, 1997, pp. 115-116).
- *Progression*: A *progression* is built by moving between the positive and negative charges of the values that are at stake in the story (McKee, 1997, p. 119).

A progression is built on two components the positive and negative dimensions of the values related to the controlling idea. A progression occurs from scene to scene and sequence to sequence as the values at stake in the story shift from positive to negative and back again, building tension as the story progresses. An example is a crime story in which the opening scene or sequence expresses the negative value as the criminals get away with the loot from a robbery (e.g. “Crime pays”), followed by the next scene/sequence which expresses the positive value when the detective discovers a clue to the criminals’ identity (e.g. “Crime doesn’t pay”), which is then followed by another scene/sequence which expresses the negative value when the criminals discover the detective is on to them and take counter-measures (e.g. “Crime pays”), and so on until the end of the story.

- *Temporal Dimension*: A story has a *temporal dimension* that is created by changes that put the story into the “flux of history” (Ryan, *Storyworlds Across Media*, 2011). A story’s temporal dimension (story time) exists within story-world time.
- *Point of View*: The *point of view* of a story determines whose perspective is used to tell the story. The point of view can be:
 - *First-person*: With the *first-person* point-of-view the narrator is a participant in the story.
 - *Second-person*: With the *second-person* point-of-view the narrator refers to the protagonist or another main character using the word “you”.

- *Third-person*: The narrator in the *third-person* point-of-view refers to all of the characters in the story with terms like “he”, “she”, “it”, and “they”. The narrator is outside of the story.
- *Story Mode*: The *story mode* is how the story relates to the audience while being presented. The story mode can be:
 - *Representational* – everything is expressed from the point of view of a character in the story and the author never addresses the audience. The story is presented as if a boundary is present that maintains the separation between the audience and the story.
 - *Presentational* – there is no boundary between the audience and the story. The author acknowledges the audience, either directly by addressing them or indirectly through a general attitude or specific use of language, looks, gestures or other signs that indicate the character aware of the audience's presence.
 - *Combination* – both representational and presentational modes are used within the story.
- *Act*: An *act* is a series of sequences that peak in a climactic scene which causes a major reversal of values, more powerful in its impact than any previous sequence or scene (McKee, 1997, p. 38).
- *Sequence*: A *sequence* is a series of scenes – typically two to five – that culminate with scene that has a greater impact than any previous scene (McKee, 1997, p. 38). The scenes within the sequence are usually connected by either unity of location or unity of time.

- *Scene*: A scene involves conflict that occurs in (more or less) continuous time and space and turns the condition of a character's life in a perceptible way (McKee, 1997, p. 35). Scenes can function as either:
 - *Kernels* based on one of the following types – disturbance, obstacle, complication, confrontation, crisis, or resolution (Porter, Larson, Harthcock, & Nellis, 2002)



Source: Peter von Stackelberg

Figure 31. Concept map of a story's structure

- *Satellites* based on one of these types – exposition, dramatic question, character introduction, action, plan revelation, relationship affirmation, clarification, conflict continuity, relief, theme reinforcement, foreshadowing, or ambiance (Porter, Larson, Harthcock, & Nellis, 2002).
- *Beats*: A *beat* is the smallest element of the story structure and consists of an exchange of behavior between characters that are paired in an action/reaction mode (McKee, 1997, p. 37).
- *Sub-Story*: A story can contain one or more *sub-stories*. The sub-story has a structure similar to the story's structure.

Ontology: Plot

A *plot* is a cause-and-effect chain of relationships that unify the actions, behaviors, and events in a story. The generic plot consists of (Field, 2005, pp. 142-159):

- *Act 1 (Part 1)*: Typically *Act 1* comprises the first 20 to 25 percent of the story (Brooks, 2011, p. 146) and introduces the story's setting and protagonist. Contained within Act 1 are the following plot points:
 - *Setup*: The *setup* opens the story, sets the “hook” for the audience, establishes the story's setting and protagonist, identifies what is at stake, and foreshadows (but does not introduce) the antagonistic forces.
 - *Inciting Incident*: The *inciting incident* is an event that radically upsets the balance of forces in the protagonist's life, arousing his/her conscious and unconscious desires and fears.

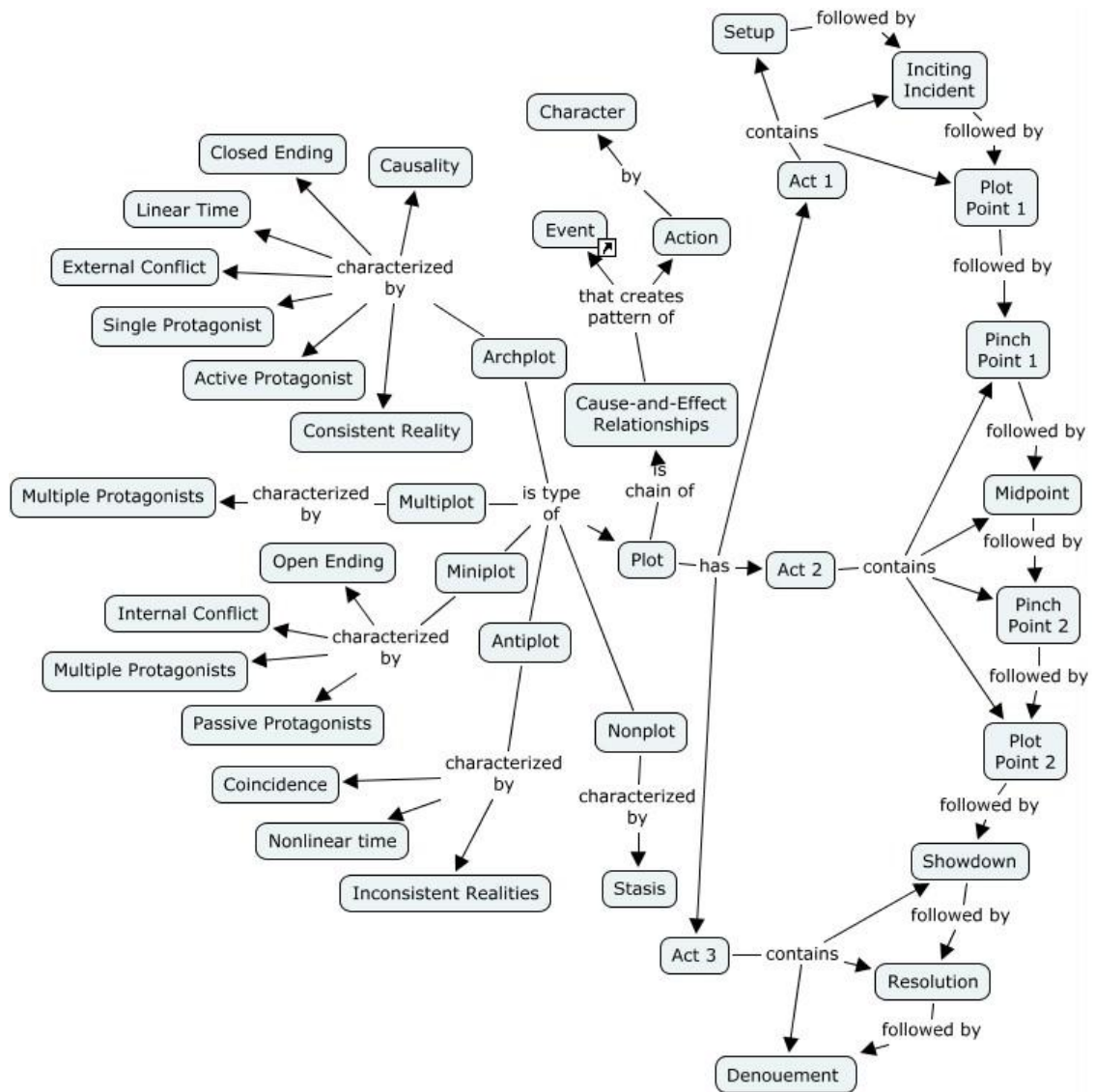
- *Plot Point 1*: At *plot point 1* the protagonist makes a decision in order to restore life's balance. This decision launches him/her on a path that will define the protagonist's journey and the challenges that lay ahead.
- *Act 2 (Parts 2 & 3)*: Together *Parts 2 and 3* typically form *Act 2*, which comprises about 60 percent of the story. Act 2 involves the complicating and antagonistic factors affecting the protagonist. Plot points in Act 2 are:
 - *Pinch Point 1*: The first full appearance of the story's antagonist occurs at *pinch point 1*, providing the audience a view of the antagonist in its purest, most dangerous, and most intimidating form.
 - *Midpoint*: At the *midpoint* a reversal of fortune or major revelation changes the direction of the story arc.
 - *Pinch Point 2* – The audience is reminded of the story's central conflict at *pinch point 2*. This pinch point is often linked to pinch point 1.
 - *Plot Point 2*: At *plot point 2* the protagonist experiences a dramatic reversal, decides enough is enough, and finally resolves to face the antagonist. This may also be a low point for the protagonist from which he/she must bounce back from in order to overcome the obstacles that remain.
- *Act 3 (Part 4)*: The final confrontation between protagonist and antagonist occurs in Act 3 (Part 4). This act is also where the story's issues are resolved and loose ends tied up.
 - *Showdown*: In the *showdown* the Protagonist confronts the Main Problem of the story and either overcomes it or comes to a tragic end.

- *Resolution*: The *resolution* resolves any remaining issues in the story.
- *Denouement*: The *denouement* is the story's epilogue and ties up the loose ends, giving the audience closure.

The generic plot structure fits well with the traditional narrative design, but may not accommodate other narrative designs as easily. McKee identifies five categories of plots (McKee, 1997, pp. 43-58):

- *Archplot*: The *archplot* is the classical narrative design built around a protagonist who struggles against forces of antagonism in pursuit of a goal. The archplot narrative design is characterized by:
 - *Causality* – consists of a series of cause-and-effect relationships that express the interconnectedness of events
 - *Closed ending* – all questions raised are answered and all emotions evoked are satisfied by the end of the story
 - *Linear Time* – the story moves through continuous time and ends a point in story that is after its beginning. It may contain flashbacks but the audience is able to follow events in a sequential order.
 - *External conflict* – the protagonist may have inner conflicts, but the primary struggle is with external forces such as personal relationships, with social institutions, or the forces of the physical world
 - *Single protagonist* – one major story dominates and a single protagonist is at the heart of that story

- *Consistent reality* – the settings, events, interactions, and other aspects of the storyworld remain consistent throughout the story, helping create meaning
- *Active protagonist* – the protagonist is actively involved in the pursuit of a goal and takes action that directly conflicts with the people and world around him/her
- *Miniplot*: The *miniplot* is a narrative design that begins with the traditional elements of the classical narrative but reduces the most prominent features of the archplot. The miniplot narrative design is characterized by:
 - *Open ending* – some of the questions raised are left unanswered and emotions evoked are left unsatisfied by the end of the story
 - *Internal conflict* – the protagonist may have external conflicts, but the primary struggle is with his or her own conscious or unconscious thoughts, feelings, and beliefs
 - *Multiple protagonists* – a single story dominate but several protagonists are at the heart of that story
 - *Passive protagonist(s)* – the protagonist is outwardly inactive but pursues a desire internally, resulting in a conflict with his or her own nature
- *Antiplot*: An *antiplot* is a narrative design that reverses or contradicts the design elements of the classic narrative. The antiplot narrative design is characterized by:



Source: Peter von Stackelberg

Figure 32. Concept map of plot types and structure

- *Coincidence* – consists of random events that break apart the interlinked cause-and-effect relationships and lead to a sense that reality is fragmented, meaningless, and absurd
- *Nonlinear time* – the story moves through time in a seemingly random order or blurs temporal continuity to the point where the audience is un-

able to determine what happens before or after what has already been told.

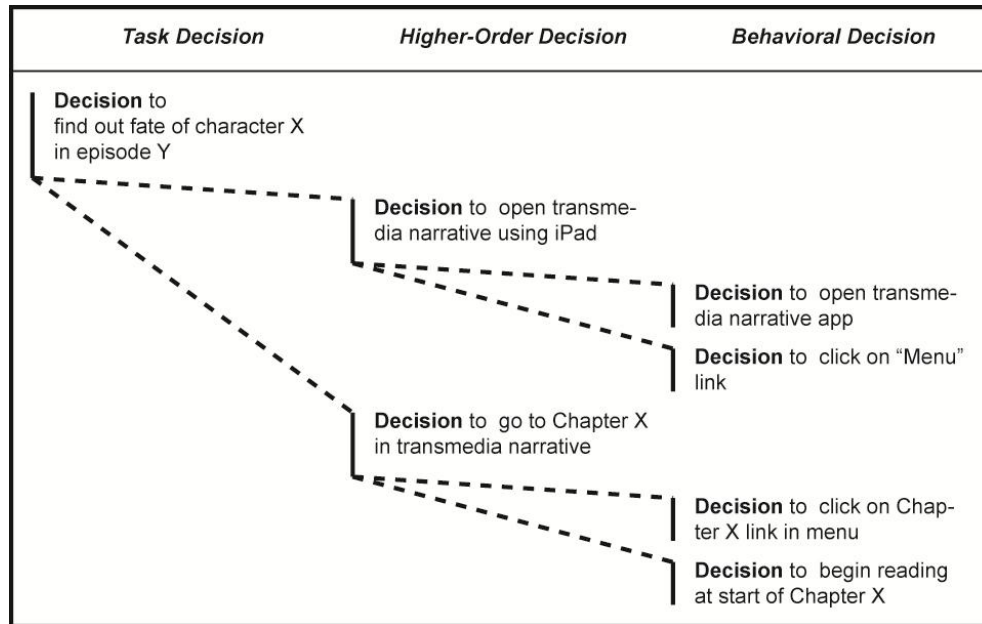
- *Inconsistent realities* – the settings, events, interactions, and other aspects of the storyworld are inconsistent from one episode to the next, jumping from one reality to another and creating a sense of meaninglessness and absurdity.
- *Multiplot*: The *multiplot* is a narrative design that is mid-way between the archplot and miniplot. It typically involves several interwoven “mini-stories” with their own plots and protagonists. Multiplot narratives may be “hard” if they lean towards the archplot or “soft” if they lean towards the miniplot
- *Nonplot*: The *nonplot* is a design that exists outside of the archplot-miniplot-antiplot triangle. McKee states that these may be loosely termed “narratives” but do not tell a story and instead become portraiture and “slice-of-life” pieces. In this type of narrative, the conditions of the character’s life at the end of the story are almost identical to their condition at the start.

Ontology: User Interaction

User interaction is a set of decisions and actions taken by the user to navigate the transmedia narrative and consists of a cyclical process that occurs each time a user needs to make a decision while navigating through a transmedia narrative. This model of the interaction cycle is based on a combination of Hartson’s interaction cycle (Hartson, 2003) and Passini’s wayfinding process (Passini, 2000, p. 88). It is also consistent with Dena’s model of Primer → Referral → Reward (Dena, 2007), which is used in the description of the concept of the “call-to-action” (CTA). An effective and efficient call-to-action will be

tightly linked to the user interaction cycle. The user interaction cycle consists of seven steps:

- *Perception*: The first step of the cycle is *perception*, which occurs when the user first perceives (i.e. sees, hears, feels, etc.) a signal for an interaction. *Sensory affordances* are particularly important at the perception step.
- *Cognition*: In the *cognition* step, the user processes the perceived signal to decode its meaning. *Cognitive affordances* are particularly important at the cognition step.
- *Decision Making*: In the *decision making* step the user determines what task to do with the system in order to achieve a specific goal or objective. Upon completion of this step, the user has developed a *task decision*, which is the first element of a *decision plan* (see Figure 33). *Cognitive affordances* are particularly important at the decision making step.
- *Action Planning*: In the *action planning* step the user translates the *task decision* into a plan a set of specific actions needed to complete the task. During the action planning process the user makes two types of decisions – *higher-order decisions* that focus on the sub-tasks needed to accomplish the task decision and *behavioral decisions* that focus on the specific actions needed to accomplish the sub-task (see Figure 33). *Cognitive affordances* are particularly important at the action planning step.
- *Action Execution*: The *action execution* step is the point at which the user takes an action to carry out the decisions made. *Physical affordances* are particularly important at the action execution step.



Source: Peter von Stackelberg, based on Passini (Passini, 2000, p. 93)

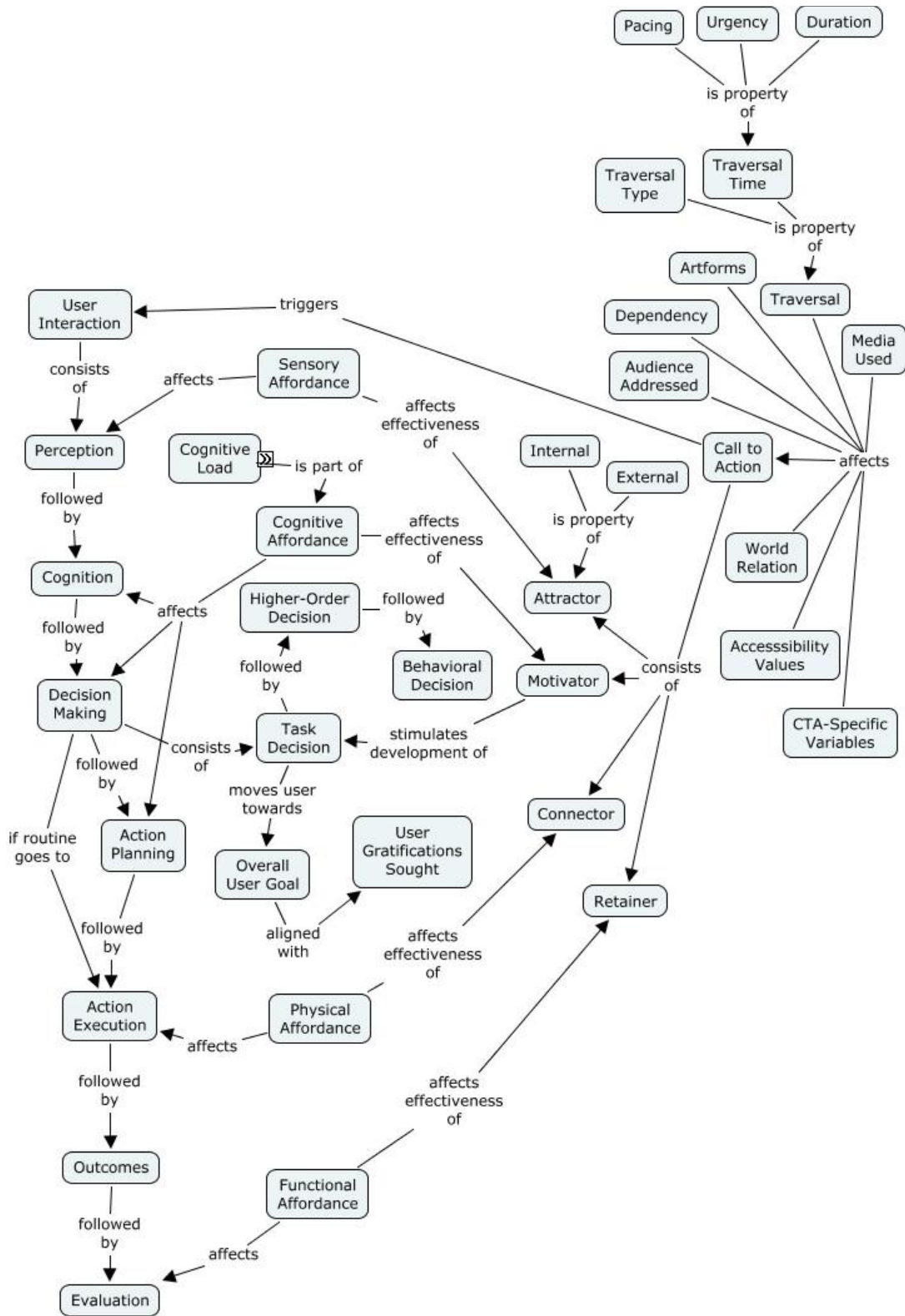
Figure 33. Example of a decision plan used to navigate to a hypothetical transmedia narrative chapter

- *Outcomes:* In the outcome step the system responds to the action taken by the user.
- *Evaluation:* In the evaluation step the user assesses the response of the transmedia narrative system to determine what kind of follow up is needed. *Functional affordances* are particularly important at the evaluation step.

Hartson identified four types of affordances that are applicable to the steps of the user interaction cycle (Hartson, 2003):

- *Cognitive Affordance:* A *cognitive affordance* is a design feature that helps users think and/or know something.
- *Sensory Affordance:* A *sensory affordance* is a visual, auditory, and other sensory design feature that helps users sense something.

- *Physical Affordance*: A *physical affordance* is a design feature that helps users do a physical interaction with the transmedia narrative system's interface.
- *Functional Affordance*: A *functional affordance* is a design feature that helps users to accomplish a task. Functional affordances are not addressed in Bloom's taxonomy.
- *Affective Affordance*: An *affective affordance* is a design feature that helps users experience an emotional response to the transmedia narrative.
- *Call-to-Action*: The *call-to-action (CTA)* triggers the user's awareness and motivation to engage in an interaction, serving as a "plea for the user to do something" (Pratten, *Getting Started with Transmedia Storytelling*, 2011, pp. 35-36), and facilitates the user's cross media interaction. A call-to-action should consist of these four elements:
 - *Attractor*: The *attractor* gains the attention of users and draws them into areas of interest in the transmedia narrative. *Sensory affordances* are particularly important in the design of the attractor. (See Appendix E for a detailed list of features affecting the quality of sensory affordances.)
 - *Motivator*: The *motivator* helps stimulate the user develop a goal and make a task decision. *Cognitive affordances* are particularly important in the design of the motivator. (See Appendix D for a detailed list of factors affecting the quality of cognitive affordances.)

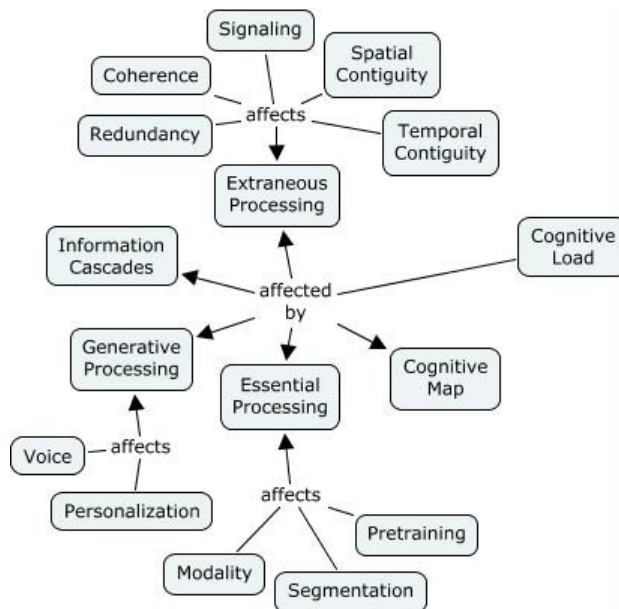


Source: Peter von Stackelberg

Figure 34. Concept map of user interaction (including the “call-to-action”)

- *Connector*: The *connector* provides the user with the mental and physical links needed to attain the goal and accomplish the task decision. *Cognitive* and *physical affordances* are particularly important in the design of the connector. See Appendix D and Appendix F for detailed lists of factors affecting the quality of cognitive and physical affordances respectively.)
- *Retainer*: The *retainer* delivers the “reward” to the user. This should be a memorable moments. *Functional affordances* are particularly important in the design of the retainer.
- *Cognitive Load*: The *cognitive load* (see Figure 35) experienced by a user can have a significant impact on the ability to perform the *cognition*, *decision making*, and *action planning* steps of the user interaction cycle. The user’s cognitive load is affected by the user’s cognitive map and three types of cognitive processing:
 - *Cognitive Map*: A *cognitive map* is a mental representation that represents geometric aspects of an environment, including “topological (e.g., connectedness, adjacency, or containment), affine (e.g., collinear or parallel), metric (e.g., distances and angles), and so on” (Rescorla, 2009).
 - *Extraneous Processing*: The user’s construction of knowledge is not supported by *extraneous processing*. The design of user interactions should minimize the amount of extraneous processing required of a user.

- *Essential Processing*: The user’s ability to receive the basic information presented is determined by *essential processing*. The design of user interactions should ensure essential processing is managed to ensure maximum efficiency.
- *Generative Processing*: The user’s ability to make sense of the basic information received is determined by *generative processing*. The design of user interactions should foster generative processing.



Source: Peter von Stackelberg

Figure 35. Concept map of cognitive load

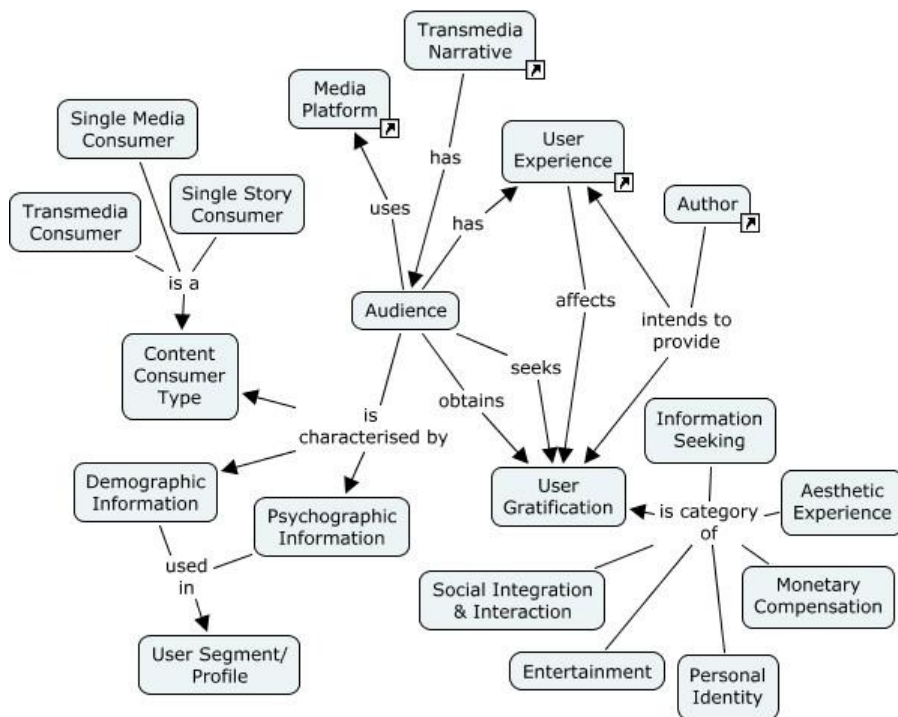
Ontology: Audience

Understanding the audience is an essential part of storytelling. The author of a transmedia project needs to identify who the audience is and what its characteristics are.

This is done by identifying (see Figure 36):

- *Demographic Information:* The *demographic information* on an audience includes properties such as age, gender, income level, urban/suburban/rural, and income level, price sensitivity, time sensitivity, favored brands, and so on.
- *Psychographic Profile:* A *psychographic profile* of the audience identifies their personality, values, attitudes, interests, and lifestyles. Psychographic profiles are often broken down into *user segments/audience profiles* that categorize the audience into easily identifiable groups, often with each segment/profile named in a way that readily identifies individual groups.
- *User Gratifications:* The user's needs and expectations of a medium are the *user gratifications*. Six broad categories of user gratifications have been identified – information seeking, aesthetic appreciation, monetary compensation, personal identity, entertainment, and social integration and interaction.
 - *Gratifications Sought:* The *gratifications sought (GS)* are those gratifications that the user is seeking from the transmedia narrative.
 - *Gratifications Obtained:* The *gratifications obtained (GO)* are those gratifications that the user actually received from using the transmedia narrative.
 - *Gratifications Intended:* The *gratifications intended (GI)* are those gratifications that the author intended to provide the users.
- *Content Consumer Type:* The *content consumer type* is divided into three categories based on how much of the storyworld the user views:

- *Single Story Consumer*: The *single story consumer* is a user who is open to looking at one story in the storyworld but will tend to move on to something else after finishing with that story.
- *Single Media Consumer*: The *single media consumer* is a user who is open to looking at all of the stories in the storyworld that are published with a specific medium but is resistant to looking at other media.



Source: Peter von Stackelberg

Figure 36. Concept map of audience

- *Transmedia Consumer*: The *transmedia consumer* is a user who is open to looking at all of the stories in the storyworld now matter what medium they are published in.
- *Media Platform(s)*: The *media platform(s)* used by audience can be divided into hardware (e.g. computer, smartphone, tablet, television, etc.) and software

(e.g. blogs, wikis, Twitter, etc.). The performance characteristics (i.e. screen size and resolution, bandwidth, download speed, upload speed, specific constraints, etc.) of these platforms should be identified.

Transmedia Narrative Design Process

The process for developing a transmedia project includes a number of major activities. *How to Write a Transmedia Production Bible* documents five major steps to capturing the key aspects of a transmedia production's story, user engagement, functional and technological specifications, and business and marketing strategies (Hayes G. P., 2011, p. 3):

- Treatment
- Functional Specification
- Design Specification
- Technology Specification
- Business & Marketing

Getting Started with Transmedia Storytelling (Pratten, *Getting Started with Transmedia Storytelling*, 2011) proposes four major steps that parallel the approach taken by Hayes:

- Developing Transmedia Entertainment
- Documentation
- Participation & Engagement
- Financing

While all of these steps are important in the production of a transmedia project, this thesis deliberately does not deal with the areas related to business models, marketing, and

financing in order to delve more deeply into the tasks involved in the three aspects of design for transmedia narratives – narrative design, user engagement design, and interaction design.

Interviews with practitioners in the field of transmedia narrative design indicated a strong desire for an “actual workflow/linear creative process for bringing everything together.” (Pratten, *User Interaction & Engagement*, 2011)

One of the biggest design issues is telling a story that invokes the right emotions at the right time. Too often I hear the word "immersive" and it means the author just builds a world full of "stuff" that doesn't actually tell a *story*. So now there's a ton of websites that are all supposed to expand the storyworld but there's no compelling narrative reason to visit any of it

There's lots of enthusiasm and lots of commentary but scarce resources to actually hold someone by the hand and lead them through doing something. What's needed is a step by step guide to *tell stories* across platforms. Once people have been working in transmedia for a couple of projects they learn the participation aspects and some experience design aspects but it's the basic storytelling that's a problem. (Pratten, *User Interaction & Engagement*, 2011).

A developer of alternate reality games said a “universal step-by-step plan that allows you to write down/define the project in a uniform way” would make it much easier for transmedia practitioners to share concepts and work with collaborators and customers around the world (de Haas, 2011). A wiki component that enables the development of a “bible” that makes it easy to track characters and events and which can be used to prevent continuity conflicts within the narrative is also an important element within a comprehensive transmedia narrative design system (de Haas, 2011). The most significant design issue facing transmedia narrative designers is the creation of “an organic and believable world that is suited for diverse media to be connected to” (de Haas, 2011). A framework

for designing and developing transmedia narratives also needs to recognize that authors who have worked solely on movies, books or games as individual media might find it difficult to start thinking in terms of telling a story across multiple media because of the need to think of how can the story be told through movie, book, comic, and videogame (de Haas, 2011).

In order to help transmedia narrative designers and developers deal with these issues and to provide a “universal step-by-step plan”, this thesis proposes a series of tasks broken out into four levels:

- *Transmedia Project Level Design Tasks:* The *transmedia project level design tasks* are those tasks that need to be done first in order to begin a transmedia project.
- *Storyworld Level Design Tasks:* The *storyworld level design tasks* involve the creation of the storyworld within which stories will be played out.
- *Story Level Design Tasks:* The *story level design tasks* focus on the design work that needs to be done for each story within the storyworld.
- *Sequence/Scene Level Design Tasks:* The *sequence/scene level design tasks* focus on the design and development of the actual content of the individual stories and sub-stories in the transmedia project.

Transmedia Project Level Design Tasks

A number of key decisions need to be made very early in the design process for a transmedia project. Decisions made at these key points will shape the direction in which the project will develop, so the transmedia designer needs to consider them carefully.

Definition of Transmedia Projects

If the planned project tells one or more stories based in the same storyworld and uses two or more media, it is a transmedia project based on the criteria set out in this thesis. This definition is less stringent than the American Producers Guild (APG), which requires at least three stories told across multiple media. A strict interpretation of the APG definition favors intercompositional transmedia narratives while eliminating intracompositional transmedia narratives from consideration as transmedia projects. The less stringent definition is used here so that both intracompositional narratives (a single story told across multiple media) and intercompositional narratives (multiple stories told across multiple media) can be included as transmedia narratives.

There is no strict sequence in which the design tasks at the transmedia project level (see Table 2) need to be completed once the project has been initiated. Much of the transmedia design process involves multiple iterations as audience research data is gathered, the purpose of the project defined, and the overall purpose and general structure is developed. However, all of the transmedia project level design tasks should be largely complete before work begins on the details of the storyworld and stories.

Transmedia Project Tagline

The transmedia project *tagline* is a single-sentence hook that “teases” potential users about what the project “will achieve or what questions it raises from an experiential point of view” (Hayes G. P., 2011, p. 4). The best taglines include the user with the term “you” (e.g. “Your journey into the dark heart of Wall Street”, “How do you save a man condemned to death?”, etc.).

Table 2. Transmedia project level design tasks

Transmedia Project Level Design Tasks
<ul style="list-style-type: none">• Initiate transmedia project• Create transmedia project tagline• Identify the purpose of the project• Identify audience demographics• Develop audience psychographic profile• Identify content consumer type• Identify user gratifications• Identify audience media usage• Identify user segments• Identify media/platforms that will be used• Determine project type• Determine if the project is intercompositional or intracompositional

Purpose of the Transmedia Project

The purpose of a transmedia project will influence the intended message, how the content should be presented, and how users will navigate through the project. Designing a transmedia narrative for entertainment but targeting users who are looking for specific, factual information is likely to frustrate those users.

If the transmedia project is intended for educational or informational use, the users are known as “knowledge seekers”. These “knowledge seekers” are characterized by their interest in finding information related to a very specific topic (Lawless & Schrader, 2008, p. 271). When navigating the web, these users typically go to screens that contain information that increased their comprehension of the topic of interest. They are strategic in

the selection of links and tend to move toward the content as quickly and directly as possible.

A transmedia narrative intended for entertainment, on the other hand, is likely to have a large number of users who are “feature explorers”. “Feature explorers” are characterized by their tendency to spend a disproportional amount of time interacting with the most noticeable features of the transmedia narrative (i.e. videos, animations, sound effects, etc.) (Lawless & Schrader, 2008, p. 271). This type of user typically spends more time learning the features of the transmedia environment than understanding the content.

Players of alternate reality games might be considered an extreme example of the “feature explorer” type. For ARG players much of the pleasure comes from exploring the features of the created environment to discover clues that will allow them to move forward in the game.

The purpose of the transmedia project will shape the message the user is intended to receive. A marketing and branding transmedia project will have a message that ultimately promotes a specific product, service, or brand. A transmedia narrative focused on activism may have a message that argues one side of a social or political issue. That message may be very pointed, like the perspective *Collapsus* presents on the perils of industrial society’s dependence on petroleum products, or it may have a more subtle but still clear point of view on modern industrial society as in *Animism: The Gods’ Lake*.

It is not necessary to take an either/or approach to determining the purpose of the transmedia narrative but one purpose should be dominant. For example, an educational/informational transmedia can be entertaining, but the entertainment value should be secondary and designed to support the primary purpose without distracting from it.

Hayes identified a number of points that can serve as examples of what to look at when identifying the purpose of a transmedia project (Hayes G. P., 2011, p. 16):

- Purpose from a user perspective
 - Stimulate community-based storytelling
 - Get the audience to be highly active during a live broadcast
 - Create deeper engagement between scheduled events
 - Get the audience to become active outside the home
 - Stimulate massive community created content contribution
 - Make the service highly personalized
 - Develop a powerful “tease” service to a must-view linear property
- Purpose from the author perspective
 - Reach a younger or older demographic
 - Experiment with never before tried multi-platform concepts
 - Improve the skills of the creative team
 - Raise awareness of issues, social good, or other media property
 - Build a strong female or male viewership
 - Build a loyal local and/or international community for a creative property
 - Increase the overall audience

Audience Demographics

Understanding the audience is an essential part of storytelling. Telling a great story to the wrong audience can make the story fall flat. The author of a transmedia project

needs to identify who the audience for that project is and what its characteristics are. With this information in hand, the transmedia author can look at the project's theme, genre and characteristics and make adjustments to either project or target audience as required.

The demographic profile of your audience should tell you about their key characteristics – age, gender, race, ethnicity, where they live (urban, suburban, or rural), income level, price and time sensitivity, their favorite brands, and so on.

Audience Psychographic Profile

Psychographics is an approach used by marketers to understand the motivational and cognitive drives of a target audience. The psychographic profile tells you more about the personality, values, attitudes, lifestyles, social goals, and interests of your audience. A psychographic profile differs from the more traditional demographic profile of your audience, although they should be used together to get a better picture of the audience segments.

Psychographics can easily be misunderstood or incorrectly applied. It's quite common to contrast them with demographic variables such as age and gender, or with behavioral variables such as usage rate. In fact psychographic variables and the other major analytic variables work in concert. Each is related to the other and affects the other. A marketing approach that is focused solely on one such area can miss critically important information.

Psychographics remain a valuable tool in effective market segmentation, since lifestyle, attitude, emotions and preferences are crucial factors in analyzing how consumers and business people allocate their money. Demographic and behavioral analyses give detail and data, but psychographics is needed for understanding the consumer in depth. (Market Segmentation Services, 2008)

Content Consumer Type

The type of content consumer your audience is will influence how you structure your transmedia narrative. For example, if you find that the majority of your audience consists of single story consumers that are only going to stick you for one story you may want to rethink the whole transmedia approach.

A good story well told may keep single media consumers coming back if you provide them with a series of live action videos but you risk losing them if one episode of your transmedia narrative is video and the next is a comic book and the third is a live event. Perhaps the best strategy is to find one medium that works for most of that audience for the core of the narrative and have a limited number of extensions in other media.

It is the audience that consists of transmedia consumers that you are looking for. These are the consumers who embrace stories told across many different media. These are the ideal transmedia consumers. However, the concept of transmedia narratives is so new that it will take time for the mass audience to become use to this form of storytelling. The best strategy is to exceed this audience's expectations and have them serve as evangelists for the transmedia project.

User Gratifications

Users have a set of needs and expectations when they make the decision to use a transmedia narrative. They decide to use that transmedia narrative because they are seeking something to satisfy those needs and expectations (known as gratifications sought). A user seeking a short break from a hectic lifestyle, for example, will look to the transmedia narrative for an escape from the real world. Knowing this single piece of information

about the user will help the author structure the transmedia narrative so it is fictional and entertaining rather than non-fictional and informative.

User gratifications for most media use fall into six broad categories:

- Information seeking
- Aesthetic experience
- Monetary compensation
- Entertainment
- Personal identity
- Social integration and interaction

Consciously or unconsciously an author will know early in the process of defining the concept of the transmedia narrative that the project will do for the audience? Will it entertain? Inform? Help them with their social life? User gratifications are the needs and expectations a user has of a medium. The author needs to determine the primary gratification the transmedia project will address as that decision will strongly influence the overall structure and content of the project.

While users often seek more than one gratification, it is important that the author of the transmedia narrative pick a primary gratification that the narrative will address and keep any others as secondary. Attempting to satisfy two equally dominant gratifications is very likely to result in mixed priorities with neither of the gratifications being adequately satisfied. A more effective approach is to select a primary and a secondary gratification. An example of this approach is *The Daily Show with Jon Stewart*, a political satire that uses a television news format. The primary gratification *The Daily Show* satisfies is entertainment through comedy with the secondary gratification being political informa-

tion. If there is a conflict between these two gratifications, comedy wins every time and information takes the backseat.

What the user seeks and the author intends to provide may not always be what the user actually gets (gratifications obtained) from the transmedia narrative. The creator of the transmedia narrative should plan to survey users to determine whether they obtained the gratifications they were seeking.

A gap between gratifications sought and gratifications obtained needs to be addressed so that users have a positive experience with the transmedia narrative. Any gap is likely to result in disappointment and dissatisfaction. Finding out why there is a gap is vitally important to correcting problems with the transmedia narrative.

Audience Media Usage

Knowing what media your audience uses will shape structure of your transmedia narrative. If your primary audience avoids social networks, for example, publishing a significant portion of your narrative on Facebook means that you've lost a large portion of your audience.

User Segments

After audience characteristics (e.g. demographics, psychographics, user gratifications sought, etc.) have been identified, user segments and audience profiles can be developed. User segmentation involves dividing the potential user base into groups in which the individuals have similar ages, genders, interests, media use, and other user characteristics. Using segmentation makes it easier to target specific groups within the overall audience for a transmedia project.

Media/Platforms for Transmedia Projects

Knowing how your audience accesses content will also shape the structure of your transmedia narrative. The experience of watching an episode of your narrative on a big-screen television is very different from watching the same episode that has been downloaded to a smartphone. One of the most interesting new devices from a transmedia perspective is the table computer (i.e. Apple iPad, Samsung Galaxy Tab, Amazon Kindle Fire, etc.). However, these devices are just starting to enter the mass market phase of adoption and many potential audience members for transmedia projects don't have them. In addition, content designed for one tablet may not be compatible with another brand. Knowing which technologies your audience uses is important when deciding how you will structure your transmedia project. Examples of technology platforms for transmedia projects include (Hayes G. P., 2011, p. 13):

- *2D PC Web*: These are traditional browser-based websites that can include Flash, HTML 5, or similar rich media elements.
- *3D PC*: These are isometric or full 3D applications or browser-based game-like engines.
- *Mobile (Generic)*: These are well connected handset sized smartphones, including SMS (texting) only handsets.
- *Tablets (Generic)*: These are mobile, connected devices with larger screens than smartphones.
- *Connected TV & Set Top Boxes*: These are specialized hardware connected to or integrated into large-screen TVs or cinema screens that effectively combine TV content and the web.

- *Specialized Consoles*: These are large games platforms, media boxes, or handheld game devices.
- *Augmented Reality*: These are technologies that allow the layering of digital content over the real world and are primarily marker or location-based.
- *Real World*: This is physical space in the real world.
- *TV Sets*: These are conventional television sets that receive traditional broadcast or cable signals.
- *Cinema Screens*: These are traditional movie theater screens.

Project Type

Transmedia narratives provide users the opportunity to engage in more active roles (user agency) than traditional narrative forms. Some examples of user agency include spatial navigation, problem solving, incorporating game play within narratives, and traversing links in hypertext narrative. Computer and console games that incorporate elements of narrative have captured a significant audience. In these games, users have a sense of free will that is often conveyed by enabling robust forms of spatial navigation and interaction with objects in the game world. This has resulted an obsession with the idea that “the more agency, the better” (Mulholland & Collins, 2002). However, the degree of user agency needs to be considered carefully when designing a transmedia narrative.

Determining where on the narrative-game spectrum the project falls will determine what kind of transmedia work it will produce. At one end of the spectrum is narrative, which has a high degree of author control over the narrative flow and meaning, while on the other end is game, which gives the user/player a high degree of control (see Figure

48). Towards the middle of the spectrum are alternate reality games (ARGs) in which control in shaping meaning, and to a lesser degree narrative flow, is shared.

“Gamification” is becoming increasingly popular for a variety of applications (Peters M. , 2011). Games and game-like features are finding their way into transmedia narratives. At the other end of the spectrum, increasingly sophisticated games are including narrative elements to enhance their entertainment value.

Any “gamification” of a transmedia narrative should add significant narrative potential. In order to do so, gaming elements should be rich enough to create purposeful and meaningful experiences that can be used as the source of the user’s own narrative. Transmedia narrative designers should avoid including games that encourage mindless attention and passive participation (Screven, 2000, pp. 166-167).

The *Burn Notice* website for the television series of the same name is an example of how games should not be used as part of a transmedia narrative. The site has ten games including “See It Like a Spy” (see Figure 37) and 12 quizzes like “Can You Outsmart Michael?” (USA Network, 2011). None of them are integrated into the ongoing narrative of the series nor do they provide any narrative content themselves.

“See It Like a Spy” is a simple click-drag-and-drop game in which the user has to move three graphics onto a graphic of a workbench to get the correct answer. The “Covert Ops” game is more sophisticated, putting the player into the role of an associate of the protagonist in the television series using a first-person perspective, but there are not narrative elements to the game. The quizzes are little more than a series of questions with four possible answers for the user to click on. None of these game elements have any significant connection with the on-going narrative in the television series nor do they extend

the Burn Notice storyworld in a meaningful way. Rather, the games and quizzes provide the user with features that promote mindless rather than mindful attention (Screven, 2000, pp. 166-167) and fail to deepen user engagement with the narrative.



Source: USA Network (USA Network, 2011)

Figure 37. The USA Network's Burn Notice series uses gamification in an attempt to boost user engagement

Intercompositional versus Intracompositional Projects

Deciding whether a transmedia narrative involves a single story told using multiple media (intracompositional) or multiple stories told using multiple media (intercompositional) will shape the structure and focus of the narrative. *The Matrix* is a frequently cited example of an intercompositional transmedia narrative. Three films, several video games, a series of animated short films, and a number of comic books form *The Matrix's* storyworld. Each of the works in this storyworld is a fully developed story or game that can stand on its own.

Transmedia narratives like *Must Love Robots* and *Animism: the Gods' Lake* are intercompositional transmedia narratives. In *Must Love Robots*, each element of the story contributes essential information that the user needs in order to fully understand the story. A single story is central to *Animism: The Gods' Lake* and a variety of media, live events, and an alternate reality game provide additional information related to the primary story. Alternate reality games and stories structured using “narrative hubs” are closest to being “pure” intracompositional narratives.

Stories that involve either a central character or a central mystery are well suited to an intracompositional narrative structure. Intercompositional narrative structures are better suited to a number of individual stories that set in the same story world and which may or may not be interconnected.

Storyworld Level Design Tasks

The second level of design tasks occurs at the storyworld level (see Table 3). At this level, the storyworld is created, level of user engagement and degree of user agency determined, and high level transmedia narrative's interactions are documented. Design at the storyworld level is an iterative process in which the overall transmedia project design evolves as the author works through the various steps of the narrative, engagement, and interaction design. New information or changes in one design area can lead to changes in the other design areas as well.

Storyworlds

Ryan notes that events provide a temporal dimension by creating a history of the changes that occur in the time span framed by the universe (Ryan, 2011). This temporal

dimension allows for the development of dynamic storyworlds rather than static text worlds. A disadvantage, however, is that if every sequence of events generates a different storyworld it is difficult to create multiple stories within the same storyworld (Ryan, 2011).

Table 3. Storyworld level design tasks

Storyworld Level Design Tasks		
Narrative Design	Engagement Design	Interaction Design
<ul style="list-style-type: none"> • Create storyworld • Develop storyworld tagline • Select storyworld genre • Determine if storyworld is fictional, non-fictional, or hybrid • Create characters • Create significant object(s) • Create events • Create settings • Develop storyworld synopsis 	<ul style="list-style-type: none"> • Determine desired level of user engagement • Determine degree of user agency • Determine user control of characters • Determine user role (internal or external) • Apply principles of human centered design • Develop “rules of engagement” synopsis • Develop design aesthetic • Develop style guides 	<ul style="list-style-type: none"> • Develop preliminary wireframes • Determine entry points to transmedia narrative project • Map storyworld level navigation

A more flexible way to deal with the temporal dimension is to have an inherent property of the storyworld and by extension the existents, events, settings, and stories that are contained within that storyworld. This temporal dimension can be identified as *storyworld time* (see Figure 38). The use of the temporal dimension is a key method for organizing information and a timeline can be a powerful tool for organizing the various ele-

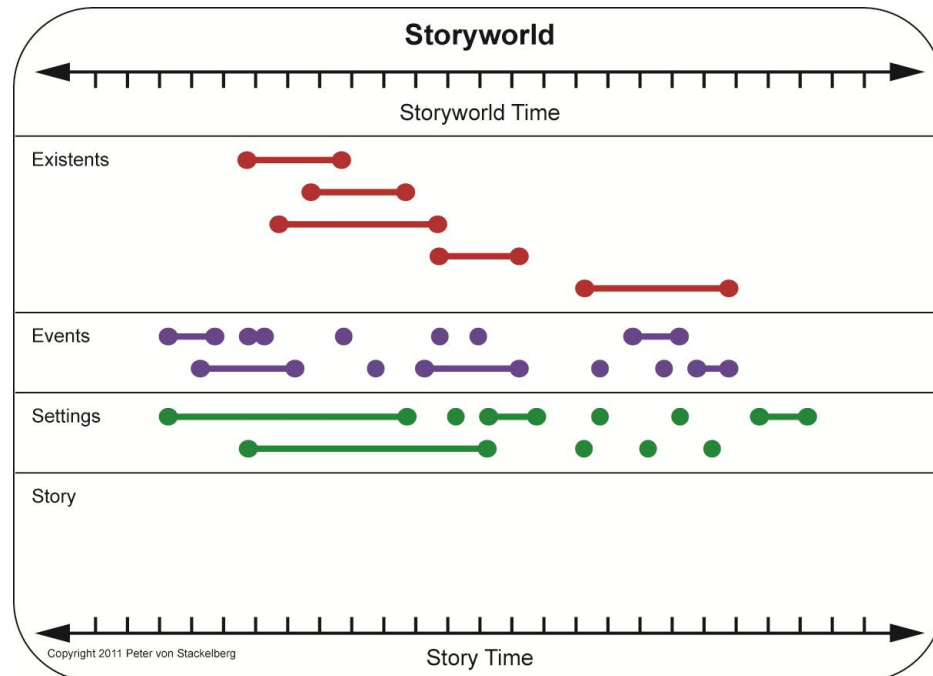
ments of the storyworld. Existents, events, and settings can be placed into the storyworld at the appropriate point on its timeline (see Figure 38).

The time dimension can be stretched as much as needed to accommodate these elements. A story can be established with its own timeline – *story time* -- within storyworld time (see Figure 39). The “present day” of the story is established when the main part of the story begins. Prologues typically present a portion of the narrative that precedes the “present day” and is “outside” of the story. Selecting from among the existents, events, and settings of the storyworld within the timeframe of a story (see Figure 40) provides the basic elements from which to create the story. Selecting a different set of existents, events, and settings provides the elements for a different story, even if the same timeframe is used (see Figure 41). Shifting the story timeframe results in a different set of existents, events, and settings being available and the emergence of a different story (see Figure 42).

A common technique in serial television narratives is the use of layered stories or plotlines. (Porter, Larson, Harthcock, & Nellis, 2002). This multi-layered story structure can be maintained using this framework (see Figure 43). Scenes or other elements of the main story can alternate with the sub-plots or sub-stories.

The development of dynamic, multi-dimensional characters is also possible within this framework. Characters should be viewed as entities that change over time. They come into existence at some point in storyworld time, change and evolve for a period of time, and then cease to exist, at least in the “physical” sense although they may persist as the memories, dreams, or memorials of other characters or in other settings. The “life-

lines” of characters can be linked to the layered story structure, the events, and the settings, creating opportunities for the characters to change and evolve (see Figure 43).



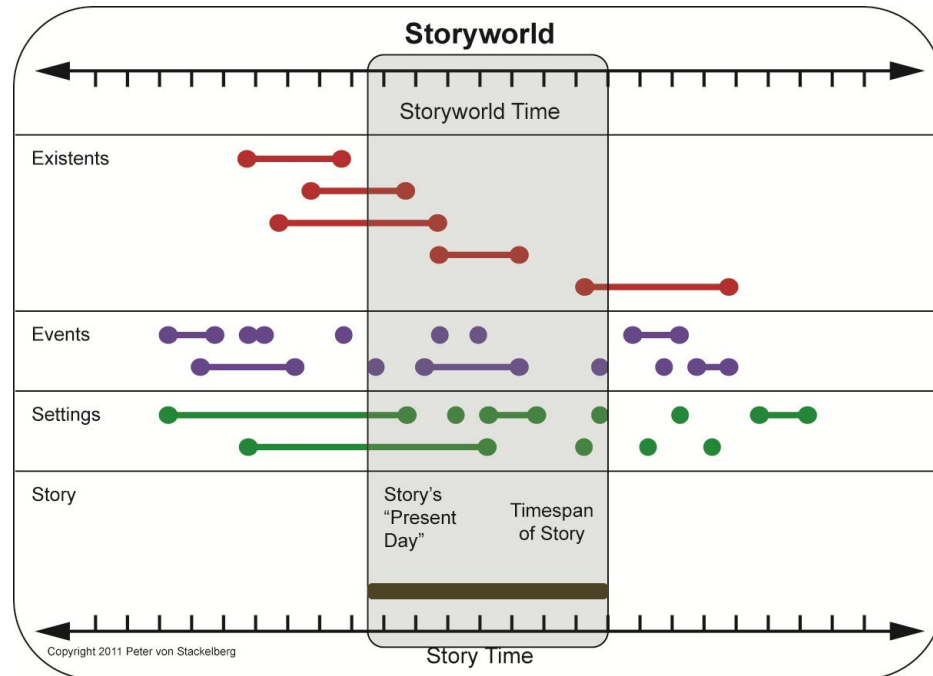
Source: Peter von Stackelberg

Figure 38: The storyworld consists of existents, events, and settings that exist at certain points in storyworld time.

Ryan notes that narratives “establish particular facets of the storyworld into *states*” (Ryan, Introduction, 2004, p. 62), which is consistent with the approach used in this framework. The evolution of a character occurs as a result of a change from one state of being to another. These points of change in the character’s state of being are illustrated by the diamonds on the characters’ “lifelines” in Figure 43.

The concept of state change can also be applied to settings. From a storytelling perspective, changes in setting can add dramatic tension and conflict, particularly when characters need to deal with those changes. These changes can range from changes in the physical environment – day to night, warm to cold, calm to stormy, and so on – to social

and political changes, moral changes, and many more. Mythos, topos, and ethos should be seen as having the potential for state changes to occur. However, care must be taken when incorporating such changes into a story and storyworld to ensure that they are logical, consistent, and plausible based their prior states.

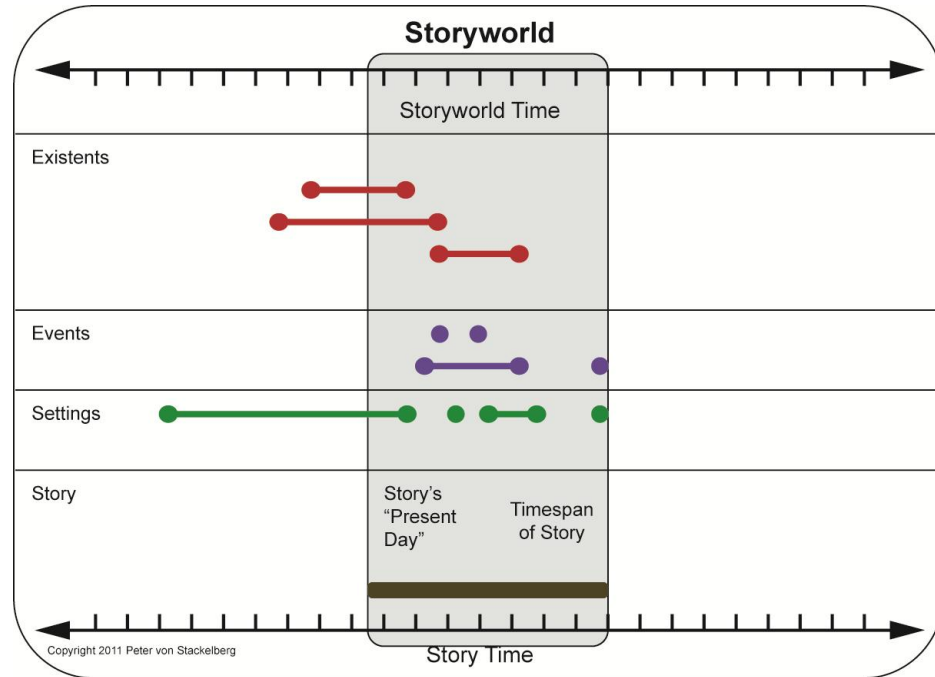


Source: Peter von Stackelberg

Figure 39: A story establishes a timeline within storyworld time, with the story's "present day" typically occurring when the story starts.

A variety of story structures are possible with this storyworld framework. For example, Freytag's Triangle (with or without flashbacks) (see Figure 44) can be represented are possible with this storyworld framework. Selecting existents, events, and settings from some point in the story time's past makes it possible to create flashbacks and flash forwards can be done by taking the same elements form the future in story time. A vertical story structure in which a main storyline connects a series of threads that explore

more deeply the states of particular characters, events, or settings at specific points in storyworld time can also be mapped out on a storyworld timeline.

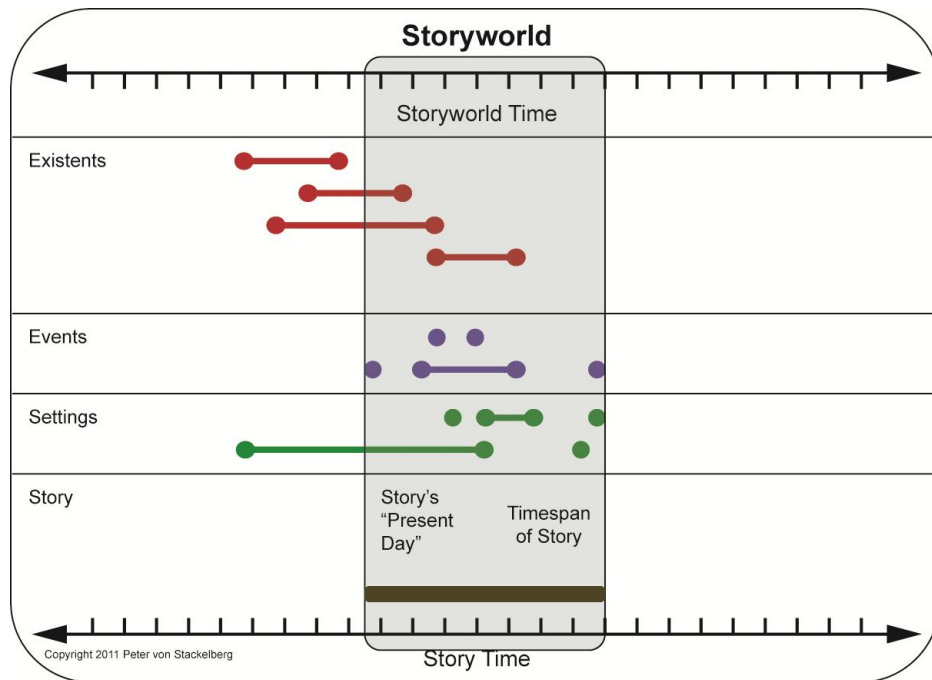


Source: Peter von Stackelberg

Figure 40: A number of existents, events, and settings from the storyworld are selected for use in the story.

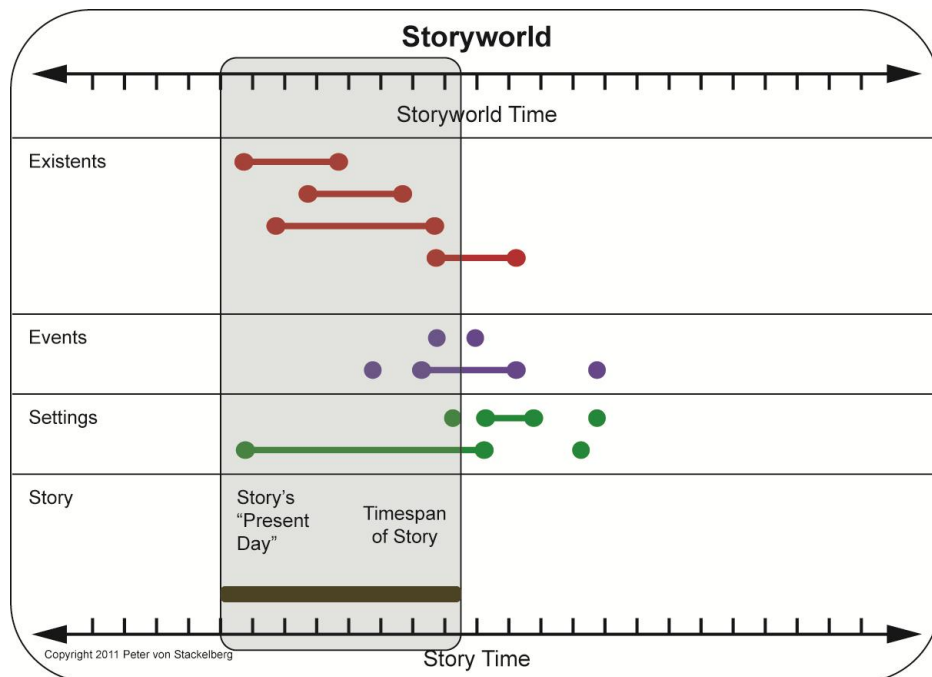
A storyworld timeline can be used to map out how different media are used to present a story in the storyworld. Moving horizontally along the timeline, for example, the main storyline could be created as a television program, while sub-plots or sub-stories are presented on a website/blog and in a comic book (see Figure 45).

A detailed perspective on individual elements of the storyworld (e.g. a setting) could also be presented by moving horizontally along the timeline (see Figure 46). Working vertically on the timeline, it is possible to use a variety of media to create a series of “mini-stories” that can be linked to a main storyline or can stand on their own (see Figure 47).



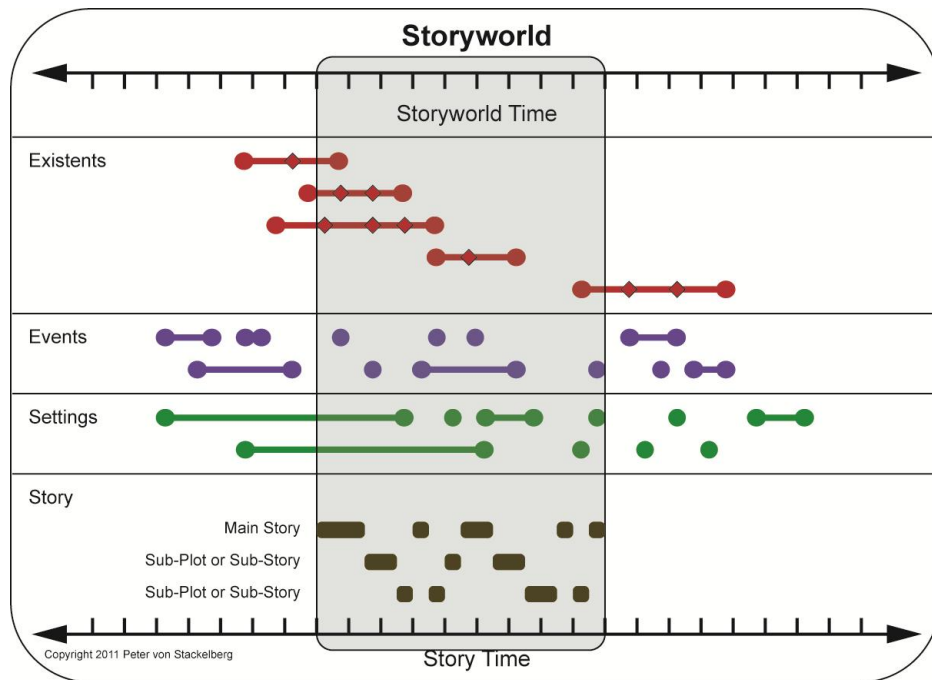
Source: Peter von Stackelberg

Figure 41: A different combination of existents, events, and settings results in a different story even when the time span of the story is the same.



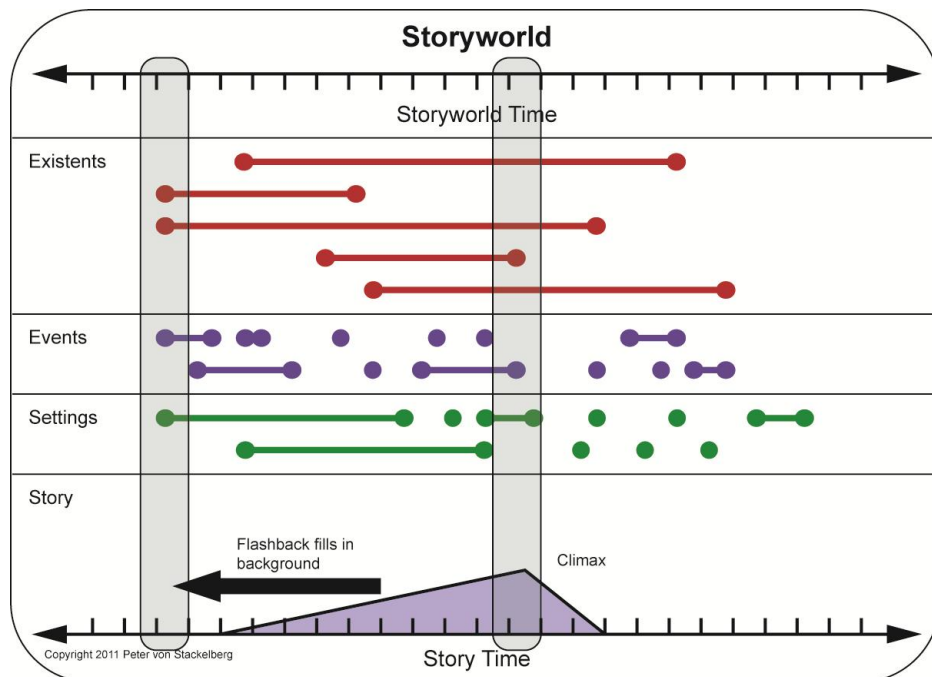
Source: Peter von Stackelberg

Figure 42: Using a different timeframe for the story provides a different set of existents, events, and settings to use in a different story.



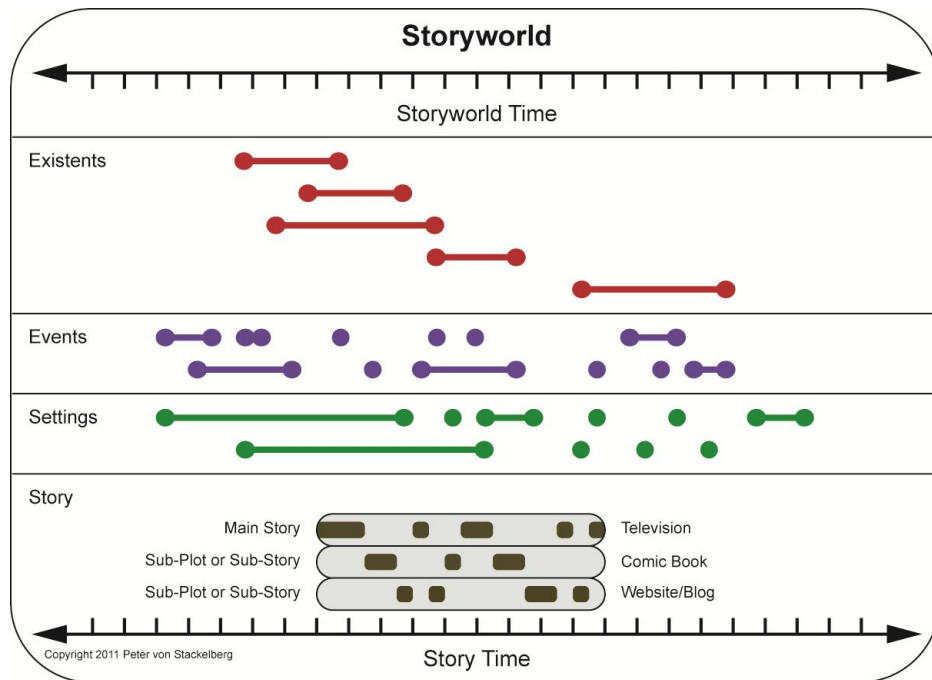
Source: Peter von Stackelberg

Figure 43: This storyworld structure makes possible the “layering” of stories and the development of dynamic characters and settings



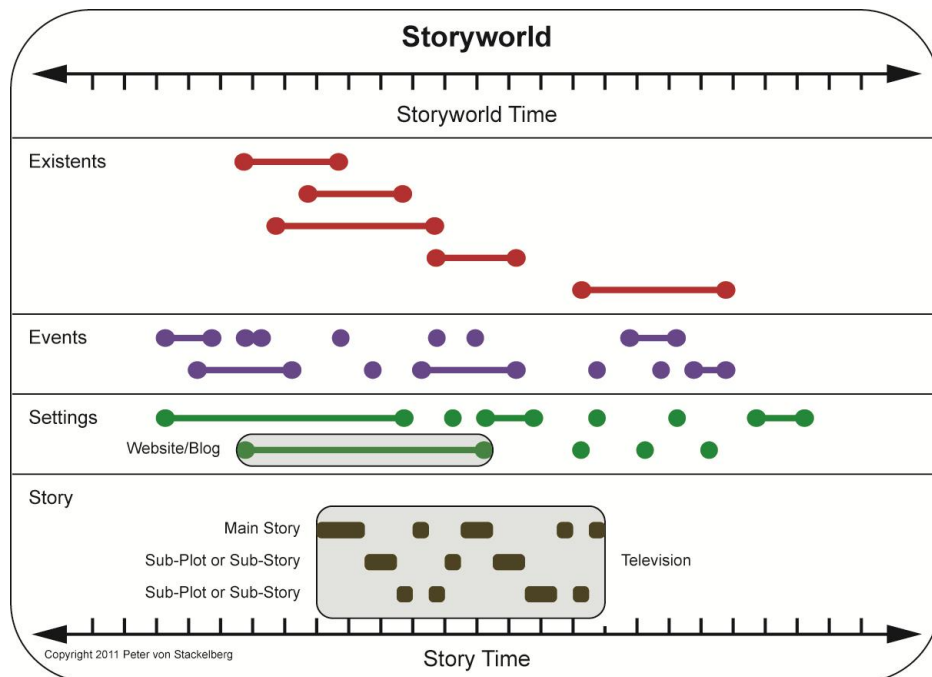
Source: Peter von Stackelberg

Figure 44: A variety of story structures – for example, Freytag’s Triangle (with or without flashbacks) – can be represented with this storyworld structure.



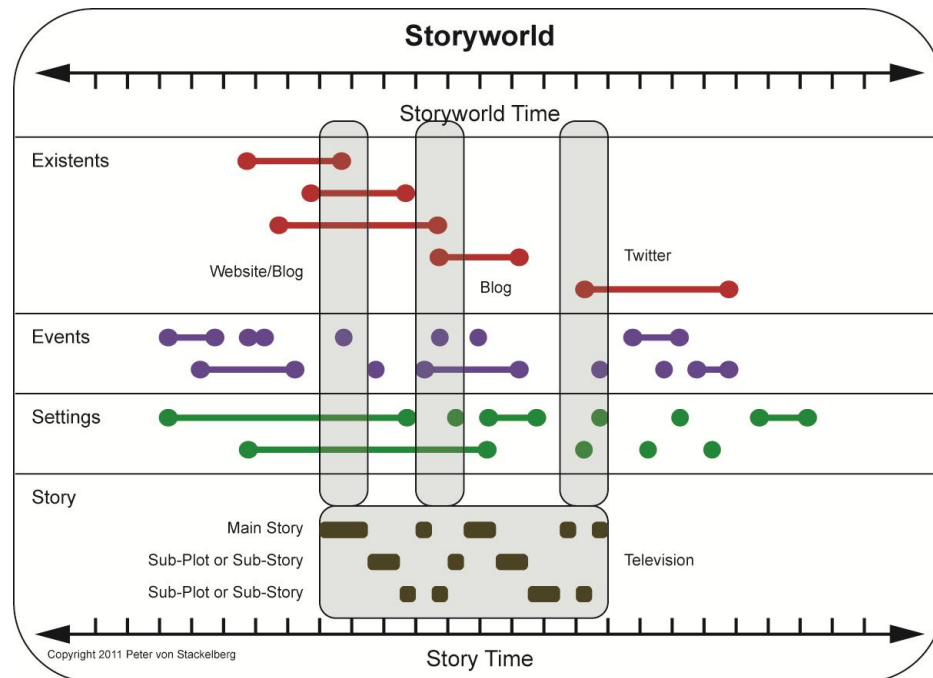
Source: Peter von Stackelberg

Figure 45. A variety of media can be used for different stories or sub-stories, creating a transmedia narrative



Source: Peter von Stackelberg

Figure 46. Individual elements of the storyworld can be explored in detail – “tourist guides” for fictional settings for example



Source: Peter von Stackelberg

Figure 47. Different media can be used to provide more detail on different existents, events, and/or settings and expand the storyworld

This flexibility in using the storyworld timeline approach makes it easy to map out interstitial micro stories (stories that are closely related to the main story), parallel story (stories that unfold at the same time and have a strong relationship to the main story), and peripheral stories (stories that have a weak relationship to and may not occur at the same time as the macro story). Interstitial, parallel, and peripheral stories have all been identified as ways in which storyworlds can be expanded (Scolari, 2009).

Storyworld Tagline

The storyworld *tagline*, like the transmedia project tagline, is a single sentence that hooks potential users into the storyworld. The storyworld tagline should be closely related to the transmedia project tagline and, in the case of a project with a single storyworld, may be the same. Transmedia projects in which more than one storyworld exists

(e.g. multiple storyworlds that serve as “alternate universes”) should have a separate but related tagline for each storyworld.

Storyworld Genre

The *genre* selected for the storyworld will define the similar settings, content and subject matter, themes, plots, central narrative events, styles, structures, recurring icons, situations, and characters (Dirks, 2011) for all stories within that storyworld. It will also define the expectations of your audience and will have a significant role in defining who your audience will be. Examples of genres include action/adventure, comedy, crime and gangster, drama, epic and historical, horror, science fiction, musical or dance, war/anti-war, and westerns. Within these genres are a numerous sub-genres and hybrid story types. There is no single “official” list of genres; rather, a number of different lists from a variety of sources exist. While there may be differences across media, the main genre types have many similarities.

Understanding a genre and its conventions is important for the author of a transmedia narrative as each genre has a unique set of conventions that shape the story design, and the audience for a particular genre has a set of expectations based on those conventions (McKee, 1997, p. 89).

Genre study is best done in this fashion: First, list all those works you feel are like yours, both successes and failures...Next, rent the films on video and purchase the screenplays if possible. Then study the films stop and go, turning pages with the screen, breaking each film down into elements of setting, role, event, and value. Lastly, stack, so to speak, these analyses one atop the other and look down through them all asking: What do the stories in my genre always do? What are is conventions of time, place, character, and action? (McKee, 1997, p. 89)

McKee was referring specifically to genres for film, but the approach for studying genres for novels, comic books, and other media would be similar.

Fictional, Non-fictional, and Hybrid Storyworlds

Determining whether a transmedia narrative is fiction, non-fiction, or a hybrid that includes both will have wide-ranging impacts on that narrative. Creating a fully fictional story will give the author a blank page to start with and allows all aspects of the characters, objects, events, and settings to be created by the author. *The Lord of the Rings* and *Star Wars* are examples of fully fictional stories that have no links into the real world.

At the other end of the spectrum is a non-fiction story in which the storyworld contains real characters, objects, events, and settings. In this case, the author is responsible for faithfully portraying all of those elements. Journalistic works ranging from newspaper articles to television news programs are (ideally) fully non-fictional and can range in length from short pieces to novel-sized books like Truman Capote's *In Cold Blood*.

Between the two ends of this spectrum lies a vast range of territory populated with hybrid stories. Some of these stories may lie closer to the non-fiction end of the spectrum where, for example, fictional characters are injected into actual events or settings. Historical fiction like Bernard Cornwell's *Sharpe* series places a fictional character into meticulously researched events and settings during the Napoleonic Wars. Other stories lie closer to the fiction end of the spectrum. *Star Trek*, for example, has a vast fictional storyworld but retains some ties to Earth and a history that includes actual people, events, and settings.

If a hybrid story is planned, the author needs to determine which end of the spectrum will be dominant so the focus of the narrative detail is appropriate. No matter where on

the fiction/non-fiction spectrum the story falls, information on real events, settings, and people needs to be accurate in order to preserve the narrative illusion created by the fictional components.

Alternative histories, in which the author creates a story that branches off of historical events (e.g. what if the South won the American Civil War or Germany won World War 2) appear to contradict the principle of historical accuracy. However, the logic of alternative histories maintains historical accuracy up to the point at which the story branches from non-fiction to fiction.

The rise of reality television over the past decade illustrates how the distinction between fiction and non-fiction has been blurred in mainstream entertainment (Fetveit, 1999; Mendelson & Papacharissi, 2007). Authors should consider how the mass audience's perception of fiction and reality can be used in the design of transmedia narratives.

Characters

One category of *existents* is the *characters* (Ryan, *Storyworlds Across Media*, 2011) – human or otherwise – which are sentient beings with the ability to feel, perceive, or to have subjective experiences. In science fiction and fantasy non-human characters described as "sentient" typically have similar abilities, qualities and rights as human beings.

The true nature of a character is “revealed in the choices [made] under pressure – the greater the pressure, the deeper the revelation, the truer the choice to the character's essential nature” (McKee, 1997, p. 101).

“Pressure is essential. Choices made when nothing is at risk mean little. If a character chooses to tell the truth in a situation where telling a lie would gain him nothing, the choice

is trivial, the moment expresses nothing. But if the same character insists on telling the truth when a lie would save his life, then we sense that honesty is at the core of his nature.” (McKee, 1997, p. 101)

A character’s motivations, values, desires, and fears may change as the story progresses. This process of change is exemplified by the “hero’s journey” that a protagonist undertakes in an epic narrative.

Exploring the roots of a character’s desires and fears provides opportunities to use a different medium to flashback to a particular time and situation that resulted in a specific desire or fear. These could be short vignettes that provide depth to a character while allowing the overall process of the protagonist’s change to continue.

The use of archetypal characters can help an audience quickly move into a story. If the protagonist and antagonist in a story are broad archetypes they are immediately recognizable (Jenkins, 2006, p. 120).

Archetypes are found in the themes of myths (e.g. death and rebirth), characters in literature (e.g. hero and villain), and imagery in dreams (e.g. eyes and teeth). They are believed to be the product of unconscious biases and dispositions that have been ‘hardwired’ into the brain over the course of human evolution. (Lidwell, Holden, & Butler, 2010, p. 28)

The Matrix used character archetypes from a variety of sources to help the audience quickly understand the story. This use of archetypal characters is particularly important in games where there is little time for exposition before users “grab the controller and try to navigate the world” (Jenkins, 2006, p. 120). From an information design perspective, “identifying and aligning appropriate archetypes with a design will increase the probability of success” (Lidwell, Holden, & Butler, 2010, p. 28).

Consider archetypal themes and forms in all aspects of a design – from form and function to name and brand. Since

archetypes influence perception on an unconscious and primarily affective level, they are especially useful when traditional modes of communication (e.g. language) cannot be used. (Lidwell, Holden, & Butler, 2010, p. 28)

Engaging the audience on the unconscious and affective level can increase the incentive to migrate to another platform or medium in a transmedia narrative. An audience that is emotionally engaged with a character or set of characters is more likely to cross media in order to follow what is happening. Archetypes also reduce the friction associated with audience migration by making it easier to quickly recognize the characters on the new platform or medium.

The list of possible character archetypes is long and varied. For example, the website Listology has 140 archetypes listed (Diaskeaus, 2006); 65 archetypes are listed on the TV Tropes site (TV Tropes, n.d.); and 47 archetypes are identified at the Unofficial White Wolf Wiki (White Wolf, n.d.). In *45 Master Characters: Mythic Models for Creating Original Characters*, Schmidt identifies 45 archetypal characters and provides broad character descriptions for each.

Significant Objects

Significant objects are the second type of *existents* (Ryan, *Storyworlds Across Media*, 2011). To qualify as a *plot-significant object*, an object must have a substantial impact on the story's plot. The One Ring in *The Lord of the Rings* trilogy is an example of a significant object. Without the ring, the plot would be entirely different. The Holy Grail is another significant object and has been used in many grail quest stories. Money, treasure, a submarine, and atomic bombs are among the significant objects that have driven the plots of a wide variety of stories.

A *character-significant object* has meaning to a character. It may satisfy an emotional, religious, or other need for the character.

Character-significant objects do not need to change the course of the plot, but they do need to be described in enough detail that the reader understands their value or importance to the character. (Rosenfeld, 2008, p. 48)

A significant object has a set of physical characteristics and has value – monetary, symbolic, or as a source of power – to the characters in the story. In many stories, the significant object has an extensive history. The One Ring in *The Lord of the Rings*, for example, was forged “in the year 1600 of the Second Age to gain power over other rings held by the leaders of Men, Elves and Dwarves” (Wikipedia, 2011) and has a history that spans more than 4500 years of *The Lord of the Rings* storyworld time. In the movie *The Hunt for Red October* the significant object is the Soviet Union’s newest and most powerful submarine. In the novel and movie *The Da Vinci Code* the significant object is both an object and, in an interesting plot twist, a person. In each case, the significant object has a back-story that is directly relevant to the story’s plot and/or one of its characters.

This back-story can provide an opportunity to develop one or more transmedia narrative extensions that delve more deeply in the significant object. These extensions can be relatively simple works that are the equivalent of an article in an encyclopedia or as complex as a narrative with the significant object at the center of a previous or subsequent story. The history of the One Ring in *The Lord of the Rings* has it come into the possession of several characters, only to be lost again. Each of those situations could be expanded into a separate story with the One Ring at the center of it.

Similarly, the submarine in *Hunt for Red October* could be the significant object at the center of a sequel in which it is used, perhaps, to penetrate Soviet territory on an ultra-secret, highly dangerous mission.

Events

Events are a change in the state of an entity such as a setting or character. External events (outside of a character in the story) may be the result of an uninitiated change (out of the control of a character in the story). An uninitiated change could be a natural disaster or a man-made disaster which is caused by someone who is outside the scope of the story. A war story, for example, may have the war as an uninitiated change if the main characters are ordinary soldiers on the frontlines. An event may also occur as the result of an initiated change, which is the result of the actions of a character in the story. For example, if the actions of a leader that take a nation into war are part of the narrative, the war would be an example of an initiated change.

The interaction of two characters or a character and an event may result in internal events that are the changes to the character. These “mental events” are an important element of the storyworld (Ryan, *Storyworlds Across Media*, 2011). They involve the emotional reactions, psychological transformations, and other internal changes in the characters. Internal events are typically the result of a character’s interaction with external events, settings, or other characters.

Events, once published, become part of the “official” history of the storyworld and should not be changed except perhaps if the author intends to create an alternate storyworld.

Events have a temporal dimension; they have a start and end point and span a period of storyworld time. Events can also be nested inside other events. For example, a particular battle in a war story can take place within a broader war event. This nesting of events provides an opportunity to use a transmedia approach to expand the storyworld. The *Sharpe* series by Bernard Cornwell and adapted as a television series by ITV encompasses more than 25 novels and short stories that chronicle rise of Richard Sharpe, a fictional character, in the British Army during the Napoleonic Wars (Cornwell, n.d.). Although not a transmedia narrative, the *Sharpe* series illustrates how the nesting of events can provide additional detail to a storyworld and the characters within it. The short story “Sharpe’s Christmas” published in the *Sharpe’s Christmas* takes place towards the end of the Peninsular War, while the short story “Sharpe’s Ransom” published in the same book occurs after the Battle of Waterloo. These two short stories fill in gaps in the timeline between individual stories – after the storytime in *Sharpe’s Regiment* in the case of the first short story and after *Sharpe’s Waterloo* in the case of the second.

The events of the storyworld can be used to extend the transmedia narrative by having encyclopedia-style articles or History Channel-style documentaries. It is also possible to use the nesting of events to create a narrative that delves more deeply into a particular event that is incidental to the story of a broader event. Although Cornwell has not done so, it would certainly be possible to nest a story of a fictional commando raid (like *Sharpe’s Siege*) within the storyworld time that is already occupied by another story that spans a broader period of time.

Settings

A setting is the backdrop within which a narrative occurs, but it goes far beyond the physical characteristics of a place in which events happen. Setting includes the historical background, cultural attitudes, and mood of the time (Bickham, 1994, p. 1). Well developed settings can (Bickham, 1994, p. 3):

- Make reader involvement more intense
- Enhance story unity
- Tighten plot structure
- Make suspense more intensive
- Provide character motivation

Settings occur on two levels – the storyworld and individual stories. At both levels, settings consist of mythos, topos, and ethos (Klastrup & Tosca, 2004) but are differentiated by scope and the level of detail. The elements within these hierarchical structures, however, are similar at both levels and should be consistent between individual stories and between stories and the storyworld.

Mythos is the established conflicts and battles of the world, the characters of that world, its stories and rumors, and its creatures (Klastrup & Tosca, 2004). The mythos should also include the “official” history of the happenings within the storyworld. In *The Lord of the Rings*, for example, the mythos includes the creation of the One Ring in the year 1600 of the Second Age, the battle in the year 3434 of the Second Age in which the Dark Lord Sauron has the ring taken from him, and other events that take place well before the beginning of the first novel’s story time. This history sets out the various factions and creatures – factions like Dark Lord Sauron’s forces and those of Men, Elves, and

Dwarves; creatures like the Orcs and the Hobbits – and is closely linked to the events on the storyworld’s timeline.

The *topos* is the setting of the storyworld or world in a specific period and geography. In addition to the physical setting, the *topos* deals with the physical laws that exist in the storyworld – for example, laws that govern whether faster-than-light travel is possible, or whether magic exists. The *topos* should tell the audience whether the story is set in a futuristic technological world, the middle ages with magical elements, or a crime-ridden underworld in the present day. In addition to the physical setting, elements of the *topos* also include the social, technological, economic, political, and legal systems of the story or storyworld. Typically the *topos* is somewhat broader at the storyworld level than at the story level. The physical setting at the storyworld level might consist of a broad description like that used in the first of the *Star Wars* films which begins with the introduction “A long time ago, in a galaxy far, far away...” and continues with the now iconic crawling text that says:

It is a period of civil war. Rebel spaceships, striking from a hidden base, have won their first victory against the evil Galactic Empire.

During the battle, Rebel spies managed to steal secret plans to the Empire’s ultimate weapon, the DEATH STAR, an armored space station with enough power to destroy an entire planet.

Pursued by the Empire’s sinister agents, Princess Leia races home aboard her starship, custodian of the stolen plans that can save her people and restore freedom to the galaxy....
(ALL *Star Wars* Crawls Episodes I-VI , 2008)

The use of the text crawl was continued at the beginning of each of the subsequent *Star Wars* films, providing audiences with a brief overview of the setting for each story.

These introductions are excellent examples of how a short piece of text can provide a great deal of information about a story's mythos and topos.

The third element of setting is the *ethos*, which consists of the social values and laws, implicit and explicit ethics, and codes of behavior within the storyworld. The ethos provides the knowledge needed to “know *how to behave* in the world” and defines what is acceptable or inappropriate behavior (Klastrup & Tosca, 2004).

Setting can provide numerous opportunities for expansion across multiple media. These transmedia opportunities can range from relatively simple encyclopedia-style entries about particular aspects of the storyworld's setting – articles on its flora, fauna, geography, and so on – to more detailed “travelogues” that highlight some aspect of a particular setting for the storyworld's equivalent of the Travel Channel to “ethnographic” studies of cultures within the storyworld.

Storyworld Synopsis

The synopsis is a one- to two-page outline that describes how the story elements and user experience will unfold over time. It should clearly define the storyworld and concentrate on the narrative threads, introducing key characters, significant objects, settings, and events. The synopsis should be storyworld-focused, but should also be clear on how and why different media and platforms might work with different aspects of the story (Hayes G. P., 2011, p. 4).

Level of User Engagement

The discussion of “interactivity” in transmedia narratives covers a broad range of concepts that can confuse as much as clarify the issues of transmedia narrative design. In

order to clarify the different concepts associated with “interactivity” and their relationships to other elements of transmedia narratives, the terms “user engagement design” and “interaction design” are used in this thesis.

The distinction between user engagement and interaction is based on the two different modes of cognitive work users engage in when using transmedia narratives (Finnemann, 1999):

- Reading mode – viewing and processing the content of the narrative (*user engagement*)
- Navigation mode – processing cues needed to physically navigate the narrative (*interaction*)

Users employ different sets of cognitive capacities and demonstrate two different types of behavior when moving from navigation mode to reading mode and vice versa (Finnemann, 1999). The term “*user engagement*” is used to differentiate the mental and emotional component from physical interactivity like clicking buttons or selecting objects. In this thesis, *user engagement* refers to “interpretive interactivity” (Evans, 2008) and the process of meaning-making (Darley, 2000).

The level of user engagement can be determined by determining how users interact with the transmedia narrative. There are five levels of engagement:

- *Attention* – This is the lowest level of user engagement. The user reads or watches content from the transmedia narrative but takes no further action and has not made a commitment to continued engagement with it.
- *Evaluation* – The user’s level of engagement has increased and there is a definite interest in the transmedia narrative. The user is deciding whether to make

a commitment to continue engaging with the transmedia narrative, including using resources (e.g. time, money, effort) to further that engagement.

- *Affection* – The user has made a commitment to spend time, money, effort, and other resources to continue engaging with the transmedia narrative. Engagement includes commenting, writing reviews, joining a community (but maybe only lurking), and posting Facebook and other “likes”.
- *Advocacy* – The user’s commitment to the transmedia narrative goes beyond individual participation. The user encourages others to engage with the narrative through online forwards of information, embedding content, and in satisfaction polls and questionnaires.
- *Contribution* – This is the highest level of engagement by a user. The user’s engagement includes making contributions to the narrative’s fan forums, events, and other activities or adding to the narrative’s storyworld through remixes, collaborations, or creation of entirely new stories.

As the level of user engagement increases, more sophisticated social media capabilities need to be included in the transmedia narrative’s infrastructure. Providing a user with the ability to show affection for the transmedia narrative by “liking” it requires a small addition to the infrastructure. On the other hand, enabling user contributions will require not just blogging, wiki, and similar capabilities, but the resources to monitor and respond appropriately to user contributions.

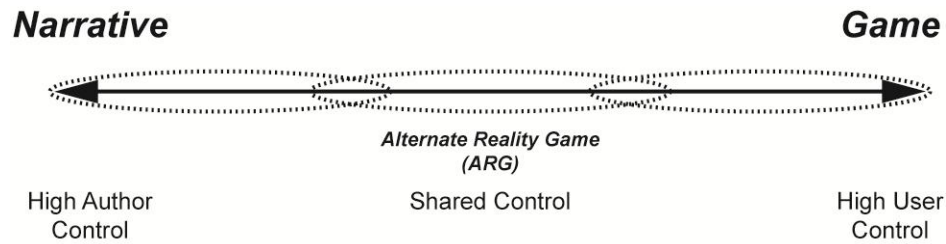
Some of your audience will engage with all of the elements across media, contribute to it, and advocate it. There is a common rule in interactive projects, and the same applies to transmedia projects: the smallest percentage of your audience/players are the most active (and often skilled); the middle percentage engage with less content but are never-

theless a larger audience size; while the largest audience size engages with the least amount of content (in the transmedia context this sometimes translates to one medium or artform only), and is often passive. Where possible and appropriate, design for these different levels of engagement and create opportunities for your audience/players to move between them. (Dena, *The Process of Creating Quality Transmedia Experiences*, 2011)

Degree of User Agency

Choosing to develop a transmedia narrative means giving the author all or most of the control over the narratives' flow and meaning. Reader control is severely limited because the narrative's coherence can be compromised by the reader's desire to take the story in a direction that the author's version of the narrative doesn't support (Mulholland & Collins, 2002). At the other end of the spectrum, choosing to develop a transmedia game means giving the user most of the control over narrative flow and meaning and having the narrative's author take a supporting role. Injecting too much author control into a game reduces the quality of game play and is very likely to frustrate the user.

Simply deciding that both the author and the reader will be given control is not likely to be effective. This is because interactive narrative is a paradox (Rank & Petta, *Appraisal for a Character-based Story-World*, 2005, p. 496) that involves compromise between the author's control of story flow and meaning and the user's freedom to control the narrative. Studies of readers found that they were unhappy with stories over which they had only partial control because they might have ideas that differ from the author's on how to create a satisfying end to a story (Murray, 1997). Providing an illusion of control is also a counterproductive strategy. The "primary pleasure of interactivity is that of control" and either thwarting that control or providing only token control causes user dissatisfaction (Graham, 1996).



Source: Peter von Stackelberg

Figure 48. The narrative-game spectrum of control

That doesn't mean that the solution to the author/user control issue is an all-or-nothing proposition. An audience can have a strong desire for both strong author and user control in a transmedia work (Evans, 2008). As can be seen from a number of successful alternate reality games (ARGs), sharing of control between author and audience can work. In order to make this sharing work, the author needs to clearly think the degree of control that is to be retained by the author and how much will be given to the audience.

The decision of how tightly user actions (agency relationship) are linked to the transmedia narrative is one of the most significant decisions a transmedia narrative designer will make. User input can take a variety of forms, from the control of avatars in games to user communication via social networking in which narrative direction can be influenced by user comments. However, allowing user input "is a very tricky proposition at any time" (Dena, *Authentic in All Caps: a Playful Comedy-Drama* by Christy Dena, 2011).

When making the decision to include user input into a transmedia narrative, the designer needs to have very clear understanding of what this agency relationship will add to the narrative. If it adds little or nothing to the narrative, it is probably better to avoid the complications and limitations that come from having to work with user input.

Answering the question of local versus global content (agency scope) in a transmedia narrative will have a significant impact on the user's level of control over the narrative itself. Local impact means the user has control of movement in the transmedia world and may even be able to manipulate objects. However, the user is essentially an explorer who can move and observe (i.e. perhaps like an avatar in a 3D game) but has no impact on the overall narrative. The other end of the spectrum is global impact in which the user's actions have an effect on the direction of the narrative. It is possible for a transmedia narrative to have both local and global agency. A user's actions, for example, might result in a local impact that begins a sequence of events that ultimately results in a global impact.

The decision on the degree of control the author and user each have in creating the meaning of the narrative will guide whether user actions are local versus global.

The actions of the user may have an immediate impact or there may be a delay in when the impact occurs. The designer must be careful in ensuring the immediacy of the response is appropriate to the context of the narrative and the user's role in it.

A narrative that involves games or game-like elements will usually require an immediate response to the user's action. For example, a user trying to navigate an avatar through a narrative environment will become frustrated and dissatisfied very quickly if there is a significant lag between an action and a response from the avatar.

However, a delayed response may be appropriate with a user action, for example, writing and mailing a letter within the storyworld that reveals vital secret information that is part of a spy or mystery narrative. If a delayed response is used, the designer should be sure to include an indicator that the user's action has actually taken place. Failing to pro-

vide that kind of signal can leave the user wondering if the action was recognized by the system.

Often an immediate response is linked to local agency, while delayed response is linked to global agency.

How long the impact of a user action lasts can range from extremely brief to long-term within the context of the storyworld. In first person “shooter” games the impact of a user’s action (i.e. shooting an opponent) may last only a few seconds before that opponent is “resurrected”. Long-term impacts may last for the duration of the game or narrative. The duration of the impacts of a user’s action should be appropriate to the context of the narrative. In a game that focuses on tallying “kills” the immediate resurrection of an opponent provides additional “cannon fodder” but has not impact on the overall game or narrative. The user’s actions in games of strategy, on the other hand, must have long-term impacts or they become meaningless.

Agency duration should be consistent across the transmedia project. The resurrection of an opponent should be the same each time it happens or, if it does vary, the user should be made aware of the logic behind the variance. Short agency duration will typically is associated with local agency, while long-term agency duration is generally associated with global agency.

Changes in any aspects of user agency (dynamic agency) need to be handled very carefully to avoid confusing and frustrating the user. Having user find that they can control a specific element of the narrative at one point but not another should be avoided. Design of the transmedia narrative should ensure consistent agency across the entire system. For example, if a game embedded in a transmedia narrative provides local agency

scope and instantaneous agency immediacy at one point in the game, it should be the same in at all similar points throughout the game.

If it is absolutely vital that an aspect of agency be changed, it needs to be clearly communicated to the user. The logic behind the change in agency – preferably related to something in the narrative itself – as well as the nature of the change needs to be explained. For example, if an avatar’s agency immediacy is slightly delayed at a certain point in the game, this might be attributed to a wizard’s “time slowing spell”.

User agency control can allow users to modify and control various aspects of the transmedia narrative’s agency relationships, scope, immediacy, and duration during runtime. Giving users control over agency can leverage the relationship between the user and system in order to create a storyworld that is meaningful and engaging to participate in (Harrell & Zhu, 2009).

User Control of Characters

While it may be tempting to design a transmedia narrative so that users can play the role of a major character, research has shown that the audience response to that approach is generally negative. A study of the British television series *Spooks* and its associated transmedia gaming elements found that fans of the series did not want to step into the roles of the fictional characters seen on television (Evans, 2008). Dena also notes that allowing game players take the roles of a limited number of major characters in a narrative is impractical if a multi-player role-playing game is part of the storyworld (Dena, 2009, pp. 208-209). A better strategy is to create classes of characters that allow potential transmedia game players to role-play a member of a certain class of players (Dena, 2009,

pp. 208-209). For example, players might take on the role of a hobbit or dwarf from *Lord of the Rings* or a “field agent” in a game based on the *Spooks* program.

User Role in Narrative

Determining whether the user’s role is internal (projected into the narrative through an avatar or first person perspective) or external (situated outside the narrative) will have a significant impact on the nature of the transmedia project. If an internal user role is selected, the user is projected into the narrative either in a first person perspective or through an avatar. If the external mode, the user is situated outside the narrative as an observer able to see everything that happens within the narrative – in effect, like a god looking in from above. The user role, when linked to the degree of user agency, determines the fundamental structure of the transmedia project.

When the dimensions of user role and user agency are combined, four general categories for structuring transmedia narratives emerge (Ryan, *Beyond Myth and Metaphor - The Case of Narrative in Digital Media*, 2001) (see Table 4).

Human-Centered Design Principles

The human-centered design approach emphasizes an approach that focuses on designing information systems that enhance the “activity and dominance of the user” (Cooley, 2000, p. 66) and complement the human user’s skills rather than ignoring or actively rejecting them. This aligns nicely with the goal of most transmedia narratives to foster user participation in and interaction with the transmedia system.

The human-centered design approach has nine key principles that can be applied to the design of transmedia narratives.

Coherence

Coherence in a transmedia narrative ensures that the meaning of information embedded in it, even if it is not immediately evident, is not cloaked or obscured. Coherence includes the concepts of *transparency* and *consistency*.

The design of the entire transmedia narrative experience and the individual elements within it must provide users with enough information that they know what is happening and what is possible within the system. An effective transmedia narrative interface should make its features and functions readily apparent (transparency). However, that doesn't mean the inner workings of the system need to be on display to users. For example, a button that says "Move to Next Page" makes its function clear without explaining to the user how the move to the next page is handled programmatically.

The design of the transmedia narrative should also be consistent throughout, although that doesn't mean it must be the same across every element. The kinds of interface elements for which a high level of consistency is important include:

- *Interpretation of user actions*: Menu items, links, shortcut keys, and other elements involving *interpretation of user actions* should maintain a consistent meaning throughout the transmedia narrative. It is also important to ensure consistency with the interface of the platform on which the transmedia narrative is presented (Tognazzini, n.d.). For example, a pinch open should zoom in, while a pinch close zooms out. Reversing these gestures would certainly confuse and frustrate an experienced user.

Table 4. User role and user agency impact on narrative structure

	User Agency (Low)	User Agency (High)
User Role (External)	<p>Transmedia projects with low user agency and an external user role are best suited for self-referential narratives – narratives that expose their own structure to readers.</p> <p>Appropriate narratives for this type of structure include:</p> <ul style="list-style-type: none"> • Classic hypertext fiction, in which the reader selects the path between chunks of the story to reveal information but the path taken does not affect the narrative's outcome. 	<p>Transmedia projects with high user agency and an external user role are best suited for game-like situations in which the user controls one or more characters and their environment.</p> <p>Decisions the user makes can send the characters towards different destinies.</p> <p>Examples of games with this type of structure include:</p> <ul style="list-style-type: none"> • Sims
User Role (Internal)	<p>Transmedia narratives with low user agency and an internal user role are best suited for narratives in which the users takes a virtual body into the virtual world and is able to move, examine objects, view the action from different points of view, investigate, and reconstruct events in the virtual world's past. Appropriate narratives for this type of structure include:</p> <ul style="list-style-type: none"> • Travel and exploration (spatial) narratives in which the user moves around the virtual world and creates the story. • Narratives of place that focus on the in-depth exploration of a specific location through a number of "little stories" that allow the user to discover the secrets of that virtual world. • Narratives focused on interpersonal relationship with the user seeing the story from the character's points of view. • Narratives with parallel plots, typically resulting from a large cast of characters acting simultaneously in different locations and forcing the user to move from one place to the next in order to see every thread in the story. • Mystery stories with two levels of narrative – one based on the actions of the detective character, and the other story being the one the user is trying to reconstruct. 	<p>Transmedia projects with high user agency and an internal user role are best suited for games in which the user is a character in the virtual world and controls his/her own fate by acting within the time and space of that virtual world.</p> <p>Examples of games like this are first-person "shooter" video games like:</p> <ul style="list-style-type: none"> • Call to Duty • World of Warcraft

- *Invisible structures*: Objects that cannot be sensed by the user are *invisible structures*. Because the user can't sense them, it is impossible to tell whether

these objects are present or not (Tognazzini, n.d.). While generally they should be avoided in designing a transmedia narrative, there may be sound narrative reasons to include an occasional invisible structure. If invisible structures are used, it is very important that they behave in a consistent manner to avoid confusing or frustrating the user.

- *Camouflaged visible structures*: Objects that can be sensed but don't appear to be a user control are *camouflaged visible structures*. In some types of computer games, for example, active objects may be placed in a setting with numerous inactive objects. As a result, users may not discover that these objects can be manipulated. Again, consistency in design and function is important.
- *Small visible structures*: Icons, size boxes, scroll arrows, and other navigational objects are examples of *small visible structures* (Tognazzini, n.d.). The appearance and function of these objects needs to be very consistent throughout the transmedia narrative. The location of these objects is only just slightly less important than appearance and function, making a standardized location, highly desirable.

Consistency is also desirable across the user interaction and narrative design aspects of a transmedia narrative (see the appropriate section of this thesis for more detail). However, sometimes inconsistency is necessary within a transmedia narrative. Paradoxically, inconsistencies should be consistent so that when there is a response to a user action, it is consistent with what has happened before. For example, if two different icons are used to jump to a particular page within the transmedia narrative, the way the system handles the jump should be consistent.

Responsiveness

Making the “rules” of a system visible and encouraging users to learn and change them can increase the *responsiveness* of a transmedia narrative to users’ individual needs, wants, and ways to doing things. The system should offer a “path of least resistance” rather than forcing users to take a single path through the system (Tognazzini, n.d.). Tognazzini uses the analogy of an open landscape, in which users can move as they want, providing an opportunity to explore for those who want to do so while creating and marking a more direct path for users who want to get to an objective quickly or who are new to the system (Tognazzini, n.d.).

The transmedia narrative’s design should be forgiving of user actions and errors. A responsive design also gives users a graceful way to undo an action or back out of the path that was selected. It is frustrating to click on a link, only to find it takes you to a place you didn’t want to go. Even more frustrating is not being able to go back to where you were.

Malleability

A system with a high level of *malleability* can mold itself to suit the users, allowing them to modify the environment to suit their individual aesthetics, skills, and needs. The concept of malleability is closely related to responsiveness. Malleability can be as simple as allowing the user to change the color scheme and font styles of a website to giving users the ability to select the kind of content they want shown via RSS feeds, customized search queries, and so on.

Inclusiveness

An *inclusive* system welcomes users in and makes them feel like they are a part of a community of familiar and friendly activities and individuals. The concept of inclusiveness is closely linked to both responsiveness and malleability. The inclusiveness of a transmedia narrative can be accomplished by adding relatively simple features that recognize and respond to the individual characteristics of the user (i.e. geographic location, age, gender, specific interests, etc.). More complex features like user access to social networking systems linked to the transmedia narrative can also be included. Facebook, for example, provides templates and online instructions on how to create fan pages.

These capabilities must be used carefully however as they can have a huge impact on the overall design of the transmedia narrative. (The section in this thesis on user agency discusses the issues involved in this more thoroughly.)

Purpose

The transmedia narrative should be able to respond to the *purpose* users have in mind and encouraging them to go beyond it. For example, the transmedia narrative system might recognize that the user's purpose for using the system is entertainment but encourages the user to delve more deeply into a particular aspect of the narrative for the purpose of learning something that can be applied in the user's everyday life.

Engagement

A transmedia narrative that fosters a sense of *engagement* gives the user a feeling of being invited not just to look, but to participate in the process of experiencing the narra-

tive. The challenge of fostering user engagement is the subject of this entire section of this thesis.

Ownership

Fostering a sense of *ownership* can give users a sense of belonging and having an investment of time, effort, or money in the transmedia narrative. A sense of ownership can be developed by enabling users to create something within the storyworld of the narrative. Social networking applications (e.g. Facebook, Twitter, blogs, wikis, etc.) linked to the transmedia narrative can provide that sense of ownership.

Panoramic

A *panoramic* system provides “windows” or “apertures” through which a user can take a wider or more panoramic view of what is happening both inside and outside of the narrative. This panoramic perspective encourages the acquisition of “boundary knowledge” and allows users to act more effectively and competently by providing them with an understanding of the wider context of the narrative. This principle is related to the principle of transcendence.

Transcendent

A system that is *transcendent* encourages, entices, or provokes users to transcend the immediate requirements of the narrative and gain a broader understanding of the narrative’s meaning. One of the inherent strengths of the concept of transmedia narratives is giving users the ability to expand their knowledge of characters, settings, and events beyond the primarily narrative. This inherent quality of transcendence in a transmedia

narrative should be used to full advantage so the user has an opportunity to develop a broader understanding of the narrative's meaning.

“Rules of Engagement” Synopsis

The “rules of engagement” synopsis is a high-level overview of the user engagement aspects of the transmedia narrative written from the user's perspective. It should provide a “hands-on picture of the experience, including what users will be confronted with, what they expect to have to agree to, and challenges they will face” (Hayes G. P., 2011, p. 7). This synopsis should be one to two pages in length.

Design Aesthetic

The design aesthetic provides an overall vision behind the design that will cover all elements to the storyworld. It should describe and portray the characters and settings within the narrative and aesthetic features used for the various media and platforms that the content is published on (Hayes G. P., 2011, p. 10).

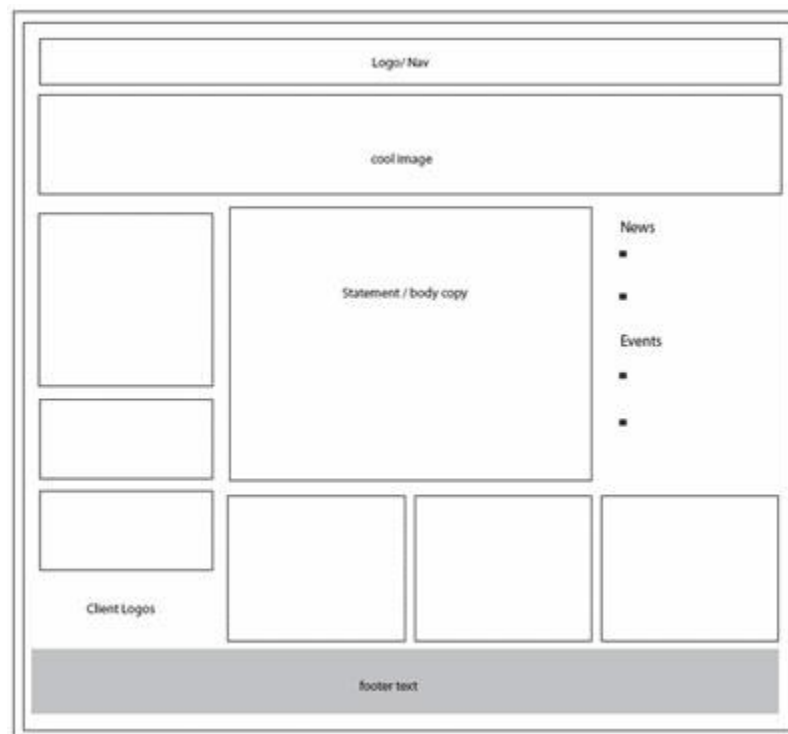
Style Guides

The design aesthetic will guide the development of the style guide, which provides precise details on color palettes, fonts, and other graphic design features. The style guide should be used for all materials produced for the project to ensure consistency and provide a sense of unity across multiple media.

A style guide for audio, music, title sequences, and similar media elements should also be developed to provide an overview of the style to be used for all media elements of the storyworld.

Preliminary Wireframes

Wireframes allows designers to create the structural elements of the transmedia narrative project's interfaces. A wireframe typically lays out the position and function of major components on web pages, applications, game scenes, and printed materials. A wireframe is an early planning document and will often be the basis for more detailed “look and feel” mockups that will be done later.



Source: Natick High School

Figure 49. Example of a wireframe for a web page

Entry Points

Just as the narrative design needs to ensure users are provided with the information needed to “hook” them on the story, the interaction design must ensure that the first call-to-action a user encounters provides the appropriate amount of information to enable an effective interaction with the transmedia narrative. The entry point call-to-action should

quickly communicate the conventions for interacting with the narrative as a whole and then move the user into the narrative. For web-based entry points, the page that the primary URL points to -- typically the home page -- is critical to establishing both the user conventions for both the narrative and interaction aspects of the transmedia narrative.

The amount of information needed at the beginning of a journey varies among individuals. Some -- improvisational wayfinders -- need only a little information while others who will do a lot of up-front planning will need a lot of information (Passini, 2000, pp. 90 - 91). Just adding information is not sufficient, however. That information needs to be appropriate and sufficient to provide informational wayfinders the cues they need while providing other users more information. It also needs to be focused on getting the user into the transmedia narrative and should not direct them away from it.

The entry point for *Animism: The Gods' Lake* in the fall of 2011 was through a URL that took the user to a web page with a book-like visual introducing users to both the story and the site (see Figure 50). At a glance, the user is able to understand both the navigational cues and a feel for the narrative content. The entry point for *Collapsus* uses a Flash graphic to provide both a navigational cue into the narrative and a sense of what the story is about (see Figure 51).

The entry point to *Burn Notice*, on the other hand, is a much more traditional web page with a variety of cues, many of which point users away from the narrative elements of the television program (see Figure 52) including to other websites accessed via the banner ads on the page. A collapsible bar (not shown on the screen capture) also intrudes into the page and requires a user to collapse it in order to see more of the *Burn Notice* home page.



Source: APTN (Aboriginal Peoples Television Network, 2011)

Figure 50. Screen capture of the *Animism: The Gods' Lake* home page



Source: Submarine Channel (Submarine Channel, 2011)

Figure 51. Screen capture of the *Collapsus* home page

From a transmedia narrative interaction perspective, the design of the *Animism* and *Collapsus* entry points is appropriate while the *Burn Notice* is a mess that undermines the ability of users to quickly find the information they need to navigate the narrative. The *Collapsus* entry point is the most effective of the three in getting users into the narrative.

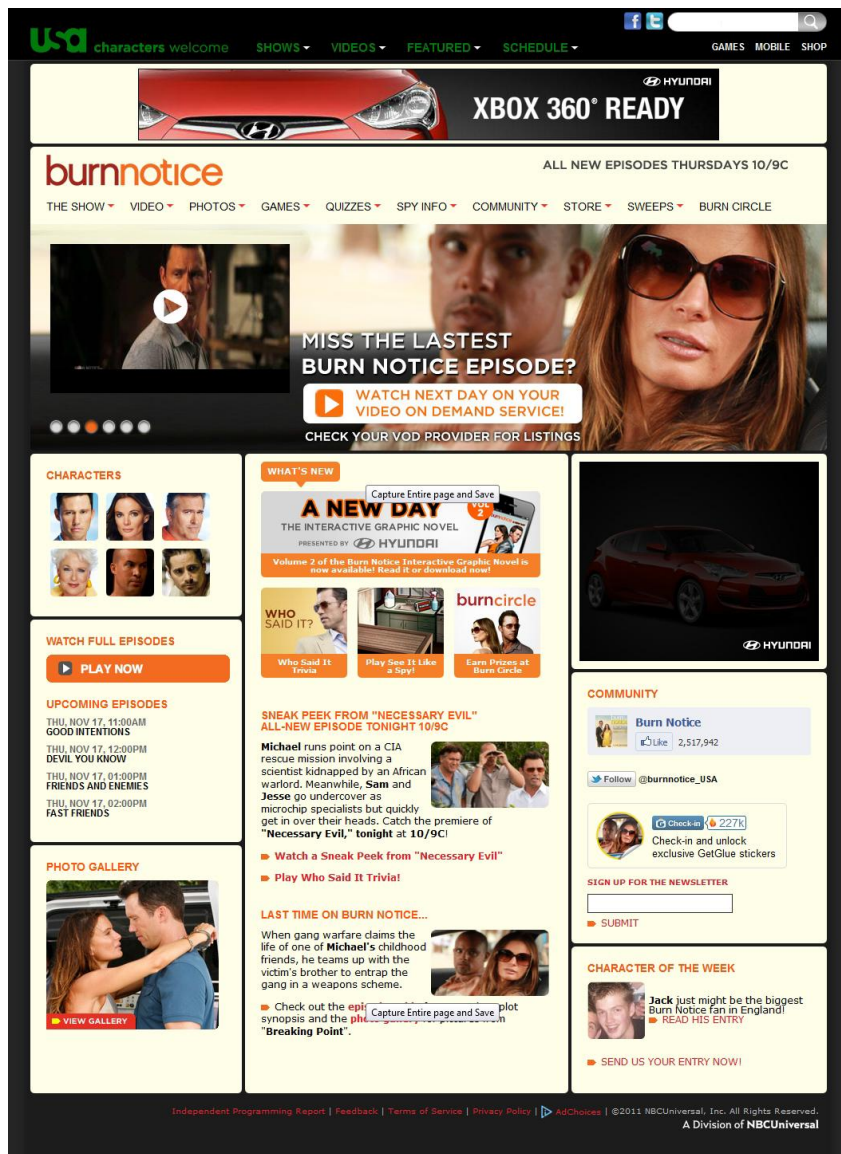
There are only two active links – the “Enter Collapsus” link prominently displayed near the center of the page and a link to the website of the producers of *Collapsus* in the lower right corner – on the enter page. One click on the primary link takes users immediately into the narrative.

The *Animism* entry point has significantly more distractions – a total of 18 links – than the *Collapsus* site. These links are to:

- Facebook, Twitter, and YouTube, where presumably more of the narrative content is located
- Pages within “The Book of Emissaries” displayed on the screen
- Various funders of the *Animism* project

While acknowledging one’s funders is probably a good move from a business perspective, it adds nothing to the narrative and providing links that direct users away from the narrative poor interaction design. Likewise, the links to various social media sites are distractions that do little to progress the narrative at this point. The links to Facebook, Twitter, and YouTube provide no information about what awaits the users if they jump there. At this point, those links are also a temptation that may take users away from the entry point permanently. The navigation links into the narrative itself are also less than optimal. Two completely different styles are used. The “>” used as an arrow indicated to the user where to click in order to open the book while a small set of icons shaped as squares and diamonds underneath the book allowed navigation to various pages of the book. Unfortunately, those icons provided no information about what to expect at the other end of the interaction.

On the *Burn Notice* page an assortment of menu items, rotating Flash elements, advertising, embedded links, and images that serve as buttons provide a wide variety of navigational devices that leave the user with a huge amount of information to process before making a decision about going into the narrative. Very little information is provided as to what the user can expect at the other end of any links.



Source: USA Network (USA Network, 2011)

Figure 52. Screen capture of the *Burn Notice* home page

When designing the interactions for a transmedia narrative, particularly for an entry point to the narrative, the designer needs to ensure that only as much information as is absolutely necessary should be provided. That information needs to be located where users are making and executing navigational decisions (Passini, 2000, p. 91). Each decision in the decision plan requires information that is appropriate for both the decision to be made and the setting in which the decision making occurs (Passini, 2000, p. 94).

One of the challenges of transmedia narratives is that a user can enter the story or storyworld for the first time at multiple points. The design of the calls-to-action at each of those entry points should follow the guidelines identified for a single entry point.

A false affordance is a navigational cue that doesn't work as the average user might expect. A page near the beginning of the *Collapsus* site features a world map with an interactive crosshair that can be moved over the map (see Figure 53). However, clicking it on a location does nothing. The only interaction possible on the page is to cursor over and click on the small photographs located low on the page. This false affordance distracts the user from the actual links present on the page and makes it appear that the page itself is broken, disrupting the narrative experience.

Storyworld Level Navigation

At the storyworld level the user can make a number of jumps that need to be considered because of their potential impact on the design of the call-to-action. A number of possible combinations of jumps at this level have been identified by Dena (Dena, 2007). The descriptions of these jumps have been modified slightly here:

- *Intra-world*: The user moves between stories (sometimes called “event-Realms”) within a storyworld. The stories may be on the same or different

mediums (i.e. the user watches a DVD with a feature length movie and then jumps to another DVD with the story's sequel or alternately from a novel to a DVD). Intra-world jumps occur at the *story* level of the story ontology.



Source: Submarine Channel (Submarine Channel, 2011)

Figure 53. Example of a false affordance on the *Collapsus* site

- *Inter-world*: The user moves between stories in different storyworlds (i.e. the user watches a movie like *Narnia* that then goes to a movie or novel from the *Lord of the Rings* series). Inter-world jumps occur at the *story* level of the story ontology.
- *Extra-world to world*: This type of jump moves the user between fictional websites and real-life websites (i.e. the user reads a web-based novel set in a particular location and then jumps to a real-world website to find more information about that setting).

- *Meta-world to world:* This type of jump moves the user from a commentary about the storyworld to the storyworld itself (i.e. the user reads an online review about the storyworld and follows a link to it).

For information on the direction and timing of the jumps between units, see the interaction design tasks at the story level.

Story Level Design Tasks

The third level of design tasks occurs at the story level (see Table 5). At this level key decisions on individual stories within the storyworld are made. The narrative design tasks begin with the development of the story concept, dramatic question, and controlling idea, which will shape the narrative content. That is followed by the selection of story structure, narrative point of view, plot structure, and identification of any sub-stories. The decisions made when doing these tasks will determine how the content will be structured from a narrative perspective.

Significant objects and the cast of characters that will populate the story are also created at this level. The interaction design tasks focus on identification of media and platforms that may be used to publish the story, develop a preliminary overview of user navigation, and preliminary identification of story assets.

Story Concept

Story emerges from the interrelationships of *existents*, *events*, and *settings*. A *trans-media narrative* is a type of story. A *story* is a series of acts that build to a last act climax or story climax that brings about an absolute and irreversible change in the protagonist (McKee, 1997, p. 42).

Table 5. Story level design tasks

Story Level Design Tasks		
Narrative Design	Engagement Design	Interaction Design
<ul style="list-style-type: none"> • Develop story concept • Develop dramatic question • Develop controlling idea • Select general story structure • Select narrative point of view • Select story mode (presentational versus representational) • Select general plot structure • Develop sub-stories • Select story timeframe • Select characters and roles • Develop character arcs • Develop preliminary storyboards 	<ul style="list-style-type: none"> • Determine if transmedia narrative involves shared vs. individual participation • Determine importance of including real people, settings, and events in transmedia narrative • Determine if transmedia narrative is time-agnostic or time-dependent • Determine if transmedia narrative is location-agnostic or time-dependent 	<ul style="list-style-type: none"> • Identify media/platforms • Develop user journey diagram • Develop preliminary calls-to-action plan • Compile preliminary assets list

The story’s *concept* asks one or more compelling “what if” *dramatic questions* that the author seeks to answer through the story. The story’s concept contains within it a very brief description of a *quest*, *goal*, and *conflict* (Brooks, 2011, pp. 36-43).

Dramatic Question

The *dramatic question* is a compelling “what if” question that raises the basic question the story will answer and is directly related to the conflict of the story (Porter, Larson, Harthcock, & Nellis, 2002).

Controlling Idea

A story’s *controlling idea* can be expressed in a single sentence that describes that describes how and why a character’s life undergoes a change in *state* over the course of

the story (McKee, 1997, p. 115). The story's *controlling idea* emerges from the story's concept (Brooks, 2011, pp. 117-120). The term "*theme*" may be used in place of "*controlling idea*".

Story Structure

One of the biggest challenges of transmedia narratives is developing a story structure that fits a linear narrative into a non-linear transmedia framework. Fragmenting a story across multiple platforms won't work for most members of the audience (Norrington, 2010). When designing the structure of transmedia narratives, it is important to maintain the things that engage audiences in stories – linked strings of cause and effect, characterization and character motivation, and the dense interweaving of micro- and macro-plots (Abbott, 2005, p. 531).

A variety of story structures used in novels, film, and other media may be adapted to provide story structures that can work for transmedia narratives. Among the story structures the transmedia author can choose from include:

- *Episodic Structure*: An *episodic structure* is a single story presented as a series of episodes. As a transmedia narrative, a story that uses this structure would have episodes published across multiple media.
- *Layered Episodic Structure*: A *layered episodic structure* has a primary story and a number of sub-stories presented as a series of episodes. Characters and settings are shared across the primary and sub-stories. The primary story is presented in the dominant medium, while episodes of the sub-stories may be presented in either secondary media or a combination of the dominant medium and secondary media.

- *Parallel Structure:* A *parallel structure* has multiple stories, each with their own protagonists and antagonists, who go through their own stories. A common thread or event shared by the stories maintains the continuity but each story is separate and has a different conclusion (Parallel Storylines, 2008). Transmedia narratives that use a parallel structure can tell individual stories on their separate media. When designing a parallel story structure care must be taken to ensure that all of the stories are equally important and none becomes the dominant narrative.
- *Converging Structure:* The *converging structure* has multiple separate stories with their own protagonists and antagonists. Unlike the parallel structure, the stories in the converging structure become increasingly intertwined as the characters converge on a single common event at the conclusion of the story. A transmedia narrative can use separate media to tell the individual stories.
- *Hub-Narrative Structure:* The *hub-narrative structure* is similar to the converging structure in that it has multiple stories with their own protagonists and antagonists. However, the hub-narrative starts with a significant event (e.g. an accident, crime, etc.) that in some way affects all of the protagonists, who are present at the same location at the time of the event. The narrative then flashes back to tell the stories of how each of the characters came to be in the same place at the same time. Like the converging structure, the hub-narrative developed as a transmedia narrative can use separate media to tell the individual stories.

- *Fish-Bone Structure:* The *fish-bone structure* provides additional detail by allowing a user to branch from a linear narrative while keeping the user from wandering off by making the extended information visible inside or beside the original narrative. When well done, the fish-bone structure adds context and understanding. However, a poorly done fish-bone structure can result in the narrative losing its flow and the audience becoming lost in trivial information. (Love, 2004).
- *Vertical Structure:* The *vertical structure* has a dominant story thread from which a series of narrative “shafts” branch to provide additional detail. This structure differs from the fish-bone structure in that the “shafts” are not organized to align with the linear narrative. In a transmedia narrative the vertical structure can be used with additional content presented using different media in a non-linear manner.
- *Frame-Story Structure:* In the *frame-story structure* serves primarily as a vehicle for the telling one or more other stories. For example, Joseph Conrad’s *Heart of Darkness* has a narrator telling a story while the protagonist is quoted so as to give the appearance he is telling the story. In *The Princess Bride* a grandfather reads a romantic fairytale to his reluctant grandson. In the frame-story structure the outer narrative serves as a vehicle for the primary story, which is the inner narrative. For a transmedia narrative, a frame-story structure may be used to pull together one or more stories from within a storyworld that are presented on multiple media.

- *Story-Within-a-Story Structure:* The *story-within-a-story structure* is similar to the frame-story structure in that one or more narratives are presented within the action of another narrative. With the story-within-a-story structure, however, the outer narrative is the primary story while the inner narratives may disclose the background of characters or events. In some cases, the inner stories may be independent of the outer narrative and can be read separately or skipped entirely without affecting the meaning of the outer narrative. The story-within-a-story structure can be used in transmedia narratives in which the dominant outer story links to multiple inner stories that are published on different media.
- *Epistolary Structure:* The *epistolary structure* is a narrative created as a series of letters, diary entries, or other documents. This structure became popular in the 18th century and was used widely in novels. Mary Shelley's *Frankenstein* combines the epistolary and frame-story structures as the story is presented through the letters of a sea captain and explorer who encounters Victor Frankenstein and records the dying man's narrative and confessions. Blog entries, video clips, e-mails, tweets, and other forms of digital communication have been used in epistolary narratives. There are three types of epistolary narratives:
 - *Monologic* – letters, diary entries, and other documents from a single character
 - *Dialogic* – documents from two characters, sometimes organized so that there is a back and forth in communication between them

- *Polylogic* – documents from three or more characters. Some polylogic epistolary novels use simultaneous but separate correspondences of the characters to create dramatic tension.

Story Mode

The *story mode* refers to how the story relates to the audience during its presentation.

There are two story modes:

- *Representational*: In *representational* mode everything is expressed from the point of view of a character in the story and the author never addresses the audience. The story is presented as if a boundary is present that maintains the separation between the audience and the story.
- *Presentational*: In *presentational* mode there is no boundary between the audience and the story. The author acknowledges the audience, either directly by addressing them or indirectly through a general attitude or specific use of language, looks, gestures or other signs that indicate the character aware of the audience's presence.

These two modes can be combined in a frame-story structure to add depth to the narrative. From the perspective of transmedia narrative design, a combination of representational and presentational story modes (with or without a frame-story structure) can be used from medium to medium to add different perspectives to the narrative.

Narrative Point-of-View

The narrative point-of-view determines who the narrator is and what perspective of characters and events of presented to the audience. The narrator may be a character in the

story or may be outside the story with the ability to see all that happens. Narrative point-of-view presents some interesting opportunities for designing transmedia narratives.

With the *first-person* point-of-view the narrator is a participant in the story. The narrator may be the protagonist, someone who closely observes the principle character and is privy to the protagonist's thoughts and actions, or a minor character who has little to do with the events in the narrative. Several rarely used variations of the first-person point-of-view include:

- First-person plural where the narrator uses “we” to indicate a group that acts as a single unit
- Multiple first-person narrators with each providing a different account of the same event
- First-person stream of consciousness in which the narrator shares fragments of thoughts to reveal a mental state
- First-person omniscient in which the narrator is a character in the story but has knowledge of the thoughts and feelings of all the other characters
- Unreliable first-person narrator whose telling of the story can't be trusted by the audience

In the *second-person* point-of-view the narrator refers to the protagonist or another main character using the word “you”. This has the effect of making the audience members feel as if they are characters within the story. Second-person point-of-view narratives are rare.

Table 6. Comparison of narrative points-of-view

	Singular	Plural
First Person	I did...	We did...
Second Person	You did...	You did...
Third Person	He did; she did...	They did...

The narrator in the *third-person* point-of-view refers to all of the characters in the story with terms like “he”, “she”, “it”, and “they”. The narrator is outside of the story. This is the most flexible point-of-view.

Each point-of-view has its limitations but they present opportunities when designing transmedia narratives. For example, different media might be used to present the differing accounts of multiple first-person narrators. The intense intimacy of the second-person point-of-view could present a powerful emotional draw for the audience. The third-person point-of-view can be used throughout the narrative or may be combined with the first- and second-person points-of-view to provide an interesting combination of perspectives. Epistolary novels, which typically consist of a series of letters written by different characters, provide a useful template for transmedia narratives in which different narrators switch between perspectives.

Plot Type

A *plot* is a cause-and-effect chain of relationships that unify the actions, behaviors, and events in a story. McKee describes plot as the “writer’s choice of events and their design in time” (McKee, 1997, p. 43). He adds that plot provides an “internally consistent, interrelated pattern of events that move through time to shape and design the story”. These plot structures include (McKee, 1997, p. 43):

- *Archplot*: The archplot is the traditional plot structure for film and novels and uses causality, linear time, single protagonist, and consistent reality
- *Multiplot*: The *multiplot* weaves together multiple stories and protagonists
- *Miniplot*: The *miniplot* is open ended and has multiple protagonists
- *Antiplot*: The *antiplot* uses coincidence, nonlinear time, and inconsistent realities
- *Nonplot*: The *nonplot* is a slice-of-life work that don't require the same degree of continuity as traditional archplot with its causality, linear time, and consistent reality

The paradox between the linear nature of narratives and the non-linear nature of transmedia narratives makes the selection of the plot structure both challenging and extremely important. While the traditional archplot/Freytag structure is the more difficult form to adapt to transmedia narratives, it is also the structure that historically has been the most commercially successful way to tell stories.

“The ‘Hollywood’ model of storytelling is successful because it's the most engaging and the problem with more ‘arty’ stories is that while they may be intellectually rewarding they often lack the emotional satisfaction of the archplot/Freytag model,” Pratten said (Pratten, *Transmedia Narratives - Storyworld Model*, 2011).

The plot spans the entire length of the story and is typically divided into three to four acts (for full-length feature films and television dramas) or parts (for novels). The generic plot consists of (Field, 2005, pp. 142-159):

- *Act 1 (Part 1)*: Typically *Act 1* comprises the first 20 to 25 percent of the story (Brooks, 2011, p. 146) and introduces the story's setting and protagonist. Contained within Act 1 are the following plot points:
 - *Setup*: The *setup* opens the story, sets the "hook" for the audience, establishes the story's setting and protagonist, identifies what is at stake, and foreshadows (but does not introduce) the antagonistic forces.
 - *Inciting Incident*: The *inciting incident* is an event that radically upsets the balance of forces in the protagonist's life, arousing his/her conscious and unconscious desires and fears.
 - *Plot Point 1*: At *plot point 1* the protagonist makes a decision in order to restore life's balance. This decision launches him/her on a path that will define the protagonist's journey and the challenges that lay ahead.
- *Act 2 (Parts 2 & 3)*: Together *Parts 2 and 3* typically form *Act 2*, which comprises about 60 percent of the story. Act 2 involves the complicating and antagonistic factors affecting the protagonist. Plot points in Act 2 are:
 - *Pinch Point 1*: The first full appearance of the story's antagonist occurs at *pinch point 1*, providing the audience a view of the antagonist in its purest, most dangerous, and most intimidating form.
 - *Midpoint*: At the *midpoint* a reversal of fortune or major revelation changes the direction of the story arc.
 - *Pinch Point 2* – The audience is reminded of the story's central conflict at *pinch point 2*. This pinch point is often linked to pinch point 1.

- *Plot Point 2*: At *plot point 2* the protagonist experiences a dramatic reversal, decides enough is enough, and finally resolves to face the antagonist. This may also be a low point for the protagonist from which he/she must bounce back from in order to overcome the obstacles that remain.
- *Act 3 (Part 4)*: The final confrontation between protagonist and antagonist occurs in Act 3 (Part 4). This act is also where the story's issues are resolved and loose ends tied up.
 - *Showdown*: In the *showdown* the Protagonist confronts the Main Problem of the story and either overcomes it or comes to a tragic end.
 - *Resolution*: The *resolution* resolves any remaining issues in the story.
 - *Denouement*: The *denouement* is the story's epilogue and ties up the loose ends, giving the audience closure.

The selection of a plot type can have a significant impact on the overall design of a transmedia narrative. The Multiplot (which weaves together multiple stories and protagonists), the Miniplot (with its open ending and multiple protagonists), the Antipplot (with its use of coincidence, nonlinear time, and inconsistent realities), and the Nonplot (which is a slice-of-life work and not a story) don't require the same degree of continuity required of the traditional Archplot with its causality, linear time, and consistent reality.

Timeframe of Story

A story has a *temporal dimension* that is created by changes that put the story into the "flux of history" (Ryan, *Storyworlds Across Media*, 2011). A story's temporal dimension (story time) exists within storyworld time.

Sub-Stories

One or more sub-stories may be included within a story. The section on story structure discusses examples of how sub-stories can be used in various types of narratives, including transmedia narratives. Sub-stories have the same basic structure as the stories they are within, although they may be shortened and simplified. Sub-stories provide opportunities for development on multiple media.

Character & Character Role Selection

Where the character archetypes provide a framework that begins to describe who the characters are and what that drives them, the character roles describe the relationships between the characters. Character roles fall into three categories (Card, 1988, p. 59):

- *Walk-on and placeholder characters:* The *walk-on* and *placeholder characters* exist in the background to add realism or, if they appear in the foreground, it is to serve a simple function and then disappear. The “cannon fodder” characters in battle scenes that are quickly dispatched are an example of these placeholder characters. They are not developed as individual characters although some effort may go into creating them as a class of character, like the Orcs in *The Lord of the Rings* trilogy or the Imperial stormtroopers of the *Star Wars* films.
- *Minor characters:* The *minor characters* have a limited impact on the story, with their desires and actions causing plot twists but not substantially shaping the overall flow of the story. Typically, minor characters do one or two things before disappearing from the story. Jabba the Hutt from *Return of the Jedi*, the third *Star Wars* film, is an example of a minor character.

- *Major characters:* The *major characters* drive the plot through its twists and turns and move the story forward. The major characters fill a variety of roles (Phillips & Huntley, 1996, pp. 36-38):
 - *Protagonist:* The *protagonist* is the main character role in a story and drives the action. The protagonist will have a goal and undergoes a change – the “hero’s journey” – in the process of seeking to achieve that goal.
 - *Antagonist:* The character in the role of *antagonist* is in direct opposition to the protagonist. The antagonist may seek the same goal (e.g. find the significant object of the story) as the protagonist or may simply want to prevent the protagonist from achieving that goal.
 - *Sidekick:* The *sidekick* character role may be linked to the protagonist or antagonist. Each of those character roles may have their own sidekick. The sidekick character provides loyalty and support throughout the story and has unfailing faith in the rightness of the goals and actions of the protagonist or antagonist to which he/she is linked.
 - *Guardian:* The *guardian* character role is that of mentor or teacher to the protagonist. The guardian provides knowledge, guidance, support, and protection but also drives the protagonist to achieving the protagonist’s goal.
 - *Skeptic:* The *skeptic* character role is linked to the protagonist, but this character’s role is to question and doubt everything – the protagonist’s

thoughts, emotions and actions, the trustworthiness of other characters, anything and everything.

- *Emotion*: The *emotion* character role is linked to the protagonist and responds to story events emotionally without thinking and without concern for the practical implications of an emotional response.
- *Reason*: The *reason* character role is linked to the protagonist and responds to events in the narrative logically, while not letting emotion interfere with the rational.
- *Temptation*: The *temptation* character role is not necessarily directly opposed to the protagonist, but rather tries to hinder, divert, and delude the protagonist from achieving his/her goal, often by tempting and playing on the weaknesses of the protagonist.

Characters can be used to extend the transmedia storyworld, but how that is done differs depending on the category of character roles. Walk-on/placeholder characters, for example, should be developed as a class of character rather than an individual character. Minor characters could go either way – remaining as they are or expanding into major characters in their own right. Numerous television spinoffs, for example, have taken minor characters and put them into their own story where they became major characters. Major characters should be fully developed as individuals, providing detailed descriptions, back-story, and other aspects of the character.

Information about characters can be introduced using Web or blog pages with “About Me” type sections that provide back-story on the character; e-mails, tweets, Facebook wall posts, and similar messages that provide character information; or online “dos-

siers” that reveal information about a character as if collected by another party. These approaches are relatively shallow and provide little opportunity to understand the character’s motivations, values, desires, and fears. They provide the “first dimension”, showing the surface characteristics of the character (Brooks, 2011, pp. 63-68). The “second dimension” of the character is the deeper issues and back-story that explain why you see what you see in the first dimension (Brooks, 2011, pp. 68-70). The “third dimension” of the character – the character arc – is how he/she deals with the inner demons to rise above himself/herself and the obstacles encountered in life (Brooks, 2011, pp. 70-74).

Character Arc

Looking at a character’s development can become one or more stories in the storyworld. One could ask the question of how the antagonist/villain in one story came to be a villain. A story set in an earlier storyworld time could describe the journey of the villain, with that character in the role of the protagonist. Darth Vader, the antagonist in the first three *Star Wars* films (*Star Wars*, *The Empire Strikes Back*, and *Return of the Jedi*) films is an example of the protagonist in a series of stories set earlier in storyworld time. The three prequel films (*Episode I: The Phantom Menace*, *Episode II: Attack of the Clones*, and *Episode III: Revenge of the Sith*) document the fall from grace of Anakin Skywalker and his gradual transformation to the evil Darth Vader. While George Lucas used film as the medium for those six narratives, shifting the development of a character in storyworld time provides opportunities for the use of various media.

The hero’s journey was developed in Joseph Campbell’s *The Hero With a Thousand Faces* (Campbell, 1949). Campbell’s study of mythic and fairy tale narratives led him to

conclude that the shapes and stages of a hero's transformation (the hero's journey) were similar across time and cultures.

Campbell's structure of the hero's journey has been adapted and used by many writers. Numerous examples of modified versions of the hero's journey exist, but most retain the essential steps identified by Campbell. One such modified version is included in *45 Master Characters: Mythic Models for Creating Original Characters*, which includes a feminine version (Schmidt, 2001, pp. 199-242) as well as a masculine version (Schmidt, 2001, pp. 243-277) of the journey.

Campbell's original version of the hero's journey or any one of its derivatives can be used effectively to structure the transformation of the protagonist. They can also serve as the framework for structuring narratives, including transmedia narratives. Typically, each step of the journey is a different setting, with a different set of challenges. These steps are natural break points in the narrative and may serve as transition points or bridges across media platforms and media. The transition points between steps of the journey can provide an opportunity to include cliff hangers and other suspense building techniques into the narrative in order to encourage the audience to make the jump to another platform or medium. Alternate reality games (ARGs) can use transitions or the journey's steps themselves to incorporate puzzles and other gaming elements into the narrative.

Preliminary Storyboards

The Storyboards are used to organize a story and list its key elements. A transmedia narrative can contain a combination of video, text, still photos, audio, graphics and interactivity presented in a nonlinear format. The first step in storyboarding a transmedia narrative is to divide the story into logical, nonlinear parts. These parts might be based on

characters, settings, events, or other aspects of the story. Pratten's *LowLifes* is an example of how a transmedia project can be divided into logical parts based on characters. The synopsis lays out the basic premise of the story:

Larry Hayes is a San Francisco homicide detective with a drug addiction.

He has a dead informant, an ex-wife fighting for custody of their daughter, and a private eye hired to dig the dirt on him. (Pratten, Transmedia Story Development, 2010)

Pratten goes on to note that *LowLifes* involves one story seen from three perspectives and told over three media platforms.


The next step is to divide the content of the story among the media that will be used for the transmedia narrative. Different media have different strengths (Stevens, 2011):

- *Video*: The best medium for depicting action is *video*. It can be used to take the users to a setting that is central to the story or hear and see characters that play important roles in the story.
- *Still Photographs and Images*: Strong emotions, particular moods, or important points in the story are best expressed with *still photographs and images*. They are often more dramatic than video and provide the user with time to examine the image in detail. Panoramic or 360-degree images can immerse a user in a story setting. Images also allow users to control the pace at which they view information (horizontal information cascade). Digital technology is blurring the boundary between photography and computer-generated images that can be photo-realistic in quality. When combined with audio, still photographs and images can highlight emotions.

- **Graphics:** Still and animated *graphics* can show how things work (e.g. an animated diagram of the gears in a machine) and go where cameras can't (e.g. inside molecules or into space). At times the line between still photographs/images and graphics can become blurred.
- **Audio:** Good *audio* can make video and still photographs/images more intense and real. Poor quality audio, on the other hand, detracts from video and still photographs/images. Audio should not be used alone.

Objective # _____ Storyboard # 1 of 45

Understanding
Your
Automobile



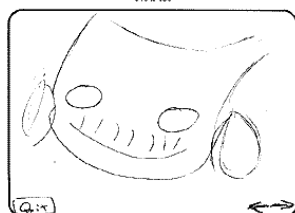
Card Info	Button Info
Card Name: <u>Title</u>	If: <u>Right arrow</u>
Card Number: _____	then: <u>go next</u>
No. of Buttons: <u>1</u>	
No. of Fields: _____	
Background Name: _____	

Comments: Background color: Dark Blue
 Text: Font: Verdana size 14, bold, Bright Yellow
 Buttons: Red square, left arrow
 Background: The car is in a white tunnel, will drive from left to right on the screen when it reaches the right side the screen will automatically go to the next screen.
 Audio: Sound of car motor running while car moves across the screen

Multimedia Storyboard

Name of course	Description of the screen	Title and duration of the screen
Title of program: <u>Understanding Your Automobile</u>	Description of the screen: <u>Buttons at car focus user of <u>arrow</u> to go into screen</u>	Title and duration of the screen: <u>None</u>
Author:	Description of the interaction:	Picture source:
Screen # of 45 screens	640 x 480	

Background: Blue
 Color: Red, Yellow
 Use: Buttons, go to screen
 Action: None
 Buttons may be used at any time during presentation



Audio: Ignition, engine, doors as screen opens
 3-Dim: None as car starts to speak
 Navigation: See attached document

The Learning Center of Cleveland Community College, Cleveland, OH A Maricopa Community College

Source: Maricopa Community Colleges

Figure 54. Sample storyboards with preliminary information

- **Text:** A description of the history of something in the story, first-person accounts of an event, and a process description can all use *text* to convey information. Text will often be combined with still photographs/images and graph-

ics and will also be used for “what’s left when you can’t convey the information with photos, video, audio, or graphics” (Stevens, 2011)

In Pratten’s *LowLifes*, Detective Larry Hayes’ perspective is told in a novella, private eye Lauren Ortega’s in a series of web videos, and ex-wife Jen Hayes’ in a blog.

The information presented with each medium should be complementary, not redundant. Some overlap among different media can be useful as a way to invite users to move from one medium to another and help orient users after they make the jump to a new medium. This overlap should be brief and provide users with just enough information to make a cognitive connection between the story elements on both sides of the jump.

A wide variety of templates are used for storyboarding content. The specific format doesn’t matter, as long as the template provides enough room to document the various elements associated with a scene from the narrative.

Individual vs. Shared Participation

Designers will need to deal with a broad range of issues when addressing the deceptively simple question of whether the transmedia narrative focuses on individual versus shared participation. At one time, individual participation with a medium meant taking one’s book and retiring to a favorite spot, while shared participation involved joining group events or attending a performance at a theater. Now, however, the range of individual versus shared options is much larger. Individual participation may still involve retreating to a private spot with a book, but it could just as readily describe the behavior of a gamer playing alone or a transmedia narrative user reading and viewing elements of the narrative but not participating in any other way. Shared participation covers a similarly broad range, involving attendance at gatherings and performances in the real world,

dropping in on assemblies in a virtual world, attending webinars and online conferences, or participating in a social media like Twitter or Facebook.

In looking at the question of individual versus shared participation, the designer needs to clearly think through why one approach versus the other should be used. Unless there is a compelling reason to use shared participation to advance the narrative or significantly improve the user's level of engagement, designing for individual participation is probably better (see Points 4 and 5 about the limitations of shared participation and related time and location issues).

Use of Real People, Events & Settings

The interactions and in-game events in well-designed ARG mimic real life and don't announce themselves as elements in a game (Szulborski, 2005, p. 13). The virtual world is not modeled through a symbolic interface. Rather, the interactions in an alternate reality game can take many forms and are generally designed to imitate the kinds of interactions a player might have in his everyday life. In the best games, the characters will use real communication methods, such as e-mails or telephone calls to talk to and guide the players in their adventures. Many ARGs also integrate instant messages with in-game characters appearing online to chat with players. Real-time interactions like this go a long way to helping establish the believability of the characters.

Time-Agnostic vs. Time-Dependent Stories

Designing a transmedia narrative to be time-agnostic provides both the author and the audience more flexibility than making it time-dependent. Time-dependency can take at least three forms:

- Requiring the user to participate in a narrative or some of its elements at a specific time (e.g. scheduling an online or real world event for a particular date and time).
- Setting “checkpoints” in the narrative that are opened, closed, or re-directed at a predefined time (e.g. requiring users to reach a particular point in an adventure story before a specific time when an event is triggered).
- Designing the narrative so elements of the story need to be revealed in a specific sequence to have meaning (e.g. revealing a series of clues that progress the user through a mystery narrative). In this case, it is the sequencing that is important, not the specific date and time.

Alternate reality games are extremely time-dependent for all three reasons noted. Start dates and times, timing for the release of clues, and the sequence in which story elements are revealed are all critical to the success of these types of games. That time dependence adds significantly to the user experience, but once the game has run its course, it makes it difficult if not impossible to play the game again or for newcomers to join late. As a result, alternate reality games tend to be “one-of” projects, which makes them useful for the promotion and marketing of movies or consumer products but far less effective as narratives with any long-term value.

Designing a transmedia narrative or some of its elements to include shared participation will make it time-dependent if online or real world events, performances, and other gatherings require the scheduling of specific dates and times.

In spite of the limitations posed by time-dependency, there may also be advantages. The carefully choreographed release of information in transmedia narratives and alternate

reality games can be closely linked to marketing campaigns they support. It may also be necessary to schedule when various narrative elements are published in order to publish the transmedia narrative in serial form (e.g. a transmedia narrative for which the initial release is carefully sequenced to avoid overwhelming the audience).

The best approach may be to use a time-dependent initial release but when the entire transmedia narrative has been published, ensure that new users can enter and enjoy it as a time-agnostic narrative.

Location-Agnostic vs. Location-Dependent Stories

Designing a transmedia narrative to be location-agnostic also provides the author and audience with more flexibility than designing it to be location-dependent. Location-dependency can take at least three forms:

- Requiring the user to participate in a narrative or some of its elements at a specific location (e.g. having a gathering at a particular location – typically in the real world but this may also include virtual world locations).
- Setting “checkpoints” in the narrative that require a user to go to specific locations (e.g. requiring users to visit a specified address to find a clue that leads to the next step of the narrative).
- Designing the narrative so that user can only interact with it in specific types of environments (e.g. a gory or risqué image or video clip may be appropriate for viewing in private but not in public).

Transmedia narratives and alternate reality games can add significantly to the user experience by making it possible to engage the senses through sights, sounds, smells, and other factors in the environment. However, the location and its use within the narrative

must be considered carefully before including location-dependent elements. The designer needs to consider what happens to the user experience of the narrative if individual users visit at different times of the day, encounter different weather conditions, or a major change in the environment occurs (e.g. a building mentioned in the narrative is demolished).

Media Selection

A storyteller alone in front of audience has a human voice, some gestures and facial expressions, and perhaps a few simple props to tell the story with. The creators of a multimillion dollar Hollywood epic film, on the other hand, have the full range of modern technology to tell the same story with. Because of the medium used, there is a significant difference how this hypothetical story is told.

A broad range of media can be used to present a story or story elements from a transmedia narrative. Among the multi-platform components the transmedia author needs to consider are (Hayes G. P., 2011, p. 8):

- *Webisode*: A *webisode* is audio or video content delivered as a developing narrative. Webisodes are often called podcasts, vodcasts, or mobisodes.
- *Community Hub*: A *community hub* is a connected service site dedicated to growing and managing a community of interest around a property.
- *Casual Game*: A *casual game* is easy to move into and out and be anything from a single player to a massively multiplayer game.
- *Serious Game*: A *serious game* specifically puts the user into real world scenarios with a series of objectives that must be accomplished.

- *3D-World Games*: A variety of *3D-world games* (e.g. *World of Warcraft*, *Call to Duty*, etc.) use goal-driven game formats and high production values for game play and, in some cases, presentation of narratives.
- *Social Virtual World*: A social virtual world is a shared virtual space (e.g. Second Life) where users socialize and create their own stories. Social virtual worlds generally are not goal-driven and differ from 3D-world games.
- *Physical Installation*: A project that uses a fixed physical interactive device (e.g. interactive kiosk or sound installation) is a *physical installation*. Physical installations are often event-driven.
- *Social Film/Social TV*: Hybrid projects that combine social media and linear video elements are *social film* or *social TV*.
- *Location-Based Service*: A *location-based service* layers digital information over the real world using GPS-equipped mobile devices like smartphones or tablets. Location-based services can be used for entertainment, education, marketing, and other applications.
- *Social Media Storytelling*: A range of social network channels (e.g. Facebook, Twitter, etc.) use *social media storytelling* to deliver fictional or non-fictional content.
- *One-Way Website*: A *one-way website* is a static website that presents content but does not allow users to interact with that content.

Refer to the “Media/Platforms for Transmedia Projects” section in the Transmedia Project Level Design Tasks for additional on media and platforms.

When selecting the media and platforms to use for a transmedia narrative, consider (Pratten, *Getting Started with Transmedia Storytelling*, 2011, p. 29):

- The relative strengths and weaknesses of each platform
- How to support the weaknesses of one platform with the strengths of another
- How the platforms work together to create the right mix of media
- How the calls-to-action on the platforms will support each other
- How the story needs to be changed to accommodate each platform

User Journey Diagram

A user journey diagram (see Figure 55) and its accompanying notes show how a user might move through a transmedia narrative. Time is mapped on the horizontal axis and the media channel or platform is on the vertical axis. The diagram provides a clear picture of the dependencies and bridges between each component of the transmedia narrative and highlights potential issues with points of entry, calls-to-action, and exits from the narrative (Hayes G. P., 2011, p. 8). The text in each box on the diagram should be used to reference a more detailed description of each component in a Preliminary Call-to-Action Plan section (below).

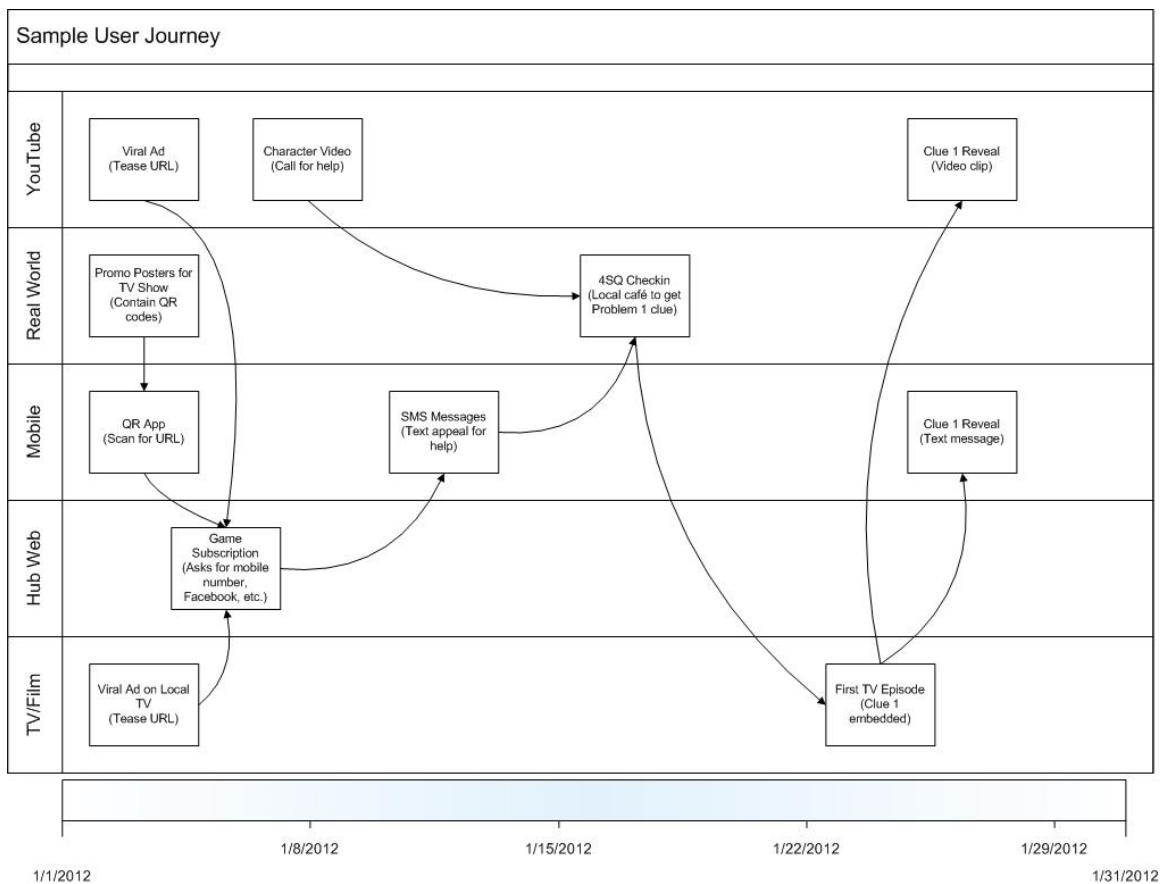
Preliminary Call-to-Action Plan

The preliminary interaction/call-to-action plan provides a detailed narrative description of the elements identified on the user journey diagram. This plan should highlight the calls-to-action of each key interaction.

The four elements of the call-to-action are a simplification of the structure of perceptual opportunities outlined by Earnshaw and Vince (Earnshaw & Vince, 2001, pp. 27-34).

They are also consistent with the elements of Dena’s Primer → Referral → Reward model of CTAs (Dena, 2007). The four elements of the call-to-action also address the three questions asked by Pratten (Pratten, Getting Started with Transmedia Storytelling, 2011, pp. 31-32):

- What’s my objective in having audiences cross platforms?
- How can I motivate audiences to cross platforms?
- What’s the reward then they get there?



Source: Adapted from Gary Hayes (Hayes G. P., 2011, p. 8)

Figure 55. Sample user journey diagram

A call-to-action serves as a signal through which narrative paths are located by the author and discovered by the user. A call-to-action should persuade and guide a user to

traverse the interconnected media and stories of a transmedia narrative (Dena, 2007). The call to action can be as simple as a button on a web page that says “Click Here” or as complex as scattered clues that point to an alternate reality’s “rabbit hole”.

Transmedia narrative designers need to be highly conscious of the “design appearance, content, and manipulation characteristics” of the call-to-action to ensure they match users’ needs respectively in the sensory, cognitive, and physical actions taken (Hartson, 2003) as they progress through the narrative. The sensory, cognitive, physical, and functional affordances identified by Hartson should be applied to the design of the elements of the call-to-action. The effectiveness of a call-to-action can also be enhanced by applying affective affordances to it. Each call-to-action should have an attractor, motivator, connector, and retainer.

The transmedia narrative designer should have a clear understanding of the purpose of each call-to-action. Jumping from one story segment to another or from medium to medium without a solid reason is poor design. Each jump should have a purpose that progresses the narrative and keeps the user engaged.

The designer of the call-to-action must determine if the content at the far end of a jump is essential to the coherence of the narrative or to unlock or make available other interactions. Dena calls this “dependency” (Dena, 2007). Essential content should be treated differently than non-essential content. For example, essential content should use a media platform the average user has. Optional content, on the other, can be placed on more “exotic” platforms that a sub-section of the user population has.

The story elements and media on both sides of a jump should be described early in the process of designing a call-to-action. The designer needs to consider how the call-to-

action moves the user from one medium to another. Dena describes a number of factors related to the story and media elements that can have an impact on the effectiveness and efficiency of the call-to-action (Dena, 2007). The medial factors the designer should identify are movement between (Dena, 2007):

- Networked and non-networked media
- Static and mutable platforms
- Fixed and portable platforms
- Public and private platforms
- Multi-modal and mono-modal media
- Visual and text-based media

The capabilities of the medium on each side of the jump need to be considered in the design of the call-to-action. For example, a call-to-action designed to move a user from an element of the narrative located on a website (networked) to a DVD (non-networked) needs to consider whether:

- The user has the DVD and if not, whether an online order feature to obtain the DVD should be included in the call-to-action
- The DVD will be played in a computer, game console, or stand-alone DVD player, which affects the capabilities of the hardware and the types of input devices available.

The user's jump relative to the storyworld (the world relation factor) also needs to be considered because of their potential impact on the design of the call-to-action. A number of possible combinations of jumps have been identified (Dena, 2007). Storyworld level jumps are discussed in the storyworld section. Jumps that occur at the story level are:

- *Intra-unit*: The user moves within one narrative element in a particular medium to another aspect of that same narrative element in the same medium (i.e. jumping from a video segment on YouTube to another video segment that is also on YouTube). Intra-unit jumps occur at the *beat*, *scene*, and *sequence* levels of the story ontology.
- *Intra-story*: The user moves from one narrative element to another on a different medium but remains within the same story (i.e. the user watches a video clip on YouTube and then jumps to an interactive comic on a web page). Intra-story jumps occur on the *sequence* or *act* levels of the story ontology.

The direction and timing of the jump between units needs to be considered when designing the call-to-action. These movements (called traversal types) have been identified as (Dena, 2007):

- *Sequential*: The user completes one narrative element of a story and moves to the next. This can happen during either a single session or during multiple sessions. Sequential jumps can occur at the *beat*, *scene*, and *sequence*, *act*, or *story* levels of the story ontology, although the further down the hierarchy, the more “friction” there is.
- *Simultaneous*: The user engages with the content on more than one platform at the same time (i.e. listening to music while reading a book). Ideally the content should be synchronized during a simultaneous engagement. Designing for simultaneous engagement ideally involves working at the *beat* or *scene* level of the story ontology.

- *Concurrent*: The user accesses units of the narrative content on more than one platform at the same time, but shifts focus back and forth across the various platforms. Concurrent engagement ideally involves working at the *scene* or *sequence* level of the story ontology.
- *Cycle*: The user jumps back and forth between units of the narrative content on different platforms, re-entering the same content when returning to a platform. This can occur in either a single session or across multiple sessions. Cycle jumps ideally involve working at the *scene* or *sequence* level of the story ontology.
- *Spiral*: The user moves back and forth between units of narrative content on different platforms, re-entering new content on each return to a platform. This can occur in single or multiple sessions. Spiral jumps ideally involve the designer working at the *scene* or *sequence* level of the story ontology.

The time it takes to make a jump (traversal time) can have a significant impact on the effectiveness of the call-to-action. Three traversal time factors have been identified (Dena, 2007):

- *Pacing*: The *pacing* is the amount of time that elapses between calls-to-action. Pacing can affect the user at both the cognitive and affective levels. A rapid flow of calls-to-action has the potential to overwhelm the user (see *information cascades* for further information) and hinder both navigation and understanding of the transmedia narrative. However, skillfully handled pacing can generate feelings of excitement, relaxation, tension, and so on in the user. The

transmedia narrative designer needs to consider how pacing will be used and whether the user will be give control over it.

- *Urgency*: The *urgency* of a call-to-action can have one of three characteristics – a) requiring an instant action from the user, b) requiring action at a specific time, or c) requiring an action at any time. The greater the urgency, the more control the designer has over the narrative.
- *Duration*: The *duration* of a jump is the amount of time it takes the user to jump from one platform to another (i.e. the difference in time it takes for a user to go from a comic to turning on a television versus going to a movie theater to see the same film). The longer the duration of a jump, the greater the possibility of losing the user.

Who the call-to-action addresses and how it addresses them is another factor the transmedia designer should consider. Four types audience address factors have been identified (Dena, 2007):

- *Many-through-one*: A single call-to-action addresses all of the users of the transmedia narrative.
- *Many-through-many*: Many calls-to-action address many different users.
- *Some-through-some*: Some calls-to-action address some users while excluding others.
- *Some-through-none*: The lack of an obvious call-to-action can trigger some users to action, particularly if they are players in alternative reality games.

Call-to-action-specific variables can affect the behavior of the call-to-action itself.

Four types of these variables have been identified (Dena, 2007):

- First, repeated, or last call-to-action
- Fixed or changeable call-to-action
- Generalized versus personalize call-to-action
- In-story call-to-action (presented in the context of the storyworld) versus a meta-call-to-action (presented outside the context of the storyworld)

From a narrative perspective, any call-to-action can provide an opportunity for developing the story. For examples, patterns of retainers can create narrative potential, with attractors and connectors creating suspense and meaningful ordering of events. Patterns of attractors and connectors, when combined with very subtle retainers, can create intense narrative potential when suspense is the objective of the author (Earnshaw & Vince, 2001, p. 49).

Attractor

The primary purpose of the attractor is to draw the user's attention to the call of action. The environment around the user of a transmedia narrative, both on and off screen, is full of information competing for the user's attention. The attractor needs to be able to cut through the information clutter and hold the user for just long enough to allow the motivator (the next element of the call-to-action) to begin working on the user. Attractors often rely on users' natural curiosity and can be characterized according to how they draw the user's attention (Fencott, van Schaik, Shafiullah, & Ling, 2003):

- *Mystery Objects*: Partially obscured or revealed objects, strange or unknown objects, and open or closed doors are examples of *mystery objects*.
- *Active Objects*: Movement, flashing lights, and sounds that change in pitch or volume are examples of *active objects*.

- *Alien Objects*: Objects that appear to belong to another world (from outside the storyworld) or which are used in an unusual context (i.e. maps, strange symbols, etc.) are examples of *alien objects*.
- *Sensational Objects*: Objects that attract attention through non-visual senses (i.e. spatialized sounds, vibrations, smells, etc.) are examples of *sensational objects*.
- *Awesome Objects*: Large, famous, expansive, or intricate objects are examples of *awesome objects*.
- *Dynamically Configured Objects*: Objects that move or change shape is examples of *dynamically configured objects*.
- *Composite Objects*: A group of objects that exhibits a range of the behaviors described above but which functions as a single attractor is an example of *composite objects*.

While most attractors rely on users' curiosity, they may also appeal to other emotions. For example (Fencott, van Schaik, Shafiullah, & Ling, 2003):

- *Objects of Desire*: Objects that have some benign significance to the user or that may be used to meet the goals the user has set are *objects of desire*. Objects of desire may be used to direct users towards a specific choice.
- *Objects of Fear*: Objects that have some malign significance to the user or achieving the user's goals are *objects of fear*. Objects of fear may be used to direct users away from a specific choice.

The use of attractors – particularly objects of desire and fear – present opportunities to add emotional impact to the narrative while also serving as navigational tools.

The level of *user attention* and the potential effectiveness of the attractor are affected by how users prefer to process information (user orientation) and the information that is in the information field.

Transmedia narrative design should take into account these different user orientations. A social media component, for example, may attract users who have a social orientation but not be of interest to other users. Games and activities that involve control, goal achievement, and competition may attract the attention of action oriented users but drive away time oriented users who are aware of how much time it could take to play.

- *Visual Orientation:* Users with a *visual orientation* are attracted to information presented in the form of objects, movement, graphics, and color.
- *Action Orientation:* Users with an *action orientation* are attracted by the opportunity to touch and manipulate elements of the narrative and participate in activities that involve control, goal achievement, competition, and challenge skills.
- *Social Orientation:* Users with a *social orientation* are attracted to social activities in which there are opportunities to engage, perform, or participate.
- *Time Orientation:* Users with a *time orientation* are conscious of how much time they have available. They adjust their activities based on their expectation of how long it will take to explore the transmedia narrative.

The design of the attractor must conform to good design principles drawn from the medium used to create it. For example, a still image used as an attractor should conform to the principles of good visual design, which would include:

- Eliminating visual clutter

- Using color, shape, tone, texture, and so on to make the image aesthetically interesting and provide clues to its meaning
- Using iconic images
- Understanding the cultural associations that an image has
- Using spatial cues to highlight important information and focus user attention

This is not an exhaustive list; many, many volumes have been written on visual design. The challenge of transmedia design is understanding each medium both individually and together. Each medium has its own set of design conventions and principles that the transmedia narrative designer needs to be familiar with when designing the attractor.

- Sensory affordances should be designed for the *perceiving* level in the psychomotor domain of Bloom's taxonomy. See Appendix C for a detailed listing of the levels and related activities in the psychomotor domain. See Appendix E for a list of the components of sensory affordance quality.

The attractors may be part of the transmedia narrative itself or can be "alien" attractors (i.e. cursors, arrows, etc.) that provide information without being part of the story. It is important that alien attractors provide information without distracting from the narrative or disrupting its internal consistency (Earnshaw & Vince, 2001, pp. 48-49).

Motivator

The purpose of the motivator is to facilitate the user's development of a task decision. The cognitive affordances of the motivator are particularly important to the motivator's effectiveness. The purpose of the motivator is to give the user a reason to interact with the narrative. This can be done by drawing the user's attention to an area of interest and rewards, which in turn are intended to satisfy the user's task decision goals.

The features of a transmedia narrative can facilitate or inhibit user's motivation to engage with the narrative. The amount of time and effort required, psychological fatigue, selective focus, enjoyment, relevance, clarity, attractiveness, and potential value to the user all affect motivation (Screven, 2000, p. 189). The user of a transmedia narrative is likely to be in a large *information field*. An *information field* is all of the information within the user's immediate environment. This includes not just the information the transmedia narrative itself presents, but also news websites that may be open on the desktop, e-mail alerts that pop open on the screen, the smartphone that vibrates for an incoming text, people in the physical space around the user, and so on. Effective control of the information field means eliminating as many forms of noise (i.e. auditory, visual, etc.) as possible. However, removing all of the noise and controlling all of the information in the information field is impossible, so transmedia narrative designers need to make the most effective use of the information over which they do have control. This means controlling the messages put into the information field.

During the design process, transmedia narrative designers need to explicitly identify the intended message(s) for each segment of the narrative while identifying and eliminating as many sources of unintended messages as possible. Designers should also have an understanding of media, cultural, and other factors that could affect how the audience processes and interprets the information presented.

Meaning can emerge from the gaps between pieces of the narrative just as negative space in visual art can be used to depict a subject by showing everything around that subject but not the subject itself. The transmedia narrative designer needs to be conscious of the messages that narrative gaps and transitions between different media and platform

create. Unintended messages should be eliminated and intended messages brought to the forefront.

Some of the physical characteristics that reduce the efficiency of a call-to-action's motivator include long, poorly spaced text; information overload; labels and graphics that are disconnected from the motivator's content; and too much unneeded information in proportion to needed information (Screven, 2000, p. 147). To maximize the effectiveness of the motivator the designer should:

- Remove distracting visuals (Screven, 2000, p. 148)
- Improve thematic orientation at entrances (Screven, 2000, p. 148)
- Create leading questions that focus attention on relevant message elements (Screven, 2000, pp. 174 - 175)
- Remove or relocate secondary and nonessential information, topics, media, and other potential distractions (Screven, 2000, p. 148)
- Use animated and simulated processes that help users visualize complex processes (Screven, 2000, pp. 174 - 175)
- Use directive text and graphics that provide clues by pointing out key information (Screven, 2000, pp. 174 - 175)
- Use matching and sorting tasks that help users connect new concepts with existing knowledge (Screven, 2000, pp. 174 - 175)
- Create information maps that help users visualize information and interrelationships (Screven, 2000, pp. 174 - 175)

The amount of time a user will spend with a motivator will often increase when the user is “aware that objects, data, relationships, ideas, or other information has some application to their social, emotional, or utilitarian lives” (Screven, 2000, p. 149).

- When designing cognitive affordances in a transmedia narrative, the designer should determine what level of performance is required of the user. The cognitive domain of Bloom’s revised taxonomy provides a useful hierarchy of cognitive skills that can provide transmedia narrative designers with framework for doing this. The skills, from lowest to highest order, are *remembering*, *understanding*, *applying*, *analyzing*, *evaluating*, and *creating* (Clark, 2010). See Appendix B for a detailed listing of the levels in the cognitive domain and related digital activities. See Appendix E for a list of the components of cognitive affordance quality.

Extraneous processing of information detracts from the user’s construction of knowledge and should be minimized through:

- *Temporal Contiguity*: Related information (i.e. a picture and the narrative that describes it) should be presented simultaneous.
- *Spatial Contiguity*: Related information (i.e. a picture and the text that describes it) should be placed near each other on the page or screen.
- *Signaling*: Essential information should be highlighted.
- *Coherence*: Extraneous words, sounds, pictures, and other information should be eliminated.

- *Eliminating Redundancy:* Redundant information (i.e. on-screen text that appears as the same information is presented by voice narration) should be eliminated.

The user's ability to receive the basic information presented by the motivator is determined by *essential processing*. The design of the motivator should ensure essential processing is managed to ensure maximum efficiency using:

- *Segmentation:* Information should be broken into "bite-size" pieces that are easy for the user to process.
- *Pretraining:* Information explaining the purpose and operation of each element of the motivator should be provided to the user.
- *Modality:* Spoken words should be used rather than printed text whenever possible.

The user's ability to make sense of the basic information received is determined by *generative processing*. The design of user interactions should foster generative processing through:

- *Personalization:* Information should be presented in a conversational rather than formal style.
- *Voice:* Narration should be presented using a human voice with standard characteristics (i.e. accent, pitch, etc.).

Physical Affordances

The connector makes it possible for the user to take the action needed to fulfill the task decision. The design of the connector should focus on the cognitive affordances needed by the user to make the cognitive links between story elements (including devel-

oping the user’s cognitive map) and the physical affordances that allow the user to take the actions needed to move to the next element of the story.

The connector should provide enough information that the user has a general idea of what will happen next like knowing that clicking a button will take the user to the next unit of the story or into a game or cause “X” to happen. It isn’t necessary to reveal specifically what is going to happen and it is often provide some hints and then let the user’s curiosity prompt that action of using the connector.

What the motivator promises should be consistent with what the connector will take the use to. A discrepancy between the motivator, connector, and retainer risks leaving the user confused, frustrated, or cheated.

The connector may be the same object as the attractor (e.g. a big button that says “Click Me”) or it may be something different (e.g. the attractor shouts “Hey! Look over here!” while the connector is the “door” it is pointing the user towards). If the attractor and connector are different, the design of the call-to-action needs to ensure the user isn’t confused about which is which.

In addition to the cognitive affordances, the design of the connector must also keep the physical affordances in mind. For example, its size and location should make the connector easy to click, select, drag, or whatever the required user action is. (See Appendix F for a detailed list of factors affecting the quality of physical affordances.)

- Designing the physical affordances of a transmedia narrative so they achieve the *setting* category in the psychomotor domain in Bloom’s taxonomy should be a designer’s minimum target. Ideally, designers to aim to have users achieve even higher levels (*guided responding*, *mechanizing*, and *complex*

overt responding) of performance when using a transmedia narrative's physical affordances. See Appendix C for a detailed listing of the levels and related activities in the psychomotor domain. See Appendix F for a list of the components of physical affordance quality.

Retainer

Every call-to-action needs to have a retainer. A retainer serves two functions:

- It provides the user with a “reward” for using the connector
- It moves the user into the next unit of the narrative

The call-to-action's motivator and connector made “promises” to the user. The retainer is where those promises – the reward – are kept. If the motivator/connector promised the answer to a puzzle if the user took a specific action, the retainer needs to provide that answer. If access to a game embedding in the narrative was promised, the retainer takes the user to the beginning of the game.

The retainer also serves as the user's entry point to the next element of the story and should provide a seamless transition. A good model for this transitional structure is a well-written novel in which each chapter has a suspenseful ending (the motivator) (e.g. the hero is hanging from a cliff) and the next chapter begins with a twist that provides a resolution to the problem (the retainer) (e.g. the hero escapes the jaws of death). Only after the retainer has been delivered does the story continue on until the next call-to-action is encountered and the process begins again.

Preliminary Media Asset List

Media assets identified in the prior stages of the transmedia narrative design process should be organized into a hierarchical list to aid in production planning (Hayes G. P., 2011, p. 12). These assets can include images, movies, music, sound effects, audio narration, text, colors, scripts, and links. Initially the asset list will be high level but as the design process reaches the story and scene/sequence levels, it will become much more detailed.

Scene/Sequence Level Design Tasks

The fourth level of design tasks is at the scene/sequence level. This is the level at which the design decisions made earlier in the transmedia narrative design process are used in the development of narrative content. Story concepts and narrative structure are translated into individual scenes and sequences and the story's characters, settings, and events come alive. This is also the level at which decisions on user engagement and interactions are implemented.

Table 7. Scene/sequence level design tasks

Scene/Sequence Level Design Tasks		
Narrative Design	Engagement Design	Interaction Design
<ul style="list-style-type: none">• Develop detailed storyboards• Create scene/sequence• Select/create characters• Select/create settings• Select/create significant object(s)	<ul style="list-style-type: none">• Design scene/sequence for active participation• Design scene/sequence elements for affective participation• Design scene/sequence elements for sensory participation	<ul style="list-style-type: none">• Identify media/platforms for individual sequences/scenes• Design information cascades• Develop calls-to-action• Develop cognitive maps• Design information field• Develop detailed asset list

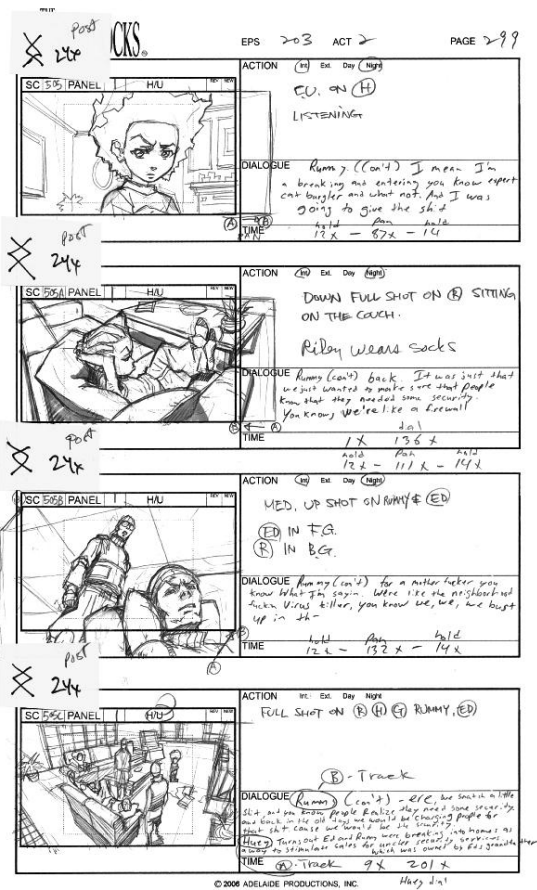
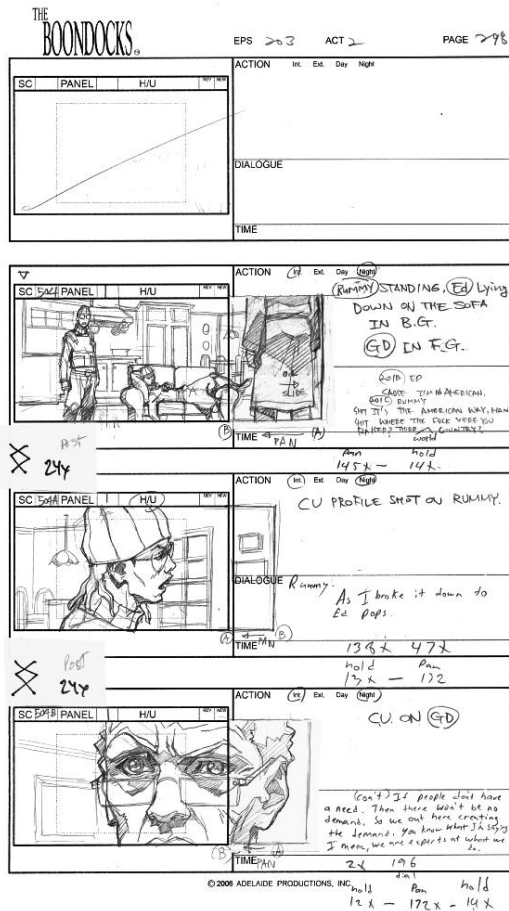
The transmedia narrative designer will need to use the information developed at the earlier levels to guide design and development at the scene/sequence level. However, as with the other levels of the transmedia narrative design process, design decisions made at this level may require modification of earlier decisions. This is a normal part of the iterative design process that is typical of transmedia narrative projects.

Detailed Storyboards

The preliminary storyboard created at the story level are the framework for development of more detailed storyboards that present each scene (and perhaps each beat) of the narrative. These storyboards should provide enough information that the characters, settings, dialog, visual layout, and other elements of the scene are easily understood by the developers who will create the final content. The sample storyboard (see Figure 56) for the animated television series *The Boondocks* shows how a linear film or video narrative might be storyboarded. Unlike the storyboard for a specific medium, a detailed transmedia storyboard must also address the use of other media (e.g. film/video, comic book, web page, tweet, etc.) and the linkage between scenes/sequences and calls-to-action.

Sequences, Scenes & Beats

McKee's hierarchy of story structure provides a set of breakpoints at which a story can be moved from one media platform to another or one medium to another. While McKee developed his hierarchy of *story*, *act*, *sequence*, *scene*, and *beat* (McKee, 1997, pp. 34-42) to describe the story structure of film, it provides a framework of elements that can also be applied to novels, transmedia narratives, and other types of narratives.



Source: Adelaide Productions Inc.

Figure 56. Sample storyboard from the animated television series *The Boondocks*

The most obvious breakpoint is at the top level, where multiple stories can emerge from the storyworld. Moving down the hierarchy also provides opportunities for breakpoints at which the story can move to another platform or medium. A transmedia narrative may have one act played out in print, another on video, and a third as a live performance. Further down the hierarchy, a transmedia narrative could play out different scenes on different media, with users migrating from scene, medium to medium to extract meaning from the narrative. However, the transmedia narrative's author needs to choose carefully the levels the narrative's breakpoints are at and the incentives provided to encourage the audience to cross platforms or media.

How a narrative is fragmented can determine the cognitive load required for the audience to extract meaning from it. Cognitive science has determined that people have separate channels for processing visual/pictorial and auditory/verbal information, have a limited capacity to process information in each channel, and need to actively engage in cognitive processing of receiving incoming information, mentally organizing it, and integrating it into knowledge from long-term memory (Mayer, 2008). The migration from one media platform to another or one medium to another involves some degree of “friction” that serves as a disincentive for the audience to cross platforms or media. (Pratten, *Getting Started with Transmedia Storytelling*, 2011, p. 34). The cognitive load imposed by moving across media is an important aspect of the amount of friction the audience experiences.

Meaning builds progressively as the audience moves through a story beat by beat, scene by scene, and act by act. Stories inherently provide the most complete meaning when read, viewed, or heard in their totality. Breaking a story up increases the cognitive load on the audience as it becomes necessary to remember and mentally assemble the various elements of the story, organize it, and integrate it into existing knowledge. The more fragmented a story, the greater the cognitive load. As a result, the lower an element is in McKee’s hierarchy, the more “friction” there is likely to be when crossing platforms and media. The cognitive load required to piece together a story from a series of beats scattered across multiple media will be significantly higher than the cognitive load of piecing together several acts scattered across the same media.

A *sequence* is a series of scenes – typically two to five – that culminate with scene that has a greater impact than any previous scene (McKee, 1997, p. 38). The scenes within the sequence are usually connected by either unity of location or unity of time.

A potential point at which to break the story structure of a transmedia narrative in order to cross to another platform or media is the sequence. A sequence is a series of scenes that form a distinct narrative unit unified by either location or time. The sequences serve as "mini-movies", each with their own compressed three-act structure. The sequence approach was developed in the late 1890s when films were rarely long than 10 to 15 minutes. While the sequence approach was initially developed to deal film's technological limits, it now provides opportunities to engage the audience.

...sequencing helps writers create dynamic, dramatic engines that drive their stories forward. And unlike other popular approaches to screenwriting, the sequence method focuses on how the audience will experience the story and what the writer can do to make that story better. (Gulino, 2004)

A full-length feature film would have about eight sequences of 10 to 15 minutes in length. Typically each sequence is a short narrative that mirrors the structure of the whole story. Because story conflicts and issues are only partially resolved at the end of the sequence the attention of the audience continues to be engaged across the break from one sequence to the next. The sequence approach fits into the traditional three-act narrative structure. The first two sequences combine to form the film's first act, the next four create the second act, and the final two sequences the third act. Each sequence's resolution creates the situation which sets up the next sequence. A framework for a typical narrative based on the sequence approach is (Sarantinos, 2010):

- *Sequence 1:* The first sequence often starts with a hook, a riddle, predicament, or questions used to stimulate audience curiosity. This builds up to the *inciting incident*, which destabilizes the protagonist's world, thrusting him or her (often reluctantly) into action.
- *Sequence 2:* The *central dramatic question* is set out in the second sequence, introducing the story's theme, potential course of action, and source of tension. After the initial reluctance, the protagonist begins to take action to restore life's balance. When this fails, the protagonist's predicament intensifies. At the end of the second sequence a key event – *the first turning point* – occurs, signaling a marked change and the point of no return for the protagonist.
- *Sequence 3:* As the protagonist tries but fails to resolve the conflict, a pattern of increasing tension – *the complication* – is created. The protagonist ventures alone (or with one or two trusted confidantes) in a world that they don't know and far from familiar ground. The protagonist must gain knowledge and understanding of the new world before being able to move forward.
- *Sequence 4:* A reversal of fortune takes the protagonist further away from returning to normality than ever. This usually results in the *first culmination* (midpoint, climax of tension) catapulting to the second turning point. At this point it is clear what the protagonist must do to solve the problem but there are complications, making the path a treacherous one. The protagonist experiences repeated setbacks and eventually hits rock bottom (*the fallen angel*).
- *Sequence 5:* The protagonist grapples with intensified conflict as the rules of play change and begins on a new quest at this point (*the story within the sto-*

ry). At the end of this sequence it appears to be clear whether a success or failure is imminent. A resolution occurs of the secondary but not primary conflict.

- *Sequence 6:* At the end of this sequence the main dramatic question is often answered, the main tension is resolved as all other avenues are exhausted. The *second culmination* (second turning point) occurs and with it a profound reflective, meditative moment in the evolution of the main tension. The protagonist either resolves or reframes it.
- *Sequence 7:* The apparent resolution previously is not the final conclusion. Unexpected developments occur, the stakes are raised, and the protagonist often changes objectives completely (the *final hurdle*) at a more frenetic pace.
- *Sequence 8:* After a climactic moment, the equilibrium is restored and the protagonist can begin their new life in their new world. Usually a coda or epilogue ties off any loose ends and allows the protagonist to settle into a new world.

The sequence approach provides a story form that is more easily developed across multiple media than lower level scenes and beats. Because each sequence is a short narrative that mirrors the structure of the whole story, it may be appropriate to create different sequences with different media and have the users migrate across media at the transition from one sequence to another.

A *scene* involves conflict that occurs in (more or less) continuous time and space and turns the condition of a character's life in a perceptible way (McKee, 1997, p. 35). Scenes can function as either:

- *Kernels* based on one of the following types – disturbance, obstacle, complication, confrontation, crisis, or resolution (Porter, Larson, Harthcock, & Nellis, 2002)
- *Satellites* based on one of these types – exposition, dramatic question, character introduction, action, plan revelation, relationship affirmation, clarification, conflict continuity, relief, theme reinforcement, foreshadowing, or ambiance (Porter, Larson, Harthcock, & Nellis, 2002).

A *beat* is the smallest element of the story structure and consists of an exchange of behavior between characters that are paired in an action/reaction mode (McKee, 1997, p. 37). The structure of *beats* as described by McKee provides a framework that accommodates the limitations of texting, Twitter, and Facebook narratives. Scenes can emerge naturally from the assembled beats, providing the next level of McKee's story hierarchy. The concept of the beat provides a useful framework for structuring storytelling using media like Twitter and texting in which the length of messages is severally restricted. Text messages, for example, are limited to 160 characters while Twitter limits messages to 140 characters (about the length of this sentence). These restrictions on message length impose significant constraints on an author's ability to develop show settings and character development.

Despite those constraints, in Japan mobile phone novels called *keitai shosetsu* became so successful that they accounted for four of the top five works on the literary best-seller list in 2007 (Goodyear, 2008). A writer known as Yoshi was the first to bringing out a *keitai shosetsu* in book form. His narrative, entitled *Deep Love* (2002) was a collection of racy tales about a teenage prostitute in Tokyo. It first appeared online as a mobile

phone novel, then appeared as a book, and was later developed into a manga, a TV series and a film (Day, 2008).

As dictated by the medium, the language of *keitai shosetsu* is simple and peppered with emoticons. Dialogue and description are sparse. Subject matter is predictable...Typically, a heroine loses her first love (in *K*, the male love interest dies in an accident), then later struggles to find love again. Obstacles can be gritty – rape, drugs, accidental pregnancies and prostitution are all common – but they are invariably overcome, and traumatic events usually serve as devices to bring the heroine and her beau closer together. (Day, 2008)

Barry Yourgrau, an American author of *keitai shosetsu* published in Japan, said the format he used for his mobile phone novels limited individual stories to 350 words to limit thumb-scrolling and 12-word opening sentences that would fit on a single mobile phone screen (Yourgrau, 2009). Yourgrau notes that one of the big mistakes he made when writing his *keitai shosetsu* was interaction with his audience.

I wrote my stories the old, author-as-god way: me writer, you reader. *Keitai shosetsu*, however, exist in vast online pools where writers and readers engage each other. Yoshi shaped *Deep Love* based on ongoing hits and emails. (He even handed out fliers.) Keitai readers notoriously aren't big book buyers – but they will buy books as mementos of their communal involvement. (Yourgrau, 2009)

The beat is the lowest level building block of the hierarchy developed by McKee (McKee, 1997, p. 37). It is an exchange of behavior between two characters that involves a series of actions and reactions that create dramatic tension and shape the turning of the scene. A beat occurs every time a character says or does something and another character reacts is a beat. A beat also occurs when a character sees, feels, hears, tastes, or smells something and reacts with a thought or action.

Many texted narratives are written from a first-person perspective, providing insights into the actions, thoughts, and emotions of the main character. The first-person approach is also commonly used in Twitter-based fiction. The microblogging (another term for Twitter-type sites) narrative *Joy Motel* (available in its complete form at <http://joymotel.blogspot.com/2008/12/kindred.html>) is a science fiction narrative about the “‘brainstream’ flowing inside the neural net of its lead character, Kindred” (Kewley & Sallee, 2009). Writing Twitter-based narratives means limiting not just the number of characters in a tweet to 140, but also limiting the number of sentences that are used to no more than 10 to avoid overloading the audience with dozens or hundreds of tweets (Miliard, 2009).

Facebook is also being used as a venue for the development of narrative works. Like mobile phone and Twitter narratives, stories on Facebook are written in installments of just a few lines (Schaefer, 2010). However, segments of a narrative on Facebook do not have the length restrictions of texts and tweets, giving the author more flexibility (Schaefer, 2010).

From a transmedia narrative perspective, a potential use for first-person perspective and social media is to have character express aspects of his or her thoughts and feelings via short messages that are published in parallel with the action the character is involved in another medium.

Some story structures are more amenable to being played out over multiple media platforms or media than others. For example, a story structure that uses the main plot as the spine from which “side trips” branch and return would have less friction than a more linear story represented by the traditional structure of Freytag’s Triangle. Similarly, the

vertical story structure (in which the main plot holds together a number of narrative “shafts”) and the converging story structure (which consists of a number of different story lines based on individual characters) have less friction than more traditional structures.

Character Selection

At the scene/sequence level character selection focuses on which of the “cast” members selected at the story level will be included in a particular scene. The majority of scenes in a narrative should involve major characters, although it doesn’t always need to be the protagonist. There may be scenes, for example, that involve the antagonist interacting with other characters.

Each scene should establish a purpose, goal, or intention for the character that is central to that scene. For example, a mystery story might contain a scene which begins with the protagonist finding an unidentified body. The intention of the protagonist in that scene might be to figure out the cause of death or alternately, the identity of the victim. To heighten the dramatic tension, the intentions of the protagonist might be thwarted by the actions of another character, an accident, a natural event (e.g. severe rain storm), or something similar. By the end of the scene the protagonist either achieves the intention, has been blocked, or been diverted to pursuing another intention in the next scene.

The number of major characters in a scene should generally be limited to three, as having more characters makes it difficult for the audience to follow the interactions between characters. If more than three major characters are in the same scene, the extras should be relegated to the background. Minor characters or walk-on and placeholder characters may be used to provide information, create obstacles, and generally aid or thwart the intentions of the character central to the scene.

Significant Object(s) Selection

Significant objects don't have to appear in every scene, but when they do they should be used with a specific narrative purpose in mind. The appearance of a plot-significant object (e.g. the ring in *Lord of the Rings*) focuses everyone's attention -- characters and audience alike -- and should be directly relevant to the plot (Rosenfeld, 2008, pp. 47-48). A character-significant object (e.g. a small crucifix on a gold chain worn around a character's neck) reveals something about the character's background and beliefs and can be used in a scene to reveal the character's thoughts and emotions.

Setting Selection

The selection of a setting (or creation of one if it has not yet been created) can have a significant impact on the scene. When selecting a setting, the transmedia narrative's author should consider the role that setting will play in the overall scene or sequence. Settings can play one of seven roles (Hodgins, 2001, pp. 79-85):

- **Generic:** The setting is without unique features, implying that the story could happen anywhere. The problem with this is that all real places have their own cultural and physical characteristics and these characteristics influence characters. A generic setting will not seem real and may actually detract from the story.
- **Backdrop:** The setting merely provides us with a way of knowing where we are and, though it may have unique characteristics, it does not affect the characters or action. It is a place, but it doesn't do anything.
- **Local Color:** The story is flavored by attention to the unique details of the setting, which may give the impression that the story could not have happened

anywhere else. The writer may be tempted to make the setting entertaining without really giving it any significance.

- **Atmosphere/Mood:** Setting can be used to set the mood or atmosphere for the whole story or novel. In addition, the settings of individual scenes may reflect the state of mind of the characters.
- **Action and Character:** Characters are more real if they have a historical and geographical context; the place where a person grew up will affect their attitudes and behavior for their whole lives. For example, someone raised in a big city will think and act differently from someone raised in a tiny rural village.
- **Place as Character:** One example of this is in the old "man versus nature" plot, where the main struggles the protagonist faces are with the environment. In this situation, the setting itself is the antagonist. In stories of this sort, changing elements of the setting would change the entire story. Can you imagine a story about a woman's struggle to climb a mountain unaided being set on the prairies? That story wouldn't work without a mountain, and so the mountain becomes a central character. The story's plot, then, is largely determined by its setting.
- **Metaphor/Symbol:** The setting becomes symbolic of the theme of the story.

Active User Participation

The transmedia designer should be aiming for active participation across all elements of the transmedia narrative in order to sustain a high level of user engagement. Active participation increases the users' incentive to migrate across the media and platforms and reduce the friction associated with that migration.

The degree of mental processing the audience uses distinguishes passive from active participation (Screven, 2000, pp. 166-167). This spectrum of participation is closely related to the user's attention, which can range from "mindless" (casual and unsystematic) to "mindful" (focused and active) (Screven, 2000, pp. 166-167). Mindful attention is characterized by viewer behaviors that include making comparisons, raising questions, looking for interdependent relationships, making connections to personal knowledge or experience, noting contradictions, and searching for specific information or categories of information (Screven, 2000, p. 152). Mindless attention, on the other hand, is more scattered, focusing randomly on a variety of items without apparent purpose or direction until something catches the viewer's eye. Attention is brief and erratic and viewers are easily distracted (Screven, 2000, pp. 152 - 153). Screven found that "fun formats" like visual media and games are ineffective in motivating viewers to pay mindful attention and at times have a negative impact on attention (Screven, 2000, p. 157).

Affective Participation

Engaging a user at an emotional level (affective participation) can be extremely effective in keeping that user involved with the transmedia narrative. Users who are emotionally invested in a story are likely to be loyal fans. The emotional hook for a user may come from within the story itself. An intriguing plot may create curiosity. Deeply developed characters may evoke feelings of trust, loyalty, and warmth on one hand and anger, fear, and disgust on the other.

Factors outside of the story can also influence the user's emotions. Music, for example, can have a strong impact on mood. Selection of color in an image can do the same thing.

Sensory Participation

Most transmedia narratives engage vision and hearing but few engage all five senses because of the current technological limitations. As noted in the discussion of location-dependent narratives, all of the senses can be engaged by putting the user into a physical location. Other techniques have been used (e.g. sending out scent vials that are to be smelled at the appropriate time, making special foods available to participants at events, or sending out artifacts relevant to the narrative) but these have a relatively limited reach, are costly, and tend to be time- or location-dependent.

In spite of these constraints, transmedia narrative designers should attempt to include as many of the senses as practically possible in order to foster user engagement.

Media Selection

At the scene/sequence level media selection involves matching individual scenes and sequences to the most appropriate media. The detailed storyboard should indicate the medium used for each scene. Users of transmedia narratives are likely to move from one art form to another (i.e. computer-based text to video clips). When designing calls-to-action, designers need to consider the impact of these jumps on the user's ability to both navigate the narrative and understand its meaning. Among the questions that the designer should address are how to manage the impact of jumps between art forms like (Dena, 2007):

- Representative arts and simulations
- Narrative and non-narrative
- Static, interactive, generated, or emergent
- Long-form, short-form, or micro-content

Translating information across media can present transmedia designers with signification challenges. For example, visual language – the tight integration of images, shapes, colors, and words – is widely used in graphic novels (comic books) and can be highly effective for expressing an author’s message. However, translating visuals from one style of graphic novel to another or to another medium entirely can diminish or destroy the information being communicated.

In traditionally drawn comics, for example, characters’ personalities, attitudes, and emotions are established through exaggerated images (Ellis & Martin Ellis, 2008, p. 26). The title character in the *Dick Tracy* comic strip (see Figure 57) (Staton & Curtis, 2011), for example, was a tough, square-jawed crime fighter with the exaggerated facial features typical of traditional comics.

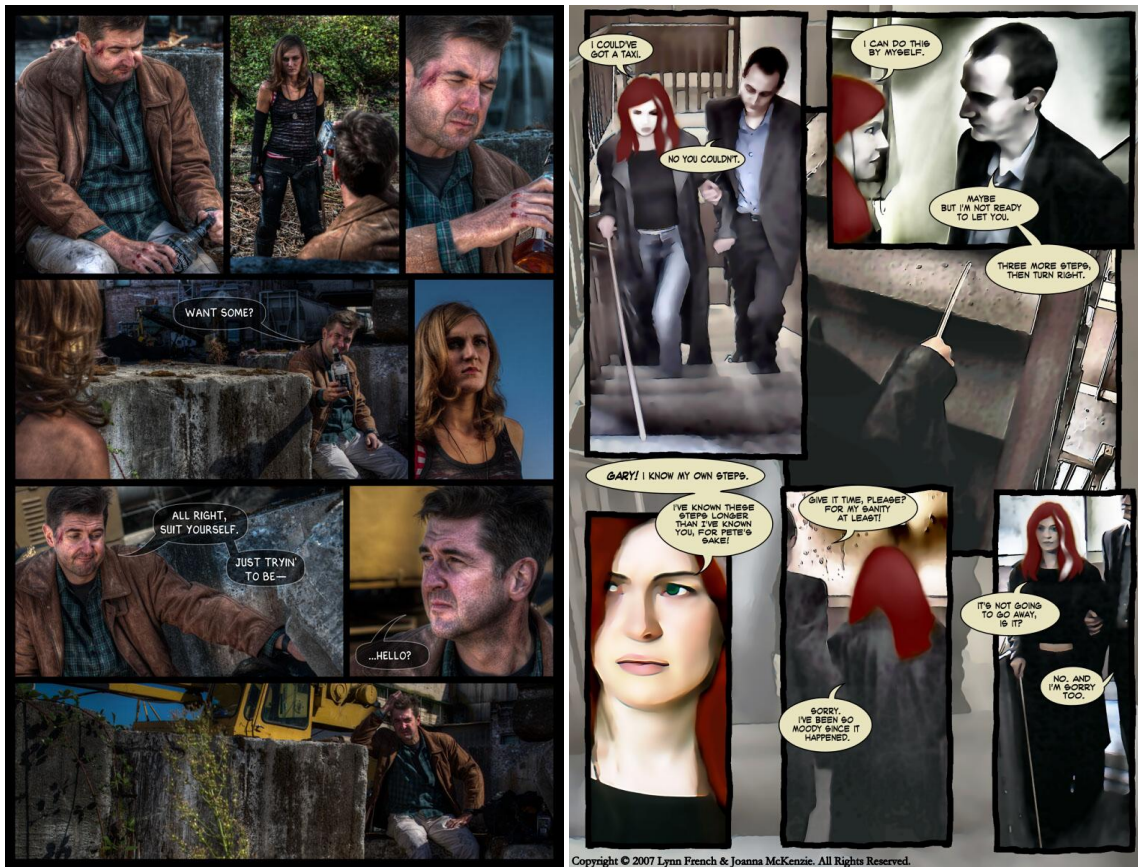
The *fumetti* (photograph comic) *Night Zero* (see Figure 58) has sharp, high-contrast images that show realistic representations of characters and settings (Black-Mizuta, Hillis, & Winkle, 2011). *Dark Red* is another *fumetti*, but the photographic images are modified in Photoshop to adjust image color and texture, providing a distinctive feel to the artwork. Although each of these examples is considered a comic, the approaches used in one may not work in another. For example, the exaggerated features of characters in traditional hand-drawn comics do not translate across to the characters in a *fumetti*. The color used in traditional comics like *Dick Tracy* differs from that of *Night Zero* and *Dark Red*. While the difficulties of translating between one style and another in a single art form like comics can be difficult, the challenges are even greater when designing the movement between media that are significantly different (i.e. still image to text, static web page to video). The designer (or design team) needs to understand the conventions of

each medium used and work creatively to develop seamless, effective, and meaningful transitions from one medium to another.



Source: Joe Staton & Mike Curtis (Staton & Curtis, 2011)

Figure 57. Dick Tracy's tough-guy character is shown with exaggerated facial features (particularly the square jaw) characteristic of traditionally drawn comics



Source: Eli Black-Mizuta, Jansen Hillis & Anthony Van Winkle; Lynn French & Joanna McKenzie

Figure 58. *Night Zero* (left) is a photographic comic book while *Dark Red* (right) is a photocomic in which the images have been altered in Photoshop

Effective Calls-to-Action

All of the elements of the call-to-action (attractor, motivator, connector, and retainer) need to work together to keep the user moving deeper into the narrative. Effectively designed can be much more than a “Click Me” button. They can:

- Provoke curiosity, fear, desire, and other emotions
- Control the pacing of the transmedia narrative
- Help users map the “geography” of the transmedia narrative’s system as well as the story
- Provide a natural breakpoint that the user can come back to later

A well designed call-to-action will support the flow of the narrative; a poorly designed one will be the equivalent of a speed bump. The designer of a call-to-action needs to focus the interaction component and how to move the user from one side of the jump to the other. An understanding of what is happening in the narrative and how the call-to-action affects the user’s engagement with the narrative is essential.

Using a goal-centered approach in the design of calls-to-action can also make them more effective. Setting achievable, tangible goals can help viewers focus attention on unfamiliar information and integrate it with the knowledge, attitudes, and predispositions they already have. Successful use of a goal-setting approach requires viewers have the ability to use information from the narrative generally and the call-to-action specifically to achieve the goals set. This approach “must put viewers into contact with message-related information that, without a goal, might be abandoned too soon” (Screven, 2000, pp. 167 - 169). A framework for designing a goal-centered approach includes (Screven, 2000, p. 174):

- Developing clear and measurable objectives for each task and message component in the exhibit
- Developing goals and sub-goals for intermediate tasks and pretesting them
- Selecting goals that viewers perceive as having personal value
- Ensuring tasks are clearly linked to the target message

Information Field

The designer of a transmedia narrative needs to design with an awareness of the entire information field that the user will be in so the narrative can cut through the informational clutter.

Every narrative unit and call-to-action must have a clearly identified message the design wants to communicate. That intended message should be explicitly identified before creation of content and interactions starts and should be checked upon completion to ensure that the intended message is cleanly communicated.

The transmedia narrative designer should identify as many potential sources of irrelevant information (i.e. people, ambient sounds, visual distractions, etc.) in the user's information field and eliminate as many as possible. Those that can't be eliminated should be minimized through effective design. Because of the diverse mix of content and media in a transmedia narrative, the designer must be careful not to create unintended messages through the juxtaposition of pieces of information.

Different users can perceive the same piece of information in ways that extract completely different meanings. Social, cultural, gender, age, and other factors can significantly impact what the perceived message is. The transmedia narrative designer needs to look

at the content and structure of the narrative to identify anything that might be perceived differently and ensure that it is consistent the intended message.

Having users perceive different means in a narrative is not necessary bad. The movie *Shrek* is laden with double entendres that appeal to children one level and adults on another. Used effectively, the creation of multiple meanings through double entendres can make the narrative more interesting.

The concepts of perceptual time and information cascades have significant implications for interaction design. Designers of transmedia narratives need to be mindful of how much control they allow users to have over the pace at which information is presented. A vertical information cascade (i.e. a film) gives users no control over the pace at which information is presented. A horizontal information cascade (i.e. a book) gives users a high degree of control over the pace at which information is presented.

User control of the information cascade removes from the transmedia narrative designer the burden of trying to accommodate perceptual times that vary from person to person. Instead, individual users can determine how much time they need to deal with the cues in the information cascade. A combination of vertical (program-provided) and horizontal (user-provided) information cascades (Thwaites, 2000, p. 237) provides significant opportunities for a transmedia narrative designer to optimize the transmission and processing of the information stream.

Users of transmedia narratives may not always move to the linked information immediately, so the call-to-action needs to be designed to provide both immediate and long-term connections. Most web users have probably had the experience of seeing something interesting, moving on briefly, and then trying to back track to it, only to realize that they

could not find it again. This experience is not unique to web-based media. Books can present the same challenge (hence the need for Post-It notes). There are two reasons why users may not follow a link immediately:

- They have to stop what they are doing with the transmedia narrative so they can attend to something outside the storyworld.
- They found something else in the storyworld that attracted their attention and are attending to that instead.

In either case, the user may lose track of where in they are or forget important pieces of information. Transmedia narrative designers need to consider how they can provide ways for the user to work with connections both immediately and over the long-term. This could include everything from keeping the overall design simple enough that it's not an issue to leaving breadcrumbs of the user's route to drawing maps (actual as well as cognitive maps).

Cognitive Maps

Cognitive maps are the result of a type of mental processing in which a user acquires, codes, stores, recalls, and decodes information about things of interest in their environment. When used in the navigation of transmedia narratives, cognitive maps allow the "mind's eye" to visualize the relative location of and links between different elements of the narrative, substantially reducing the user's cognitive load while enhancing the recall of information.

Facilitating the creation of the user's cognitive map of the transmedia narrative (and ideally the entire storyworld) makes it significantly easier for the user to navigate between story elements and maintain the continuity of the overall narrative. As a result, the

cognitive load on the user is substantially reduced when having to make decisions during the user interaction cycle.

Traditional web design approaches recommend reducing the navigational complexity of web pages.

The World Wide Web, for all its pretty screens and fancy buttons, is, in effect, an invisible navigation space. True, you can always see the specific page you are on, but you cannot see anything of the vast space between pages. Once users reach our applications, we must take care to reduce navigation to a minimum and make that navigation that is left clear and natural. Present the illusion that users are always in the same place, with the work brought to them. This not only eliminates the need for maps and other navigational aids, it offers users a greater sense of mastery and autonomy. (Tognazzini, n.d.)

This design approach, however, is exactly opposite of what a transmedia narrative designer is attempting to do. Instead of presenting the “illusion that users are always in the same place”, the purpose of most transmedia narratives is to create the illusion that the user is moving through vast world rich in characters, objects, events, and settings.

The more complex a transmedia narrative, the more important it is to help users develop cognitive maps of environment within which they are travelling. Most users, however, cannot or will not build elaborate mental maps and often become lost or tired if expected to do so. The transmedia narrative should enable the user to develop a cognitive map that functions at two levels. One level is a cognitive map that enables the user to understand the relationships between various media and story elements of the transmedia narrative, relative positions of each of those elements, and how to make the connections between them. For example, the user should be able to understand how a video segment, a game component, and a series of tweets in a transmedia narrative are related to each other, where they are located, and how to move between them.

The user also needs to be able to develop a second, higher level cognitive map that enables an understanding of the relationships between the various elements of the overall narrative – characters, settings, events, and so on – in order to develop meaning from the narrative.

Poor design that hinders the formation of the first level of the cognitive map will result in a user who wanders aimlessly, lost in an environment that makes little sense. Poor design that hinders the formation of the second level of the cognitive map will result in a user who will have difficulty making sense of the story being told. Poor design that fails at both levels will result in a transmedia narrative that is almost certain to be quickly abandoned by users.

When cognitive mapping of the environment is difficult, users will tend to fall back to a linear, sequential presentation of information (Passini, 2000, p. 90). Some users prefer the linear, sequential presentation of information, while others prefer a broad picture of the spatial area that they are trying to navigate (Passini, 2000, p. 90) The architectural and spatial characteristics of the user’s environment impacts which mode of information processing is preferred, with linear, sequential presentation of information being preferred when cognitive mapping of the environment is difficult (Passini, 2000, p. 90).

Detailed Asset List

The preliminary asset list developed at the story level is used as the basis for a more detailed asset list which identifies all of the images, movies, music, sound effects, audio narration, text, colors, scripts, and links used and which scene it is used in. The purpose of the detailed asset list is quick identification of what assets are being used and which scenes they are being used in.

Key Design Questions

The designer(s) of a transmedia narrative needs to be able to answer a series of key design questions at each of the four levels of the design process. The questions are grouped into broad categories of activities (e.g. transmedia narrative design, user engagement design, interaction design, etc.). In addition to being assigned to these broad categories, each of the questions listed is associated with a specific level of the design process. The questions in some categories may fall across two or more design process levels (e.g. questions in the user interaction design category fall into the storyworld, story, and scene/sequence design levels). These key design questions should elicit additional detail and, when used in conjunction with the process steps outlined earlier, serve as a comprehensive design guide for transmedia narrative projects. Because of the iterative nature of transmedia narrative design and development, answering questions and making decisions at one level of the design process may have an impact at another level (e.g. a decision made at the story level may require the designer to revisit a decision made at the storyworld level).

Key Design Questions: Transmedia Narrative Design

- Does the proposed transmedia project consist of one or more narratives told across two or more media? (*Transmedia Project Design Level*)
- What is the purpose of the transmedia project (entertainment, education, organizational change, branding and marketing, activism, etc.)? (*Transmedia Project Design Level*)

Key Design Questions: Audience

- What are the demographic characteristics of the transmedia narrative's audience (age, gender, urban/rural/suburban, income level, price sensitivity, time sensitivity, favored brands, etc.)? (*Transmedia Project Design Level*)

- What is the psychographic profile of the audience? Can this profile be broken into meaningful audience segments/user profiles? (*Transmedia Project Design Level*)
- What type of content consumers are the users (single story consumers, single media consumers, or transmedia consumers)? How can single story or single media consumers be presented with a complete story when using only a portion of the transmedia narrative? (*Transmedia Project Design Level*)
- What are the gratifications (GS) the user is seeking from the transmedia narrative (i.e. information seeking, aesthetic experience, monetary compensation, entertainment, personal identity, and social integration and interaction)? (*Transmedia Project Design Level*)
- What user gratifications (GI) does the author intend the transmedia narrative to meet (i.e. information seeking, aesthetic experience, monetary compensation, entertainment, personal identity, and social integration and interaction)? (*Transmedia Project Design Level*)
- What are the gratifications (GO) the user actually obtained from the transmedia narrative (i.e. information seeking, aesthetic experience, monetary compensation, entertainment, personal identity, and social integration and interaction)? (*Transmedia Project Design Level*)
- Is there a gap between the users' gratifications sought (GS) and gratifications obtained (GO)? If so, what is the gap and why has it occurred? (*Transmedia Project Design Level*)
- What media does the transmedia narrative's audience use (i.e. websites, social networks, TV programs/movies, etc.)? (*Transmedia Project Design Level*)
- What technology does the transmedia narrative's audience use (i.e. mobile phone, mobile devices, computer, Internet access, etc.)? (*Transmedia Project Design Level*)

Key Design Questions: User Engagement Design

- What level of user engagement does the transmedia narrative seek from the audience (Attention, Evaluation, Affection, Advocacy, or Contribution)? (*Storyworld Level Design Tasks*)
- Is the transmedia project a) a narrative, b) a narrative with some game-like features, c) an alternate reality game, d) a game with some narrative features, or e) a game with no narrative features? (*Storyworld Level Design Tasks*)
- What degree of control does the author have over creating the meaning of the narrative? What degree of control does the audience have? (*Storyworld Level Design Tasks*)
- If the proposed transmedia project is a narrative, narrative with game-like features, or an alternate reality game, is it an **intracompositional** narrative (a single story told across multiple media) or an **intercompositional** narrative (multiple stories told across multiple media)? (*Transmedia Project Design Level*)

- Will the transmedia narrative include games or game-like features? If so, do they make a significant contribution to the overall narrative? (*Story Level Design Tasks*)
- Is the user role in the narrative internal (projected into the narrative through an avatar or first person perspective) or external (situated outside the narrative)? (*Storyworld Level Design Tasks*)
- Will the user play the role of a character in the narrative? If so, what character? (*Storyworld Level Design Tasks*)
- How tightly are the actions of the user and transmedia narrative system linked (agency relationship)? What does this agency relationship add to the narrative? What limitations does it put on the narrative? (*Storyworld Level Design Tasks*)
- Will user actions have a local impact (i.e. navigating an avatar) or global impact (i.e. changing the direction of the narrative's plot) (agency scope)? What does this agency scope add to the narrative? What limitations does it put on the narrative? (*Storyworld Level Design Tasks*)
- Will user actions cause an immediate response from the transmedia narrative system or will the response be delayed (agency immediacy)? What does this agency immediacy add to the narrative? What limitations does it put on the narrative? (*Storyworld Level Design Tasks*)
- Will user actions have a brief impact on the transmedia narrative system or will the impact be long-term (agency duration)? What does this agency duration add to the narrative? What limitations does it put on the narrative? (*Storyworld Level Design Tasks*)
- Will any aspects of user agency (relationship, scope, immediacy, or duration) change as the user progresses through the transmedia narrative (dynamic agency)? What does dynamic agency add to the narrative? What limitations does it put on the narrative? (*Storyworld Level Design Tasks*)
- Will the user have any control over any aspects of the transmedia narrative's dynamic agency (user agency direction)? What does user control add to the narrative? What limitations does it put on the narrative? (*Storyworld Level Design Tasks*)
- How will user role (internal or external) and user agency (low or high) be used to structure the transmedia narrative? (*Storyworld Level Design Tasks*)

Key Design Questions: User Participation

- Will the transmedia narrative focus on individual participation? Shared participation? What benefit will individual versus shared participation provide? How will the transmedia narrative encourage shared participation? (*Story Level Design Tasks*)
- How important to the audience's participation with the narrative is including real people, events, and locations? (*Story Level Design Tasks*)
- Will the transmedia narrative allow users to participate at any time (time-agnostic) or must they participate at a specific time (time-dependent)? If the user participation is

time-dependent, why is this necessary? Will time dependency limit the ability of users to participate? Does it reduce the useful life of the transmedia narrative? (*Story Level Design Tasks*)

- Will the transmedia narrative allow users to participate anywhere (location-agnostic) or must they participate at a specific location (location-dependent)? If the user participation is location-dependent, why is this necessary? Will location dependency limit the ability of users to participate? Does it reduce the useful life of the transmedia narrative? (*Story Level Design Tasks*)
- How will the transmedia scene/sequence encourage mindful attention and active participation (cognitive participation)? (*Scene/Sequence Level Design Tasks*)
- How will the transmedia scene/sequence encourage emotional involvement (affective participation)? (*Scene/Sequence Level Design Tasks*)
- How will the transmedia scene/sequence use the five senses (sight, hearing, smell, taste, and touch) to foster user engagement? What does the use of one or more of these senses contribute to the narrative? How can these senses be involved? Does the use of any sense limit the ability of users to participate? (*Scene/Sequence Level Design Tasks*)

Key Design Questions: Human Centered Design

- How will the transmedia narrative system infrastructure be designed to ensure coherence? (*Storyworld Level Design Tasks*)
- How will the transmedia narrative system infrastructure be designed to ensure responsiveness? (*Storyworld Level Design Tasks*)
- How will the transmedia narrative system infrastructure be designed to ensure malleability? (*Storyworld Level Design Tasks*)
- How will the transmedia narrative system infrastructure be designed to ensure inclusiveness? (*Storyworld Level Design Tasks*)
- How will the transmedia narrative system infrastructure be designed to ensure purpose? (*Storyworld Level Design Tasks*)
- How will the transmedia narrative system infrastructure be designed to ensure engagement? (*Storyworld Level Design Tasks*)
- How will the transmedia narrative system infrastructure be designed to ensure ownership? (*Storyworld Level Design Tasks*)
- How will the transmedia narrative system infrastructure be designed to ensure it is panoramic? (*Storyworld Level Design Tasks*)
- How will the transmedia narrative system infrastructure be designed to ensure it is transcendent? (*Storyworld Level Design Tasks*)

Key Design Questions: User Interaction Design

- Has an interaction decision plan been developed for the transmedia narrative? (*Storyworld Level Design Tasks*)
- Does the transmedia narrative's entry point call-to-action provide users the appropriate amount of information for them to begin finding their way into the narrative? (*Storyworld Level Design Tasks*)
- If the transmedia narrative has multiple possible entry points, are the calls-to-action at each of them designed for effective user interaction? (*Storyworld Level Design Tasks*)
- Does the transmedia narrative's interface avoid "false affordances"? (*Storyworld Level Design Tasks*)
- Does the transmedia narrative facilitate the development of a user's cognitive map of the narrative? (*Storyworld Level Design Tasks*)
- Does the medium being used present a vertical information cascade (i.e. film, video, etc.) or horizontal information cascade (i.e. book, user-paced slideshow, etc.)? Is the pace at which information is presented too fast? Too slow? Is user control of the speed at which information is presented possible? (*Story Level Design Tasks*)
- What media (video, audio, text, still images, etc.) and platforms (blog, YouTube, iPad, etc.)? Are the media selected appropriate for the content? How does the selection of media affect the narrative's content? (*Story Level Design Tasks*)
- Does the transmedia narrative provide an appropriate call-to-action for each task decision in the decision plan? (*Story Level Design Tasks*)
- Is each call-to-action designed to provide both immediate and long-term connections if users don't go to linked information immediately? (*Story Level Design Tasks*)
- Are the attractors in each call-to-action internal or external to the storyworld? (*Story Level Design Tasks*)
- Does the call-to-action support the narrative flow? Does it disrupt the narrative flow? Will affect the temporal sequencing of the narrative? If so, what will the impact be on the narrative? (*Story Level Design Tasks*)
- How does the transmedia narrative handle the shift from one medium to another? Does the call-to-action signal the kind of medium the user will migrate to? Are there limitations/constraints that could affect the user's migration from one medium to another? (*Story Level Design Tasks*)
- Does the design of each call-to-action use a goal-centered approach that enables users to develop clear and measurable objectives for each task and message component? Select goals that users perceive as having personal value? Ensure goals are aligned with the target message of the transmedia narrative? (*Story Level Design Tasks*)
- What is the purpose of each call-to-action? Are the call-to-action and the jump it supports essential? Does the call-to-action enhance the progress of the narrative? (*Scene/Sequence Level Design Tasks*)

- Are the story and media elements on both sides of a call-to-action described? Have the factors affecting the effectiveness of the call-to-action been considered? (*Scene/Sequence Level Design Tasks*)
- Is each call-to-action used as an opportunity to build suspense and strengthen the narrative? (*Scene/Sequence Level Design Tasks*)
- Does each call-to-action have an attractor? Does the attractor provide the appropriate sensory affordances? (*Scene/Sequence Level Design Tasks*)
- Does each call-to-action have a motivator? Does the motivator provide the appropriate cognitive affordances? (*Scene/Sequence Level Design Tasks*)
- Does the design of the motivator reduce the user's cognitive load by minimizing extraneous processing using the temporal contiguity, spatial contiguity, signaling, coherence, and redundancy principles? (*Scene/Sequence Level Design Tasks*)
- Does the design of the motivator reduce the user's cognitive load by managing essential processing using the segmenting, pretraining, and modality principles? (*Scene/Sequence Level Design Tasks*)
- Does the design of the motivator reduce the user's cognitive load by fostering generative processing using the personalization and voice principles? (*Scene/Sequence Level Design Tasks*)
- Does each call-to-action have a connector? Does the connector provide the appropriate physical affordances? (*Scene/Sequence Level Design Tasks*)
- Does each call-to-action have a retainer? Does the retainer provide the appropriate functional affordances? (*Scene/Sequence Level Design Tasks*)
- Do the elements within each call-to-action work synergistically to help the user move through the transmedia narrative? (*Scene/Sequence Level Design Tasks*)

Key Design Questions: Information Field

- What is the intended message(s) in the information field? (*Scene/Sequence Level Design Tasks*)
- What unintended message(s) are in the information field? Can they be eliminated? If they can't be eliminated, how can their impact be minimized? (*Scene/Sequence Level Design Tasks*)
- How could users perceive the message(s) in the information field? What social, cultural, and other factors could affect how the message(s) are perceived? (*Scene/Sequence Level Design Tasks*)

Key Design Questions: Media & Platforms

- What media are used for the transmedia narrative (video, audio, text, still images, etc.)? Are the media selected appropriate for the content? (*Story Level Design Tasks*)

- What media platforms are used for the transmedia narrative (blog, YouTube, iPad, etc.)? Are the media platforms appropriate for media and content? (*Story Level Design Tasks*)
- Does the selection of media help the narrative progress? (*Story Level Design Tasks*)
- Are any of media used redundant? Can any media be eliminated without damaging the integrity of the transmedia narrative? (*Story Level Design Tasks*)
- Are any of the media platforms used redundant? Can they be eliminated without damaging the integrity of the transmedia narrative? (*Story Level Design Tasks*)

Key Design Questions: Storyworlds

- Is the story fiction, non-fiction, or a hybrid (i.e. an integration of fictional and non-fictional elements)? (*Storyworld Level Design Tasks*)
- What is the controlling idea (theme) of the storyworld? (*Storyworld Level Design Tasks*)
- What is the genre of the storyworld? (*Storyworld Level Design Tasks*)
 - Action-Adventure
 - Crime
 - Detective
 - Fantasy
 - Mystery
 - Horror
 - Etc.
- Is the storyworld suitable for use across a variety of media? (*Storyworld Level Design Tasks*)
- What are the relations between the storyworlds of the system? When do we have a single storyworld vs. multiple, overlapping storyworlds? (*Storyworld Level Design Tasks*)
- Is the storyworld big enough to accommodate a wide variety of story possibilities? (*Storyworld Level Design Tasks*)
- Can the storyworld be readily expanded with one or more of the following strategies (*Storyworld Level Design Tasks*):
 - Interstitial micro stories - stories that have a close relationship to the macros story. These can be presented using comics, online video and audio clips, video games, mobisodes, and similar approaches.

- Parallel stories – stories that unfold at the same time and have a strong relationship to the macro story. These parallel stories may evolve over time and become spinoffs.
- Peripheral stories – stories that have a weak relationship to and may not occur at the same time as the macro story. Peripheral stories may also evolve overtime and spinoff.
- User-generated content platforms – environments such as blogs and wikis that facilitate user-generated stories and other user-generated content related to the storyworld.
- Does the storyworld allow for the creation of additional character background and the introduction of entirely new characters? (*Storyworld Level Design Tasks*)
- Does the storyworld allow new plot development? (*Storyworld Level Design Tasks*)
- Is the *mythos* easily understood? Does it provide the central knowledge for a reader/viewer to successfully interact with or interpret the events in the storyworld? (*Storyworld Level Design Tasks*)
 - Established conflicts/battles
 - “Historical” events
 - Character types
- Is the *topos* (setting of the world in a specific period and geography) easily understood? Does it provide the reader/viewer with an understanding of what can be expected in that world? (*Storyworld Level Design Tasks*)
 - Physical laws (*Storyworld Level Design Tasks*)
 - Physical setting (*Storyworld Level Design Tasks*)
 - What are the predominant geographic features? What is the ground like (i.e. rocky, sandy, etc.)?
 - What are the predominant built structures?
 - What materials are used for built structures?
 - What are the architectural characteristics of build structures (i.e. huts, high-rises, etc.)?
 - What is the climate like (i.e. dry, rainy, etc.)?
 - What kind of weather events are possible (i.e. tornados, droughts, blizzards, etc.)?
 - What does the atmosphere look like (i.e. clear, hazy, smoggy, foggy, etc.)?
 - What does the atmosphere smell like (i.e. clean, sweet, foul, polluted, etc.)?

- What is the plant life like? What is the predominant type of vegetation? What kind of rare plants are there? Does any of the vegetation have any notable characteristics?
- What are the animals like? Are they common or rare? How big are they? What do they look like? What do they eat? How do they behave (i.e. timid, aggressive, etc.)?
- Social systems (Storyworld Level Design Tasks)
 - What is the basic social structure (i.e. clan, tribe, etc.)?
 - What are the prevailing social beliefs? Religious beliefs? Are there opposing beliefs? If so, what are they?
 - What are the most popular forms of entertainment? Sports?
 - What celebrations, fairs, or festivals does the society have? When are they held?
 - What are the socioeconomic characteristics?
 - What are the ethnic/racial demographics?
 - What are the age demographics?
- Technological systems (Storyworld Level Design Tasks)
 - How advanced are the technologies (i.e. primitive, industrial, high tech, etc.)?
 - What technologies are commonly used?
 - What technologies are considered state-of-the-art?
 - What kind of energy systems are used?
- Economic systems (Storyworld Level Design Tasks)
- Political systems (Storyworld Level Design Tasks)
 - What are the prevailing political beliefs? Are there opposing beliefs? If so, what are they?
 - Are the political systems authoritarian, dictatorial, democratic, etc.)?
- Legal systems (*Storyworld Level Design Tasks*)
- Is the *ethos* easily understood? Does it provide the reader/viewer with an understanding of how characters behave in the world and what is acceptable and unacceptable behavior. (*Storyworld Level Design Tasks*)
 - Social values
 - Codes of behavior
 - Implicit ethics
 - Explicit ethics

- Are the mythos, topos, and ethos consistent with the conventions of the genre? (*Storyworld Level Design Tasks*)
- What are the visual characteristics of the setting? (*Storyworld Level Design Tasks*)
 - Spatial dimensions
 - Light source
 - Dominant color
 - Contrasting/highlighting color
 - Dominant texture
- What are the auditory characteristics of the setting? (*Storyworld Level Design Tasks*)
 - Nature of the sound (i.e. speech, music, machinery, etc.)
 - Loudness
 - Tonality
 - Sound source
 - Direction of the sound
 - Interpretation of the sound
- What are the scent characteristics of the setting? (*Storyworld Level Design Tasks*)
 - Type of scent (i.e. flowery, acrid, etc.)
 - Strength
 - Pleasant/unpleasant
 - Scent source
 - Scent direction
 - Interpretation of the scent
- What are the tactile (touch) characteristics of the setting? (*Storyworld Level Design Tasks*)
 - Type
 - Pleasant/unpleasant/painful
 - Localized or general
 - Intensity
- What are the taste characteristics of the setting? (*Storyworld Level Design Tasks*)
 - Type of taste (i.e. sweet, sour, bitter, etc.)
 - Strength
 - Pleasant/unpleasant

- Interpretation of the taste
- What classes of characters exist within the storyworld? (*Storyworld Level Design Tasks*)
- What archetypal characters exist in the storyworld? (*Storyworld Level Design Tasks*)
- Are characters (particularly the protagonist and antagonist) archetypes that are immediately recognizable? (*Storyworld Level Design Tasks*)
- Are the characters used across various stories and media? (*Storyworld Level Design Tasks*)
- Do the characters translate across media or are they best used in one medium? (*Storyworld Level Design Tasks*)
- How do we find out more about individual characters? (For example, web pages, blogs, Facebook, online dossiers, etc.) (*Storyworld Level Design Tasks*)
- Are the characters immediately recognizable to both new and committed fans? (*Storyworld Level Design Tasks*)
- Are characters introduced or “reintroduced” to fans? (*Storyworld Level Design Tasks*)
- Is the number of major characters appropriate to the story structure? (*Storyworld Level Design Tasks*)
- Are the characters’ characteristics (physical, social, behavioral, etc.) consistent with the *mythos*, *topos*, and *ethos* of the storyworld? (*Storyworld Level Design Tasks*)
- Is there room for the characters to develop into well-rounded, three-dimensional, unique, flawed personalities? (*Storyworld Level Design Tasks*)
- Do the major characters have clear character arcs (changes – for better or worse – in the characters’ inner nature)? (*Storyworld Level Design Tasks*)
- Are the characters credible? Does each character have a combination of qualities that allows the audience to believe the character would and could do what is done in the story? (*Storyworld Level Design Tasks*)
- What are the physical characteristics of the characters/class of characters? (*Storyworld Level Design Tasks*)
 - What is the character’s gender?
 - What is the character’s date of birth? What is the character’s age?
 - What is the character’s height and weight?
 - What is the character’s physical condition (i.e. highly fit, moderately fit, barely fit, moderately unfit, highly unfit, etc.)?
 - How would you describe the character?
 - Does the character have any distinguishing features, physical abnormalities, or disabilities?

- What is the character's race, ethnicity, species, etc.?
- What is the character's skin color (i.e. white, olive, black, green, etc.) and complexion (i.e. smooth, wrinkled, pimpled, weather-beaten, scarred, etc.)?
- What is the character's hair color, length, and style? Is the hair natural, dyed, a wig, etc.?
- What are the psychological and behavioral characteristics of the characters/class of characters? (*Storyworld Level Design Tasks*)
 - What are the character's psychological characteristics?
 - Values
 - Temperament
 - Fears and phobias
 - What are the motivating factors for the character's actions?
 - Survival
 - Safety and security
 - Love and belonging
 - Esteem and self-respect
 - Need to know and understand
 - Aesthetic needs
 - Self-actualization
 - What is the character's problem?
 - What is the character's struggle?
 - What is the character's transformation?
 - What is the character's realization?
 - What are pivotal events in the character's life? At what age?
 - What historic events occurred during the character's life? At what age?
 - What actions does the character take that result in a judgment being made about that character?
 - What in the character's past would result in a judgment being made about the character?
 - How can specific events reveal something about a character?
 - What is the character's reputation among the other characters?
 - What are the different personalities the character shows in different situations and with different people?

- What habits/patterns does the character have? What do they reveal? What would a change in habits mean?
- What are the character's tastes and preferences and dislikes? What do they reveal about the character?
- What do the character's talents and abilities reveal about the character? What do they conceal?
- What relationships does the character have?
- What are the character's behavioral characteristics? Habits?
- What are the social and socioeconomic characteristics of the characters/class of characters? (*Storyworld Level Design Tasks*)
 - What is the character's birthplace?
 - What was the character's economic status while growing up?
 - What is the character's current economic status?
 - What was the character's social status while growing up?
 - What is the character's current social status?
 - What kind of accent does the character have?
 - What is the character's citizenship?
 - What is the character's national background (i.e. what nation did the character identify with while growing up)?
 - What is the character's regional background (i.e. what region of the country did the character identify with while growing up)?
 - What are the character's social characteristics?
 - Social status
 - Family
 - Friends
 - Enemies
 - What languages does the character speak? What is the primary language? What is the mother language?
 - What is the character's educational background?
 - What is the character's job background?
 - Does the character have any special skills?
- How would the character's progression in life be described? (*Storyworld Level Design Tasks*)

- What would the chapters be in the character’s life? What would you title each chapter?
- How would you describe the character’s life at each decade? What would you title each decade?
- What are the significant object(s) in the storyworld (i.e. the ring in Lord of the Rings, the Holy Grail in numerous grail quest stories, money or treasure in “caper” stories, etc.)? (*Storyworld Level Design Tasks*)
 - What makes it/them significant objects from a plot perspective?
 - Are they significant enough that characters would give almost anything to possess them?
 - What is the history of the significant object(s)?
 - What are the physical characteristics of the significant object(s)?
 - What is the intrinsic value of the significant object(s)?
 - What is the symbolic value of the significant object(s)?
 - Is the significant object(s) used across various stories and media?

Key Design Questions: Stories

- Does this story serve as a “point of entry” to the storyworld? (*Storyworld Level Design Tasks*)
- What is the genre of the story? Is it consistent with the storyworld’s genre? (*Story Level Design Tasks*)
- What is the point-of-view (POV) of the narrative? (*Story Level Design Tasks*)
 - First person narrator
 - Third person omniscient narrator
 - Third person limited narrator
 - Is the point-of-view appropriate for the media used?
- Does the reader/viewer need additional information or can the story stand on its own? (*Story Level Design Tasks*)
 - Does the story consider the type of content consumers? (*Story Level Design Tasks*)
 - Single story consumers
 - Single media consumers
 - Transmedia consumers
- Is this story consistent with the *mythos*, *topos*, and *ethos* of the storyworld? (*Story Level Design Tasks*)

- Is there a macro-story already in place with the storyworld? If so, is the story consistent with the macro-story? (*Story Level Design Tasks*)
- What is the message this story intends to transmit? Is it consistent with the message of the storyworld? (*Story Level Design Tasks*)
- Is this story consistent with other stories that already exist in this storyworld? (*Story Level Design Tasks*)
- What is the story genre? Is the story genre consistent with other aspects of the storyworld? (*Story Level Design Tasks*)
- Is the story consistent with the conventions of the genre? (*Story Level Design Tasks*)
- What is the “story shape”? (*Story Level Design Tasks*)
 - Freytag’s Triangle
 - Freytag’s Triangle adapted for a story with one “big scene”
 - Freytag’s Triangle adapted to incorporate flashbacks
 - Freytag’s Triangle adapted to incorporate multiple scenes
 - Multiple “side trips” branching from the main story thread
 - Spiral story structure circling towards a central point
 - Horizontal story structure with multiple intertwined threads
 - Converging story structure with multiple individual threads coming together
 - Vertical story structure with multiple “narrative shafts” along a central thread
 - Multi-layer episodic story
- Are the story genre and “story shape” consistent? For example, a vertical story structure might support a transmedia narrative in which different “narrative shafts” are on different media. (*Story Level Design Tasks*)
- Is the type of interactivity (external/exploratory, internal/exploratory, external/ontological, and internal/ontological) consistent with the story genre and story shape? (*Story Level Design Tasks*)
- What is the controlling idea (theme) of the story? (*Story Level Design Tasks*)
- Is there a story arc that spans multiple elements of the story? (*Story Level Design Tasks*)
- What is the inciting incident? (McKee, 1997, pp. 189-202) (*Story Level Design Tasks*)
 - How does it radically upset the balance of forces in the protagonist’s live?
 - How does the protagonist react to the inciting incident?
 - When does the inciting incident occur? Within the first 25% of the central plot?

- Does the plot lend itself to transmedial development? (*Story Level Design Tasks*)
- Does the story have one or more sub-plots? (*Story Level Design Tasks*)
- Does a sub-plot open the story because the central plot's inciting incident is delayed? (*Story Level Design Tasks*)
 - Do the sub-plots support the central plot?
 - Do the sub-plots lead up to the inciting incident?
 - Is the inciting incident introduced at the appropriate time?
- How does the audience learn of the inciting incident? (*Story Level Design Tasks*)
 - In a serialized narrative or a transmedia narrative with multiple entry points, is there any easy way for the audience to learn about the inciting incident (i.e. recap of prior narrative events; brief introduction at the beginning of each episode; etc.)
- Do any of the sub-plots resonate with the controlling idea of the central plot? (*Story Level Design Tasks*)
 - Does the resonance enrich the story with variations on a theme?
- Do any of the sub-plots contradict the controlling idea? (*Story Level Design Tasks*)
 - Do any contradictions enrich the story with irony?
- Does a sub-plot complicate the central plot? (*Story Level Design Tasks*)
- Does the story move progressively forward to a final action beyond which the audience can't imagine another? (*Story Level Design Tasks*)
- Does the conflict build progressively to the end of the story? (*Story Level Design Tasks*)
- Does the climax occur at an appropriate point in the story? (*Story Level Design Tasks*)
- Does the climax involve a swing in the protagonist's values in absolute and irreversible way? (*Story Level Design Tasks*)
 - From negative to positive
 - From positive to negative
 - With or without irony
- Is the crisis a true dilemma for the protagonist? (*Story Level Design Tasks*)
- Is the crisis located at an appropriate point in the climactic action? (*Story Level Design Tasks*)
- Does the resolution provide a climax to any sub-plots that remain open? (*Story Level Design Tasks*)
 - Is this done in a way that links to the central plot?

- Does the resolution show the spread of the climatic effects? (*Story Level Design Tasks*)
- Does the resolution give the audience an opportunity to gather its thoughts after a powerful climax? (*Story Level Design Tasks*)
- Is the temporal ordering of the narrative: (*Story Level Design Tasks*)
 - Sequential/linear
 - Non-sequential/non-linear
- Will changing the temporal order in which elements of the narrative are accessed affect the reader's/viewer's ability to understand the meaning of the narrative? (*Story Level Design Tasks*)
 - If so, is there a clearly identified starting point for entering the narrative?
- Is the temporal ordering logical from a user perspective? (*Story Level Design Tasks*)
- Does the temporal ordering support the meaning of the story? (*Story Level Design Tasks*)
- Does the temporal ordering impede or enhance user understanding? (*Story Level Design Tasks*)
- Is the spatial ordering of the narrative logical from a user perspective? (*Story Level Design Tasks*)
- Does the spatial ordering support the meaning of the story? (*Story Level Design Tasks*)

SUMMARY

A key question about structuring narratives using transmedia techniques is linear versus non-linear storytelling. The narrative paradox of transmedia narratives provides an opportunity to use both linear and non-linear approaches within the same narrative or set of narratives. Finding the right balance, however, is difficult.

Traditionally, narratives have been structured linearly. As noted by Robert Pratten, the linear archplot/Freytag's triangle structure has become the "Hollywood" model of storytelling because the structure is highly effective and engaging while the problem with non-linear stories is that "while they may be intellectually rewarding, they often lack the

emotional satisfaction” of the archplot/Freytag triangle structure (Pratten, *Transmedia Narratives - Storyworld Model*, 2011). The use of non-linear approaches to narrative structures risks losing a significant portion of an audience that may have difficulty understanding a highly non-linear transmedia narrative. Within the narrative paradox, designers of transmedia narratives may find that an either/or choice is not their only option and discover ways to create stories that wrap non-linear elements within a linear structure or linear elements inside a non-linear structure.

The ontology developed in this thesis provides a structural framework that identifies and describes the objects, entities, and concepts of a transmedia narrative and the relationships between them. This ontology for the first time links key concepts from narrative, user engagement, and interaction design into a comprehensive framework that the designers can apply to the creation of transmedia narratives. Separating these three design areas will make it easier to identify roles and responsibilities for transmedia project team members and recognize the different sets of skills required to create a transmedia narrative. The ontology also provides a framework for better identifying where the narrative can be broken to provide a bridge from one medium or platform to another. For example, the identification of different story structures can provide designers with insights into how to create more satisfying transmedia narratives.

This thesis also provides a wealth of detail about the intricacies of writing stories and designing user engagement and interaction. The four-level process for designing transmedia narratives provides a practical set of steps for designers and developers and if not the “universal step-by-step plan that allows you to write down/define the project in a uniform way” (de Haas, 2011) does provide a solid foundation for such a process. Such a

process is of great value to transmedia practitioners who increasingly will share concepts and work with collaborators and customers around the world.

Transmedia narratives are a new form of communication and artistic expression. The next few years are likely to see the emergence of new technologies and increasingly sophisticated transmedia project. The concepts developed in this thesis will provide a substantial framework from which further developments can occur.

APPENDIX A:

BLOOM'S TAXONOMY FOR THE COGNITIVE DOMAIN

Bloom's taxonomy consists of the cognitive, affective, and psychomotor domains.

The cognitive domain consists of (starting at the lowest level) (Churches, n.d.):

- Remembering: recognizing, listing, describing, identifying, retrieving, naming, locating, finding
 - Online activities related to this skill include bookmarking, social networking, social bookmarking, favoriting/local bookmarking, searching
- Understanding: interpreting, summarizing, inferring, paraphrasing, classifying, comparing, explaining, exemplifying
 - Online activities related to this skill include advanced searches, Boolean searches, blog journaling, twittering, categorizing, tagging, commenting, annotating, subscribing
- Applying: implementing, carrying out, using, executing
 - Online activities related to this skill include running, loading, playing, operating, hacking, uploading, sharing, editing
- Analyzing: comparing, organizing, deconstructing, attributing, outlining, finding, structuring, integrating
 - Online activities related to this skill include mashing, linking, validating, reverse engineering, cracking, media clipping
- Evaluation: checking, hypothesizing, critiquing, experimenting, judging, testing, detecting, monitoring
 - Online activities related to this skill include blog commenting, reviewing, posting, moderating, collaborating, networking, refactoring, testing
- Creating: designing, constructing, planning, producing, inventing, devising, making
 - Online activities related to this skill include programming, filming, animating, blogging, video blogging, mixing, re-mixing, wiki-ing, publishing, videocasting, podcasting, directing, broadcasting

APPENDIX B:

BLOOM'S TAXONOMY FOR THE AFFECTIVE DOMAIN

Bloom's taxonomy consists of the cognitive, affective, and psychomotor domains.

The affective domain consists of (starting at the lowest level) (Clark, 2010):

- Receiving: awareness of, willingness to hear, or giving selected attention to a particular individual, object, behavior, or phenomena
 - Activities include asking, choosing, describing, following, giving, holding, identifying, locating, naming, pointing to, selecting, replying, using
- Responding: actively participating, attending to, reacting to, and responding to a particular individual, object, behavior, or phenomena
 - Activities include answering, assisting, aiding, complying, conforming, discussing, greeting, helping, labeling, performing, practicing, presenting, reading, reciting, reporting, selecting, telling, writing
- Valuing: this can range from accepting the worth or value of a particular individual, object, behavior, or phenomena to the more complex state of committing to the value
 - Activities include completing, demonstrating, differentiating, explaining, following, forming, initiating, inviting, joining, justifying, proposing, reading, reporting, selecting, sharing, studying, working
- Organizing: this involves organizing values into priorities by contrasting different values, resolving conflicts between them, and creating a unique value system.
 - Activities include adhering to, altering, arranging, combining, comparing, completing, defending, explaining, formulating, identifying, integrating, modifying, organizing, preparing, relating, and synthesizing
- Internalizing: this involves the internalization of a value system that controls an individual's behavior in a pervasive, consistent, predictable way that is characteristic of the individual.
 - Activities include acting, discriminating, displaying, influencing, listening, modifying, performing, practicing, proposing, qualifying, questioning, revising, serving, solving, verifying

APPENDIX C:

BLOOM'S TAXONOMY FOR PSYCHOMOTOR DOMAIN

Bloom's taxonomy consists of the cognitive, affective, and psychomotor domains.

The psychomotor domain consists of (starting at the lowest level) (Clark, 2010):

- Perceiving: involves sensory stimulation, cue selection, and translation to guide motor activity
 - Activities include choosing, describing, detecting, differentiating, distinguishing, identifying, isolating, relating, selecting
- Setting: involves mental, physical, and emotional dispositions that predetermine a person's response to different situations
 - Activities include beginning, displaying, explaining, moving, proceeding, reacting, showing, stating, volunteering
- Guided Responding: involves imitation and trial-and-error learning with adequate performance achieved by practicing
 - Activities include copying, tracing, following, reacting, reproducing, responding
- Mechanizing: involves learned responses that become habitual and movements that are performed with confidence and proficiency
 - Activities include assembling, calibrating, constructing, dismantling, displaying, fastening, fixing, grinding, heating, manipulating, measuring, mending, mixing, organizing, sketching
- Complex Overt Responding: involves skillful performance of motor acts involving complex movement patterns, with proficiency indicated by quick, accurately, and highly coordinated and automatic performance without hesitation and with a minimum use of energy
 - Activities include assembling, calibrating, constructing, dismantling, displaying, fastening, fixing, grinding, heating, manipulating, measuring, mending, mixing, organizing, sketching (same as mechanizing, but with better, quicker, more accurate performance)
- Adapting: involves well developed skills that can be modified to fit special requirements
 - Activities include adapting, altering, changing, rearranging, reorganizing, revising, varying

- Originating: involves creating new psychomotor patterns to fit a particular situation or specific problem, with an emphasis on creativity based on highly developed skills
 - Activities include arranging, building, combining, composing, constructing, creating, designing, initiating, making, originating

APPENDIX D:

COMPONENTS RELATED TO COGNITIVE AFFORDANCE QUALITY

- Content, meaning (of a cognitive affordance)
 - Clarity, precision, predictability of meaning
 - Precise use of words
 - Labels for naming a form field
 - Labels for buttons, menus
 - Concise expression
 - Clearly labeled exits
- Completeness and sufficiency of meaning (of cognitive affordance)
 - Complete labels for buttons and menus
 - Complete information for error recovery
 - Complete alternatives in confirmation requests
- Distinguishability (of cognitive affordances)
- Relevance of content (of cognitive affordances)
- Convincingness of content, meaning (of cognitive affordances)
- User-centeredness of wording, design of cognitive affordance content
- Error avoidance (in content, meaning of a cognitive affordance)
 - Correctness of content (of cognitive affordance)
 - Make inappropriate options unavailable
 - Anticipate and head-off potential user errors
 - Request user confirmation to avoid potentially costly or destructive errors
 - Distinguish modes
- Layout and grouping (of cognitive affordances)
 - Complexity of layout
- Cognitive directness
 - Direct presentation of cognitive affordance, rather than an encoding
 - Cognitive issues of direct manipulation
 - Direct manipulation paradigm not understood
 - Cognitive affordance content to help know how to manipulate an object, use an interaction technique

- Mnemonically meaningful cognitive affordances to support human memory limits
- Content, meaning of cognitive affordances for data entry
 - Appropriate default values for data entry
 - Indicate data type and format expected
 - Field size as indication of allowable data value length
 - Monospace type font (fixed width characters)
- Meaning contained in cognitive affordance presentation features
- Preferences and efficiency for content (meaning) of cognitive affordances
 - User ability to set preferences, parameters
 - Style of cognitive affordance content
 - Aesthetics, taste
 - Wording, word choice, vocabulary
 - Anthropomorphism, poor attempts at humor
 - User-centeredness in working, design
 - Apparent loss of user control due to wording
 - Writing style, reading level (of prompt content)
- Getting started in a task

Source: H. Rex Hartson (Hartson, 2003)

APPENDIX E:

COMPONENTS RELATED TO SENSORY AFFORDANCE QUALITY

- Sensory issues
 - Noticeability, likeliness to be sensed
 - Color, contrast
 - Timing of appearance of cognitive affordance
 - Layout complexity
 - Location of cognitive affordance, object with respect to user focus of attention
 - Focused vs. divided user attention
 - Visibility (of cognitive affordance)
 - Findability
 - Discernability, recognizability, indentifiability, intelligibility (of cognitive affordance)
 - Legibility of text (of cognitive affordance)
 - Detectability, distinguishability of sound, force
 - Bandwidth issues
 - Sensory disabilities and special limitations
 - Presentation medium choice (e.g. text vs. voice)
 - Visual quality of graphics
 - Auditory quality of audio
 - Quality of haptic, tactile, force interaction

Source: H. Rex Hartson (Hartson, 2003)

APPENDIX F:

COMPONENTS RELATED TO PHYSICAL AFFORDANCE QUALITY

- Physical actions (design helping users do the action)
 - Manipulating objects
 - Physical control
 - Difficulty manipulating and object (e.g. clicking, grabbing, selecting, dragging)
 - Object not manipulable, or not in the desired way
 - Issues about kinesthetics of a device
 - Issues about manipulating a direct manipulation design
 - Physical fatigue, stress, strain
 - Gross motor coordination
 - Fine motor coordination
 - Physical layout
 - Proximity and size of objects as a factor in moving between (Fitts' Law issues)
 - Proximity (closeness) of object as a factor in ability to manipulate reliably
 - Proximity of objects as a factor in grouping (or sensing of grouping), interference by unrelated objects
 - Display inertia and consistency of object location
 - Shape of object(s)
 - Inconsistent location of objects
 - Physical object design
 - Interaction devices, I/O devices
 - Inconsistency in the way objects or devices are manipulated
 - Interaction techniques, interaction styles
 - Object not manipulable
 - Objects not manipulable in desired way
 - Physically direct manipulation issues
 - Using direct manipulation when appropriate
 - Preferences and efficiency (for manipulating objects)

- Efficiency of (single) physical actions (for MOST OR ALL users or user classes)
- Awkwardness in physical actions for MOST OR ALL users or user classes
- Accommodating different user classes and physical disabilities
 - Making physical actions efficient for expert users
 - Awkwardness in physical actions for SOME users or user classes

Source: H. Rex Hartson (Hartson, 2003)

APPENDIX G:
LIST OF CHARACTER VALUES

Values are ideas, beliefs or understandings one has that guide and are reflected in one's behavior. These can include (Scerenko, 1997):

Citizenship

- Democracy: government of, by and for the people, exercised through the voting process
- Respect for and acceptance of authority: the need for and primacy of authority, including the law, in given circumstances
- Equality: the right and opportunity to develop one's potential as a human being
- Freedom of conscience and expression: the right to hold beliefs, whether religious, ethical or political, and to express one's views Justice: equal and impartial treatment under the law
- Liberty: freedom from oppression, tyranny or the domination of government
- Tolerance: the allowable deviation from a standard. Indulgence for beliefs or practices differing from or conflicting with one's own
- Patriotism: support of the U. S. Constitution and love for the United States of America with zealous guarding of their authority and interests.
- Courage: willingness to face danger with determination
- Loyalty: steadfastness or faithfulness to a person, institution, custom or idea to which one is tied by duty, pledge or a promise
- Honor: a keen sense of ethical conduct one's word given as a guarantee of performance
- Respect for the Natural Environment: care for and conservation of land, trees, clean air and pure water and of all living inhabitants of the earth
- Conservation: avoiding waste and pollution of natural resources

Respect for Others

- Altruism: concern for and motivation to act for the welfare of others
- Civility and cheerfulness: courtesy and politeness in action or speech
- Compassion, kindness and generosity: concern for suffering or distress of others and response to their feelings and needs

- Courtesy and cooperation: recognition of mutual interdependence with others resulting in polite treatment and respect for them
- Integrity: confirmed virtue and uprightness of character, freedom from hypocrisy
- Honesty: truthfulness and sincerity
- Truth: freedom from deceit or falseness; based on fact or reality
- Trustworthiness: worthy of confidence
- Fairness and good sportsmanship: freedom from favoritism, self-interest or indulgence of one's likes and dislikes; abiding by the rules of a contest and accepts victory or defeat graciously
- Patience: not being hasty or impetuous

Respect for Self

- Accountability: responsibility for one's actions and their consequences
- Commitment: being emotionally, physically or intellectually bound to something
- Perseverance and diligence: adherence to actions and their consequences
- Self control and virtue: exercising authority over one's emotions and actions
- Frugality: effective use of resources; thrift
- Self-Esteem: pride and belief in oneself and in achievement of one's potential
- Knowledge: learning, understanding, awareness
- Moderation: avoidance of unreasonably extreme views or measures
- Respect for physical, mental and fiscal health: awareness of the importance of and conscious activity toward maintaining fitness in these areas
- Cleanliness: good habits of personal hygiene and grooming
- Work Ethic: belief that work is good and that everyone who can, should work
- Punctuality: being on time for attendance and tasks
- Accomplishment: appreciation for completing a task
- Cooperation: working with others for mutual benefit
- Dependability: reliability; trustworthiness
- Diligence: attentiveness; persistence; perseverance
- Pride: dignity; self-respect; doing one's best
- Productivity: supporting one's self, contributing to society
- Creativity: exhibiting an entrepreneurial spirit inventiveness; originality; not bound by the norm

- School pride: playing a contributing role in maintaining and improving all aspects of a school's environment, programs and activities within the context of contributing to the betterment of the city, county and state

APPENDIX H:
 INTERACTION DECISION PLANNING
 & CALL-TO-ACTION DESIGN WORKSHEET

TD #	1	Find out the fate of Character X in Episode Y.
CTA #	1	Purpose of CTA: CTA Type: ___ Internal ___ External Media Move From: Real world Medium: None Move To: iPad transmedia app Medium: Video w/sound Story Move From: Move To: Attractor: Motivator: Connector: Retainer:
HOD #	1.1	Open transmedia narrative using iPad.
BD#	1.1.1	Find the icon for the transmedia app.
BD#	1.1.2	Select the icon for the transmedia app.
HOD#	1.2	Go to Episode Y in the transmedia narrative.
BD#	1.2.1	Click on the "Episode X" menu link.
BD#	1.2.2	Begin watching Episode X.

TD#	2	Find out more about Character X's origin.
CTA#	2	<p>Purpose of CTA:</p> <p>CTA Type: ___ Internal ___ External</p> <p>Media</p> <p>Move From: iPad transmedia app</p> <p>Medium: Video w/sound</p> <p>Move To: Web page (www.the amazingxcharacters.com)</p> <p>Medium: Text w/still images</p> <p>Story</p> <p>Move From:</p> <p>Move To:</p> <p>Attractor:</p> <p>Motivator:</p> <p>Connector:</p> <p>Retainer:</p>
HOD #		
BD#		
BD#		

BIBLIOGRAPHY

- Aarseth, E. (2004). Quest Games as Post-Narrative Discourse. In M.-L. Ryan, *Narrative Across Media: The Languages of Storytelling* (pp. 361-376). Lincoln, NE: University of Nebraska Press.
- Abbott, H. P. (2005). The Future of All Narrative Futures. In J. Phelan, & P. J. Rabinowitz, *A Companion to Narrative Theory* (pp. 529-541). Malden, MA: Wiley-Blackwell.
- Aboriginal Peoples Television Network. (2011). *Animism: The Gods' Lake - Home*. Retrieved July 2, 2011, from Animism: The Gods' Lake: <http://www.animism.com/>
- Ahmad, A., & Thompson, J. (2009). *Tale-Telling Organizations: Using Stories to Create Collective Change*. Retrieved May 3, 2011, from Council of 3M Teaching Fellows: <http://www.mcmaster.ca/stlhe/3M.council/Tale-telling%20Organizations.pdf>
- Alexander, B. (2011). *The New Digital Storytelling: Creating Narratives with New Media*. Santa Barbara, CA: Praeger.
- ALL Star Wars Crawls Episodes I-VI*. (2008). Retrieved October 31, 2011, from YouTube: http://www.youtube.com/watch?v=iLhIs_9nl9o&feature=related
- Ames, M., & Naaman, M. (2007). Why We Tag: Motivations for Annotation in Mobile and Online Media. *2007 SIGCHI Conference on Human Factors in Computing Systems* (pp. 971-980). New York, NY: ACM Press.
- Angleman, S. A. (2000, December). *Uses and Gratifications and Internet Profiles: A Factor Analysis*. Retrieved September 10, 2011, from Arkansas State University - Jonesboro: <http://www.jrily.com/LiteraryIllusions/InternetGratificationStudyIndex.html>
- Askehave, I., & Nielsen, A. E. (2005). Digital Genres: A Challenge to Traditional Genres. *Information Technology & People*, 18 (2), pp. 120-141.
- Bantz, C. R. (1982, July). Exploring Uses and Gratifications: A Comparison of Reported Uses of Television and Reported Uses of Favorite Program Type. *Communication Research*, 9 (3), pp. 353-379.
- Barthes, R. (1974). *S/Z*. (R. Miller, Trans.) New York, NY: Hill and Wang.
- Barton, K. M. (2009). Reality Television Programming and Diverging Gratifications: The Influence of Content on Gratifications Obtained. *Journal of Broadcasting & Electronic Media*, 53 (3), pp. 460-476.
- Bell, M. W. (2008, July). Toward a Definition of "Virtual Worlds". *Journal of Virtual Worlds Research*, 1 (1).
- Bickham, J. M. (1994). *Setting*. Cincinnati, OH: Writer's Digest Books.
- Biocca, F. (1992). Communication Within Virtual Reality: Creating Space for Research. *Journal of Communication*, 42 (4).
- Bittarello, M. B. (2008, July). Another Time, Another Space: Virtual Worlds, Myths and Imagination. *Journal of Virtual Worlds Research*, 1 (1).

- Black-Mizuta, E., Hillis, J., & Winkle, A. V. (2011, October 28). *Night Zero - Ally*. Retrieved November 6, 2011, from Night Zero: <http://www.nightzero.com/>
- Bloom, B. S. (1956). *Taxonomy of Educational Objectives Book 1: Cognitive Domain*. White Plains, NY: Longman.
- Bloom, B. S. (1956). *Taxonomy of Educational Objectives, Handbook I: The Cognitive Domain*. New York, NY: David McKay Co Inc.
- Blumler, J. G., & Katz, E. (1974). *The Uses of Mass Communications: Current Perspectives on Gratifications Research*. Beverly Hills, CA: Sage Publications.
- Bolton, G. E., Katok, E., & Ockenfels, A. (2003). How Effective are Electronic Reputation Mechanisms? An Experimental Investigation. *Working Paper Series in Economics 3*.
- Bonds-Raacke, J., & Raacke, J. (2010). MySpace and Facebook: Identifying Dimensions of Users and Gratifications for Friend Networking Sites. *Individual Differences Research*, 8 (1), pp. 27-33.
- Brooks, L. (2011). *Story Engineering: Mastering the 6 Core Competencies of Successful Writing*. Cincinnati, OH: Writer's Digest Books.
- Brown, J. S., Denning, S., Groh, K., & Prusak, L. (2005). *Storytelling in Organizations: Why Storytelling is Transforming 21st Century Organizations and Management*. Burlington, MA: Elsevier Butterworth-Heinemann.
- Caldwell, J. (2008). *Production Culture: Industry Reflexivity and Critical Practice in Film and Television*. London: Duke University Press.
- Campbell, J. (1949). *The Hero With a Thousand Faces*. New York, NY: MJF Books.
- Card, O. S. (1988). *Characters & Viewpoint*. Cincinnati, OH: Writer's Digest Books.
- Chatman, S. (1978). *Story and Discourse: Narrative Structure in Fiction and Film*. Ithaca, NY: Cornell University Press.
- Churches, A. (n.d.). *Bloom's Digital Taxonomy*. Retrieved November 16, 2011, from Educational Origami: <http://edorigami.wikispaces.com/Bloom%27s+Digital+Taxonomy>
- Clark, D. (2010, July 5). *Bloom's Taxonomy of Learning Domains*. Retrieved November 16, 2011, from Big Dog & Little Dog Performance Juxtaposition: <http://www.nwlink.com/~donclark/hrd/bloom.html>
- Clarke, R. (2011, March 22). *What's Transmedia?* Retrieved July 10, 2011, from Storify: <http://storify.com/rachelclarkef1/whats-transmedia>
- Cooley, M. (2000). Human-Centered Design. In R. Jacobson, *Information Design* (pp. 59 - 81). Cambridge, MA: The MIT Press.
- Coomans, M., & Timmermans, H. (1997). Towards a Taxonomy of Virtual Reality User Interfaces. *Proceedings 1997 IEEE Conference on Information Visualization* (pp. 279-284). IEEE.

- Cornwell, B. (n.d.). *Book List - The Sharpe Books*. Retrieved October 31, 2011, from Bernard Cornwell - The Author's Official Site: <http://www.bernardcornwell.net/index2.cfm?page=1&seriesid=1>
- Coyne, R. (1999). *Technoromanticism: Digital Narrative, Holism, and the Romance of the Real*. Cambridge, MA: The MIT Press.
- Darley, A. (2000). *Visual Digital Culture: Surface Play and Spectacle in New Media*. London: Routledge.
- Davenport, G. (1998). Very Distributed Media Stories: Presence, Time, Imagination. *Proceedings 4th International Euro-Par Conference on Parallel Processing*, pp. 47-54.
- Davidson, D. (2008). *Stories in Between: Narratives and Mediums @ Play*. ETC Press: Kindle Edition.
- Day, L. (2008, January 9). *Tone Language*. Retrieved October 11, 2011, from Time Magazine Arts: <http://www.time.com/time/magazine/article/0,9171,1702111,00.html>
- de Haas, D. (2011, October 30). Transmedia Design Questionnaire. (P. von Stackelberg, Interviewer)
- DeFleur, M. L., & Bale-Rokeach, S. J. (1989). *Theories of Mass Communication (5th Ed.)*. New York, NY: Longman.
- Dena, C. (2011, July 9). Authentic in All Caps: a Playful Comedy-Drama by Christy Dena. <http://www.transmedialab.org/en/storytelling-transmedia-2/authentic-in-all-caps-a-playful-comedy-drama-by-christy-dena/>. (A. Vasile, Interviewer)
- Dena, C. (2007). *Patterns in Cross-Media Interaction Design: It's Much More Than a URL...(Part 1)*. Sydney, Australia: School of Letters, Art and Media - University of Sydney.
- Dena, C. (2011, July 1). *The Process of Creating Quality Transmedia Experiences*. Retrieved November 12, 2011, from Connecting:// arts audiences online: <http://connectarts.australiacouncil.gov.au/arts-experiences/the-process-of-creating-quality-transmedia-experiences/>
- Dena, C. (2009). Transmedia Practice: Theorizing the Practice of Expressing a Fictional World Across Distinct Media and Environments. *PhD dissertation*. Sydney, Australia: University of Sydney.
- Denning, S. (2011). *The Leader's Guide to Storytelling: Mastering the Art and Discipline of Business Narrative*. San Francisco, CA: Jossey-Bass.
- Denning, S. (2001). *The Springboard: How Storytelling Ignites Action in Knowledge-Era Organizations*. Boston, MA: Butterworth-Heinemann.
- Diaskeaus. (2006, February 15). *Character Archetypes*. Retrieved October 30, 2011, from Listology: <http://www.listology.com/list/character-archetypes>
- Dictionary.com. (n.d.). *narrative*. Retrieved September 2, 2011, from Collins English Dictionary - Complete & Unabridged 10th Edition: <http://dictionary.reference.com/browse/narrative>

- Dirks, T. (2011). *Film Genres: Origins & Types*. Retrieved September 30, 2011, from FilmSite: <http://www.filmsite.org/filmgenres.html>
- Earnshaw, R., & Vince, J. (2001). *Digital Content Creation*. London: Springer-Verlag.
- Eighmey, J., & McCord, L. (1998). Adding Value in the Information Age: Uses and Gratifications of Sites on the World Wide Web. *Journal of Business Research* , 41 (3), pp. 187-194.
- Ellis, M., & Martin Ellis, M. (2008). *The Everything Guide to Writing Graphic Novels*. Avon, MA: Adams Media.
- Evans, E. J. (2008). Character, Audience Agency and Transmedia Drama. *Media, Culture & Society* , 30 (2), pp. 197-213.
- Fahle, R. (2011, July 11). *Are You Ready for the Transmedia Revolution?* Retrieved July 12, 2011, from Video-Commerce.org: <http://video-commerce.org/2011/07/are-you-ready-for-the-transmedia-revolution/>
- Fencott, C. (2001). Comparative Content Analysis of Virtual Environments Using Perceptual Opportunities. In R. Earnshaw, & J. Vince, *Digital Content Creation* (pp. 25-51). London: Springer.
- Fencott, C., van Schaik, P., Shafiullah, M., & Ling, J. (2003). The Effects of Movement of Attractors and Pictorial Content of Rewards on Users' Behavior in Virtual Environments. *Interacting with Computers* , 15, pp. 121-140.
- Ferguson, D. A., & Perse, E. M. (2000). The World Wide Web as a Functional Alternative to Television. *Journal of Broadcasting & Electronic Media* , 44 (2), 155-174.
- Fetveit, A. (1999, November). Reality TV in the Digital Era: A Paradox in Visual Culture? *Media Culture Society* , 21 (6), pp. 787-804.
- Field, S. (2005). *Screenplay: The Foundations of Screenwriting*. New York, NY: Delta Press.
- Finnemann, N. O. (1999). *Hypertext and the Representational Capacities of the Binary Alphabet*. Retrieved September 17, 2011, from Center for Cultural Studies, University of Aarhus: www.hum.au.dk/ckultur/f/pages/publications/nof/hypertext.htm
- Fisk, J. (1987). *Television Culture*. London: Methuen & Company.
- Flanagan, A., & Metzger, M. (2001). Internet Use in the Contemporary Media Environment. *Human Communication Research* , 27 (1), pp. 153-181.
- Flanagan, A., & Metzger, M. (2000). Perceptions of Internet Information Credibility. *Journalism & Mass Communication Quarterly* , 77, pp. 515-540.
- Frankl, V. (2006). *Man's Search for Meaning*. Boston, MA: Beacon Press.
- Glassner, A. (2004). *Interactive Storytelling: Techniques for 21st Century Fiction*. Natick, MA: A.K. Peters.

- Gomez, J. (2011, February 22). *Storyworlds: The New Transmedia Business Paradigm*. Retrieved July 10, 2011, from Tools of Change for Publishing: http://www.youtube.com/watch?v=81Ol6Tbjt5k&feature=player_embedded
- Goodyear, D. (2008, December 22). *I (Heart) Novels*. Retrieved October 27, 2011, from The New Yorker: http://www.newyorker.com/reporting/2008/12/22/081222fa_fact_goodyear
- Graf, J. (2006). *The Audience for Political Blogs*. Washington, DC: Institute of Politics, Democracy & the Internet.
- Graham, B. (1996). Playing With Yourself: Pleasure and Interactive Art. In J. Dovey, *Fractal Dreams: New Media in Social Context*. London: Lawrence & Wishart Ltd;.
- Gruber, T. J. (1993). Toward Principles for the Design of Ontologies User for Knowledge Sharing. *International Journal of Human-Computer Studies* , pp. 907-928.
- Gulino, P. J. (2004). *Screenwriting: The Sequence Approach*. New York, NY: Continuum International Publishing Group Inc.
- Gwenllian-Jones, S. (2004). Virtual Reality and Cult Television. In S. Gwenllian-Jones, & R. Pearson, *Cult Television* (pp. 83-98). Minneapolis: University of Minneapolis Press.
- Harrell, D. F., & Zhu, J. (2009). Agency Play: Dimensions of Agency for Interactive Narrative Design. *Proceedings of the AAAI 2009 Spring Symposium on Narrative Intelligence II* (pp. 156-162). Menlo Park, CA: AAAI Press.
- Harrow, A. J. (1972). *A Taxonomy of Psychomotor Domain: A Guide for Developing Behavioral Objectives*. New York, NY: Longman.
- Hartson, H. R. (2003, September-October). Cognitive, Physical, Sensory, and Functional Affordances in Interaction Design. *Behavior & Information Technology* , 22 (5), pp. 315-338.
- Harwood, D. (2011, June 22). *Thomas Dolby Debuts The Floating City Transmedia Game*. Retrieved July 5, 2011, from iPadNewsTracker: <http://www.ipadnewstracker.com/2011/06/thomas-dolby-debuts-the-floating-city-transmedia-game/>
- Hayes, G. P. (2011). *How to Write a Transmedia Production Bible*. Screen Australia.
- Hayes, G. P. (2010, August 5). *Producing Transmedia Stories – 10 Reasons why Audiences do it Better....* Retrieved September 10, 2011, from PersonalizeMedia: <http://www.personalizemedia.com/producing-transmedia-stories-10-reasons-why-audiences-do-it-better/>
- Hench, J., & Pelt, P. V. (2003). *Designing Disney: Imagineering and the Art of the Show*. New York: Disney Editions.
- Herman, D. (2004). Toward a Transmedial Narratology. In M.-L. Ryan, *Narrative Across Media: The Languages of Storytelling* (pp. 47-75). Lincoln, NE: University of Nebraska Press.

- Hill, P. (2001). *Superfictions: The Creation of Fictional Situations in International Contemporary Art Practice. PhD dissertation* . RMIT.
- Hodgins, J. (2001). *A Passion for Narrative: A Guide for Writing Fiction*. Toronto: McClelland & Stewart.
- Hoefs, L. (2011, April 23). *Story: The Heart of Transmedia*. Retrieved June 18, 2011, from Media Psychology Impact: Social Change Through Media Technologies: <http://mediapsy.net/2011/04/23/story-the-heart-of-transmedia/>
- Hollenbaugh, E. E. (2011). Motives for Maintining Personal Journal Blogs. *Cyberpsychology, Behavior, and Social Networking* , 14 (1-2).
- Holme, P. (2011, April 17). *The Differences Between Multimedia, Crossmedia, and Transmedia, Somewhat Explained*. Retrieved July 10, 2011, from Tools of Change for Publishing: <http://reasonpartners.com/2011/04/17/the-differences-between-multimedia-crossmedia-and-transmedia-somewhat-explained/>
- Hong, T. (2006). The Influence of Structural and Message Features on Web Site Credibility. *Journal of the American Society for Information Science and Technology* , 57 (1), pp. 114-127.
- Horn, R. E. (2000). Information Design: Emergence of a New Profession. In R. J. (ed.), *Information Design* (pp. 15 - 33). Cambridge, MA: The MIT Press.
- Hou, B. (2011, June 2). *Alien Loves Predator*. Retrieved November 6, 2011, from Alien Loves Predator: <http://alienlovespredator.com/>
- Jacobson, R. (2000). Introduction: Why Information Design Matters. In R. Jacobson, *Information Design* (pp. 1-10). Cambridge, MA: The MIT Press.
- James, M. L., Wotring, C. E., & Forrest, E. J. (1995). An Exploratory Study of the Perceived Benefits of Electronic Bulletin Board Use and Their Impact on Other Communication Activities. *Journal of Broadcasting & Electronic Media* , 39 (1), pp. 30-50.
- Jeffery-Poulter, S. (2001). Creating and Producing Digital Content Across Multiple Platforms. *Journal of Media Production* (3), pp. 155-156.
- Jenkins, H. (2006). *Convergence Culture: Where Old and New Media Collide*. New York, NY: New York University Press.
- Jenkins, H. (2009, December 12). *The Revenge of the Origami Unicorn: Seven Principles of Transmedia Storytelling*. Retrieved June 19, 2011, from Confessions of an Aca-Fan: The Official Weblog of Henry Jenkins: http://henryjenkins.org/2009/12/the_revenge_of_the_origami_uni.html
- Jenkins, H., Purushotma, R., Weigel, M., Clinton, K., & Robison, A. J. (2009). *Confronting the Challenge of Participatory Culture: Media Education for the 21st Century*. Cambridge, MA: MIT Press.
- Johnson, T. J. (1998). The Internet: Vehicle for Engagement or a Haven for the Disaffected? In T. J. Johnson, C. E. Hays, & S. P. Hays, *Engaging the Public: How*

- Government and the Media Can Reinvigorate American Democracy*. Lanham, MD: Rowman & Littlefield.
- Johnson, T., & Kaye, B. K. (2010). Choosing Is Believing? How Web Gratifications and Reliance Affect Internet Credibility Among Politically Interested Users. *Atlantic Journal of Communication* , 18, pp. 1-21.
- Juul, J. (2005). *Half-Real: Video Games Between Real Rules and Fictional Worlds*. Cambridge, MA: The MIT Press.
- Katz, E., Blumler, J. G., & Gurevitch, M. (1974). Utilization of Mass Communication by the Individual. In J. G. Blumler, & E. Katz, *The Uses of Mass Communications: Current Perspectives on Gratifications Research* (pp. 19-32). Beverly Hills, CA: Sage Publications.
- Katz, E., Gurevitch, M., & Haas, H. (1973). On the Use of the Mass Media for Important Things. *American Sociological Review* , pp. 164-181.
- Kaye, B. K. (1998). Uses and Gratifications of the World Wide Web: From Couch Potato to Web Potato. *The New Jersey Journal of Communication* , 6 (1), pp. 21-40.
- Kewley, J., & Sallee, W. A. (2009). *1 Kindred*. Retrieved October 27, 2011, from Joy Motel: <http://joymotel.blogspot.com/2008/12/kindred.html>
- Kinke, N. (2011, April 5). *Producers Guild Of America Agrees On New Credit: "Transmedia Producer"*. Retrieved June 18, 2011, from Deadline|Hollywood: <http://www.deadline.com/2010/04/producers-guild-of-america-vote-on-creation-of-new-credit-transmedia-producer/>
- Klastrup, L., & Tosca, S. (2011, June 30). *A Game of Thrones: Transmedia Worlds, Fandom, and Social Gaming*. Retrieved October 20, 2011, from Storyworlds Across Media: <http://www.storyworlds.de/programme-thursday-2011-06-30/>
- Klastrup, L., & Tosca, S. (2004). Transmedial Worlds: Rethinking Cyberworld Design. *Proceedings of the International Conference on Cyberworlds 2004*, (pp. 409-416).
- Kohn, E. (2011, April 20). *Toolkit / 5 Lessons About Transmedia from The IFP/Power To The Pixel Cross-Media Forum*. Retrieved June 19, 2011, from indieWIRE: http://www.indiewire.com/article/2011/04/20/toolkit_5_lessons_about_transmedia_from_the_ifp_power_to_the_pixel_cross-me
- Korenman, J., & Wyatt, N. (1996). Group Dynamics in an E-mail Forum. In S. C. Herring, *Computer-Mediated Communication: Linguistic, Social and Cross-Cultural Perspectives* (pp. 225-242). Amsterdam & Philadelphia: John Benjamins Publishing Company.
- Kraftwohl, D. R., Bloom, B. S., & Masia, B. B. (1967). *Taxonomy of Educational Objectives, the Classification of Educational Goals : Handbook II: Affective Domain*. New York, NY: David McKay Company.
- Kring, T. (2010). *Who We Are*. Retrieved June 15, 2011, from Conspiracy for Good: <http://www.conspiracyforgood.com/about.php>

- Krozser, K. (2010, March 30). *Thoughts on Transmedia Storytelling, or, Is It Right for Every Story?* Retrieved July 7, 2011, from BookSquare:
<http://booksquare.com/thoughts-on-transmedia-storytelling-or-is-it-right-for-every-story/>
- Lamb, A., & Johnson, L. (n.d.). *Fluid Environments for Life-Long Learning*. Retrieved September 3, 2011, from Lamb Learning Group:
<http://eduscapes.com/fluid/index.html>
- LaRose, R., Mastro, D., & Eastin, M. S. (2001). Understanding Internet usage: A social-cognitive approach to uses and gratifications. *Social Science Computer Review* , 19 (4), pp. 395-413.
- Lawless, K. A., & Schrader, P. (2008). Where Do We Go Now? Understanding Research on Navigation in Complex Digital Environments. In J. Coiro, M. Knobel, C. Lankshear, & D. J. Leu, *Handbook of Research on New Literacies* (pp. 267-296). New York, NY: Lawrence Erlbaum Associates.
- Leavitt, A. (2010, May 4). *Where Is Our Transmedia Mozart?* Retrieved September 3, 2011, from Futures of Entertainment:
http://www.convergenceculture.org/weblog/2010/05/where_is_our_transmedia_mozart.php
- Lee, C. S., Goh, D. H.-L., Chua, A. Y., & Ang, R. P. (2010). Indagator: Investigating Perceived Gratifications of an Application That Blends Mobile Content Sharing With Gameplay. *Journal of the American Society for Information Science and Technology* , 61 (6), pp. 1244-1257.
- Lee, C. S., Goh, D. H.-L., Razikin, K., & Chua, A. Y. (2009). Tagging, Sharing and the Influence of Personal Experience. *Journal of Digital Information* , 10 (1).
- Li, X. (2010, April 12). *Coming together in Space: What is “trans” about “transmedia”?* Retrieved September 16, 2011, from canarytrap.net:
<http://canarytrap.net/tag/transmedia/>
- Li, X. (2009, September 23). *Transmedia as intertext and multiplicity: why some types of stories lend themselves to transmedia*. Retrieved September 16, 2011, from canarytrap.net: <http://canarytrap.net/2009/09/transmedia-as-intertext-and-multiplicity-why-some-types-of-stories-lend-themselves-to-transmedia/>
- Lidwell, W., Holden, K., & Butler, J. (2010). *Universal Principles of Design (2nd Edition)*. Beverly, MA: Rockport Publishers Inc.
- Lillie, J. (1997). *Empowerment Potential of Internet Use*. Retrieved September 10, 2011, from University of North Carolina at Chapel Hill:
<http://www.unc.edu/~jlillie/340.html>
- Lin, C. A. (1999). Online Service Adoption Likelihood. *Journal of Advertising Research* , 39 (2), 79-89.
- Lipman, D. (1999). *Improving Your Storytelling: Beyond the Basics for All Who Tell Stories in Work or Play* . Little Rock, AR: August House Publishers Inc.

- Littlejohn, S. W., & Foss, K. A. (2010). *Theories of Human Communication (10th Edition)*. Waveland Press, Inc.
- Livingstone, S., Couvering, E. V., & Thumim, N. (2008). Converging Traditions of Research on Media and Information Literacies. In J. Coiro, M. Knobel, C. Lankshear, & D. J. Leu, *Handbook of Research on New Literacies* (pp. 103-132). New York, NY: Lawrence Erlbaum Associates.
- Long, G. A. (2011). *On Toys and Transmedia Storytelling*. Retrieved September 16, 2011, from Geoffrey Long 2011: <http://www.geoffreylong.com/miscellany/actionfigures.php>
- Long, G. A. (2007). *Transmedia Storytelling: Business, Aesthetics and Production at the Jim Henson Company*. MIT: Cambridge, MA.
- Lonsdale, A. J., & North, A. C. (2011). Why Do We Listen to Music? A Uses and Gratifications Analysis. *British Journal of Psychology*, 102, pp. 108-134.
- Love, G. (2004, May 31). *Story Structures: Fishbone*. Retrieved December 4, 2011, from New Media Journalism: <http://www.nemejo.com/experiments/fishbone>
- Lui, S., Lang, K. R., & Kwok, S. (2002). Participation Incentive Mechanisms in Peer-to-Peer Subscription Systems. *35th Hawaii International Conference on System Sciences* (p. 302b). Los Alamitos, CA: IEEE Press.
- Macy, S., Anderson, E., & Krygier, J. (2000). Interactivity and Meaning. In R. Jacobson, *Information Design* (pp. 293-299). Boston, MA: The MIT Press.
- Market Segmentation Services. (2008). *Psychographic Research*. Retrieved December 4, 2011, from Market Segmentation Services: http://www.marketsegmentation.com/what_are_psychographics.html
- Marketwire. (2011, July 19). *Colonial Williamsburg Debuts New Alternate Reality Game for Limited Time Only*". Retrieved July 20, 2011, from Marketwire: <http://www.marketwire.com/press-release/colonial-williamsburg-debuts-new-alternate-reality-game-for-limited-time-only-1539863.htm>
- Marshall, J., & Adamic, M. (2010). The Story Is the Message: Shaping Corporate Culture. *Journal of Business Strategy*, 31 (2), pp. 18-23.
- Martin, H. J. (2011, July 17). *NYC Haunts: Bronx Teens Discover Their Neighborhood Through an Interactive Look at the Dead*. Retrieved July 17, 2011, from Huffington Post: http://www.huffingtonpost.com/the-new-york-public-library/nyc-haunts-bronx-teens-di_b_898206.html
- Maslow, A. H., Frager, R., & Fadiman, J. (1987). *Motivation and Personality*. (3rd, Ed.) New York, NY: HarperCollins Publishers.
- Matheson, R. (1978). *What Dreams May Come*. New York: NY: Tor.
- Matthews-DeNatale, G. (2008). *Digital Storytelling: Tips and Resources*. Retrieved September 3, 2011, from Educause: <http://net.educause.edu/ir/library/pdf/ELI08167B.pdf>

- Mayer, R. E. (2008). Multimedia Literarcy. In J. Coiro, M. Knobel, C. Lankshear, & D. J. Leu, *Handbook of Research on New Literacies* (pp. 359-376). New York, NY: Lawrence Erlbaum Associates.
- Mayfield, R. (2006, April 26). *Power Law of Participation*. Retrieved November 5, 2011, from Ross Mayfield's Blog: Markets, Technology & Musings: http://ross.typepad.com/blog/2006/04/power_law_of_pa.html
- McClellan, S. T. (2007). *Digital Storytelling: The Narrative Power of Visual Effects in Film*. Cambridge, MA: The MIT Press.
- McGonigal, J. (2006). This Might Be a Game: Ubiquitous Play and Performance at the Turn of the Twenty-First Century. *PhD dissertation* . University of California.
- McGuire, W. J. (1974). Psychological motives and communication gratification. In J. G. Blumler, & E. Katz, *The Uses of Mass Communications*. Beverly Hills, CA: Sage Publications.
- McGuire, W. J. (1976, March). Some Internal Psychological Factors Influencing Consumer Choice. *Journal of Consumer Research* , pp. 302-319.
- McIntosh, B., Cohn, R., & Grace, L. (2010, August 17). Nonlinear Narrative in Games: Theory and Practice. *Game Career Guide* .
- McKee, R. (1997). *Story: Substance, Structure, Style, and the Principles of Screenwriting*. New York, NY: ReganBooks.
- McManus, B. F. (1998, October). *Freytag's Triangle*. Retrieved September 29, 2011, from Tools for Analyzing Fiction: <http://www2.cnr.edu/home/bmcmamus/freytag.html>
- McQuail, D. (1983). *Mass Communication Theory (1st Edition)*. London, England: Sage Publications.
- McQuail, D. (1994). *Mass Communications: An Introduction (3rd Edition)*. London, England: Sage Publications.
- McQuail, D., Blumler, J. G., & Brown, J. (1972). The Television Audience: A Revised Perspective. In D. McQuail, *Sociology of Mass Communication* (pp. 136-165). Middlesex, England: Penguin.
- Mendelson, A. L., & Papacharissi, Z. (2007). Reality vs. Fiction: How Defined Realness Affects Cognitive & Emotional Responses to Photographs. *Visual Communication Quarterly* , 14 (4), pp. 231-243.
- Merriam, S. B. (2009). *Qualitative Research: A Guide to Design and Implementation*. San Francisco, CA: Jossey-Bass.
- Miliard, M. (2009, January 14). *Novel Idea: Twitter Fiction*. Retrieved October 27, 2011, from The Boston Phoenix: <http://thephoenix.com/boston/arts/75180-novel-idea-twitter-fiction/?page=1#TOPCONTENT>
- Miller, C. H. (2008). *Digital Storytelling: A Creator's Guide to Interactive Entertainment (2nd Edition)*. Amsterdam: Elsevier.

- Montola, M. (2009). Games and Pervasive Games. In J. S. Markus Montola, *Pervasive Games: Theory and Design* (pp. 7-23). San Francisco, CA: Elsevier Science & Technology.
- Mulholland, P., & Collins, T. (2002). Using Digital Narratives to Support the Collaborative Learning and Exploration of Cultural Heritage. *13th International Workshop on Database and Expert Systems Applications (DEXA'02)* (p. 527). dexa.
- Murray, J. H. (1997). *Hamlet on the Holodeck: The Future of Narrative in Cyberspace*. New York, NY: The Free Press.
- Neto, J. S., Roussel, N., & Filgueras, L. V. (2009, October 5). User's Issues in Crossmedia Applications. *SIGDOC09* .
- Newman, J. (2004). *Videogames*. London: Routledge.
- Nicolescu, B. (2002). *Manifesto of Transdisciplinarity*. Albany, NY: State University of New York Press.
- Norrington, A. (2010, April). Harnessing 'e' in Storyworlds: Engage, Enhance, Experience, Entertain. *Publishing Research Quarterly* , pp. 96-105.
- Novak, J. D., & Cañas, A. J. (2008, January). *The Theory Underlying Concept Maps and How to Construct and Use Them*. Retrieved October 23, 2011, from Institute for Human and Machine Cognition:
<http://cmap.ihmc.us/publications/researchpapers/theorycmaps/theoryunderlyingconceptmaps.htm>
- Palmgreen, P., & Rayburn, J. (1985). An Expectancy-Value Approach to Media Gratifications. In K. E. Rosengren, L. A. Wenner, & P. Palmgreen, *Media Gratification Research: Current Perspective* (pp. 61-72). Beverly Hills, CA: Sage Publications.
- Palmgreen, P., Wenner, L. A., & Rayburn, J. (1980, April). Relations Between Gratifications Sought and Obtained. *Bulletin of Science, Technology & Society* , 7 (2), pp. 161-192.
- Papacharissi, Z., & Mendelson, A. L. (2007, June). An Exploratory Study of Reality Appeal: Uses and Gratifications of Reality TV Shows. *Journal of Broadcasting & Electronic Media* , 51 (2), pp. 355-370.
- Parallel Storylines*. (2008). Retrieved December 4, 2011, from FilmScriptWriting.com:
<http://www.filmscriptwriting.com/parallelstorylines.html>
- Park, N., Kee, K. F., & Valenzuela, S. (2009). Being Immersed in Social Networking Environment: Facebook Groups, Uses and Gratifications, and Social Outcomes. *CyberPsychology & Behavior* , 12 (6), pp. 729-733.
- Passini, R. (2000). Sign-Posting Information Design. In R. Jacobson, *Information Design* (pp. 83 - 97). Cambridge, MA: The MIT Press.
- Pavlik, J. V. (1996). *New Media Technology and the Information Super-highway*. Boston: Allyn & Bacon.

- Perryman, N. (2008). Doctor Who and the Convergence of Media. *The International Journal of Research into New Media Technologies* , 14 (1), pp. 21-39.
- Peters, D. (2010, April 6). *Find Your Film's Audience: How to Get Started*. Retrieved November 25, 2011, from Heavybag Media:
<http://www.heavybagmedia.com/blog/2010/04/06/how-to-find-audience-for-film>
- Peters, M. (2011, October 26). *How Gamification Can Make News Sites More Engaging*. Retrieved October 29, 2011, from Mashable Business:
<http://mashable.com/2011/10/26/news-gamification/>
- Phillips, M. A., & Huntley, C. (1996). *Dramatica: A New Theory of Story*. Burbank, CA: Screenplay Systems Inc.
- Plotnick, E. (2007). *An Overview of Concept Mapping* . Retrieved December 1, 2011, from Mind-Mapping.org: <http://www.mind-mapping.org/seminal-papers-in-information-mapping/concept-mapping-overview.html>
- Porter, M., Larson, D. L., Harthcock, A., & Nellis, K. B. (2002). Re(de)fining Narrative Events: Examining Television Narrative Structure. *Journal of Popular Film and Television* , 30, pp. 23-30.
- Pratten, R. (2010). *Audience Engagement & Content Strategy for Transmedia Storytellers*. Transmedia Storyteller.
- Pratten, R. (2011). *Getting Started with Transmedia Storytelling*.
- Pratten, R. (2011, November 15). Transmedia Narratives - Storyworld Model. (P. v. Stackelberg, Interviewer)
- Pratten, R. (2010). *Transmedia Story Development*. Retrieved December 5, 2011, from SlideShare: <http://www.slideshare.net/ZenFilms/transmedia-story-development>
- Pratten, R. (2011, November 24). User Interaction & Engagement. (P. von Stackelberg, Interviewer)
- Pullinger, K., & Thomas, A. (2011). *Home Page - Inanimate Alice*. Retrieved July 20, 2011, from Inanimate Alice: <http://inanimatealice.com/>
- Rank, S., & Petta, P. (2005). Appraisal for a Character-based Story-World. In T. Panayiotopoulos, J. Gratch, R. Aylett, D. Ballin, P. Olivier, & T. Rist, *Intelligent Virtual Agents* (pp. 495-507). Berlin: Springer.
- Rank, S., & Petta, P. (2005). Appraisal for a Character-Based Story-World. *Lecture Notes in Computer Science* (3661), pp. 495-496.
- Rescorla, M. (2009, June). Cognitive Maps and the Language of Thought. *British Journal for the Philosophy of Science* , 60 (2), pp. 377-407.
- Rettberg, S. (2005). All Together Now: Collective Knowledge, Collective Narratives, and Architectures of Participation. *Digital Arts and Culture Conference 2005*. Copenhagen, Denmark: IT University of Copenhagen.
- Rosenfeld, J. E. (2008). *Make a Scene: Crafting a Powerful Story One Scene at a Time*. Cincinnati, OH: Writer's Digest Books.

- Rossi, E. (2002). *Uses & Gratifications/ Dependency Theory*. Retrieved September 10, 2011, from California State University - Fresno:
<http://zimmer.csufresno.edu/~johnca/spch100/7-4-uses.htm>
- Rouse, R. (2005). The Design Document. In R. Rouse, *Game Design: Theory and Practice* (pp. 355-381). Plano: Wordware Publishing.
- Rubin, A. M. (1981, April). An Examination of Television Viewing Motivations. *Communication Research--An International Quarterly*, 8 (2), pp. 141-165.
- Ruggiero, T. E. (2000). Uses and Gratifications Theory in the 21st Century. *Mass Communication & Society*, 3 (1), 3-37.
- Ruppel, M. (2005, November 22). Learning to Speak Braille: Convergence, Divergence and Cross-Sited Narratives. *Paper presented at PhD Qualifying Exam presentation*. Maryland, USA.
- Rutledge, P. (2011, May 16). *Transmedia Storytelling: Neuroscience Meets Ancient Practices*. Retrieved June 18, 2011, from The Media Psychology Blog:
<http://mprcenter.org/blog/2011/05/16/transmedia-storytelling-neuroscience-meets-ancient-practices/>
- Ryan, M.-L. (2001, July). *Beyond Myth and Metaphor - The Case of Narrative in Digital Media*. Retrieved June 10, 2011, from Game Studies:
<http://www.gamestudies.org/0101/ryan/>
- Ryan, M.-L. (2004). Introduction. In M.-L. Ryan, *Narrative Across Media: The Languages of Storytelling* (pp. 1-40). University of Nebraska Press: Lincoln, NE.
- Ryan, M.-L. (2005). Narrative and Digitality: Learning to Think With the Medium. In J. Phelan, & a. P. Rabinowitz, *A Companion to Narrative Theory* (pp. 515-527). Malden, MA: Wiley-Blackwell.
- Ryan, M.-L. (2000). *Narrative as Virtual Reality: Immersion and Interactivity in Literature and Electronic Media*. Baltimore, MD: Johns Hopkins University Press.
- Ryan, M.-L. (1997). Postmodernism and the Doctrine of Panfictionality. *Narrative*, 5 (2), pp. 165-187.
- Ryan, M.-L. (2011, June 30). *Storyworlds Across Media*. Retrieved October 20, 2011, from Storyworlds Across Media: Mediality, Multimodality, Transmediality :
<http://www.storyworlds.de/programme-thursday-2011-06-30/>
- Ryan, M.-L. (2004). Will New Media Produce New Narratives? In M.-L. Ryan, *Narrative Across Media: The Languages of Storytelling* (pp. 337-359). Lincoln, NE: University of Nebraska Press.
- Sarantinos, J. (2010, April 19). *The Sequence Approach to Screenwriting*. Retrieved November 1, 2011, from Gideon's Screenwriting Tips:
<http://gideonsway.wordpress.com/2010/04/19/the-sequence-approach-to-screenwriting/>

- Scerenko, L. C. (1997, August). *Values and Character Education Guide*. Retrieved October 30, 2011, from Educational Psychology Interactive: <http://www.edpsycinteractive.org/topics/affect/valuesga.html#accomplishment>
- Schaefer, L. (2010, July 16). *First Facebook Novel Blurs the Line between Author and Reader*. Retrieved October 27, 2011, from Deutsche Welle: <http://www.dw-world.de/dw/article/0,,5797638,00.html>
- Schmidt, V. L. (2001). *45 Master Characters: Mythic Models for Creating Original Characters*. Cincinnati, OH: Writer's Digest Books.
- Schneider, O. (2003). *Storyworld Creation: Authoring for Interactive Storytelling*. Retrieved September 2, 2011, from Google Scholar: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.88.6927&rep=rep1&type=pdf>
- Schroeder, R. (2008, July). Defining Virtual Worlds and Virtual Environments. *Journal of Virtual Worlds Research*, 1 (1).
- Schultz, M., & Gianni, G. (2011, November 6). *Prince Valiant*. Retrieved November 6, 2011, from Comics Kingdom: http://www.oregonlive.com/comics-kingdom/?feature_id=Prince_Valiant
- Schumann, D. W., & Thorson, E. (1999). *Advertising and the World Wide Web*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Scolari, C. A. (2009). Transmedia Storytelling: Implicit Consumers, Narrative Worlds, and Branding in Contemporary Media Production. *International Journal of Communication*, 3, pp. 586-606.
- Screven, C. (2000). Information Design in Informal Spaces: Museums and Other Public Spaces. In R. Jacobson, *Information Design* (pp. 131 - 192). Cambridge, MA: The MIT Press.
- Scullion, J. (2011, October 28). *Bunchball Accelerates Gamification Growth and Success IN Q3 2011*. Retrieved November 3, 2011, from MarketWatch: <http://www.marketwatch.com/story/bunchball-accelerates-gamification-growth-and-success-in-q3-2011-2011-10-28>
- Shedroff, N. (2001). An Overview of Understanding. In R. S. Wurman, *Information Anxiety 2* (pp. 27-29). Indianapolis, IN: Que.
- Shedroff, N. (2000). Information Interaction Design: A Unified Field Theory of Design. In R. Jacobson, *Information Design* (pp. 265 - 292). Cambridge, MA: The MIT Press.
- Simmons, A. (2006). *The Story Factor: Secrets of Influence from the Art of Storytelling*. New York, NY: Basic Books.
- Song, I., LaRose, R., Eastin, M. S., & Lin, C. A. (2004). Internet Gratifications and Internet Addiction: On the Uses and Abuses of New Media. *CyberPsychology & Behavior*, 7 (4), pp. 384-394.

- Sonnenfeld, G. (2011, April 28). *Curation, Community, and Coca-Cola's Open Happiness Project*. Retrieved July 1, 2011, from Sparksheet.com: <http://sparksheet.com/curation-community-and-coca-cola%E2%80%99s-open-happiness-project/>
- Starbucks. (2011, May 21). *SRCH – Round One Recap*. Retrieved July 2, 2011, from Starbucks: <http://www.starbucks.com/blog/1020>
- Staton, J., & Curtis, M. (2011, November 4). *Dick Tracy*. Retrieved November 6, 2011, from GoComics.com: <http://www.gocomics.com/dicktracy/2011/11/04>
- Stevens, J. (2011, May 17). *Multimedia Storytelling*. Retrieved December 5, 2011, from Knight Digital Media Center: <http://multimedia.journalism.berkeley.edu/tutorials/starttofinish/storyboarding/>
- Sturken, M., & Cartwright, L. (2009). *Practices of Looking: An Introduction to Visual Culture (2nd Edition)*. New York: Oxford University Press.
- Submarine Channel. (2011). *Collapsus: The Energy Risk Conspiracy*. Retrieved June 25, 2011, from Collapsus.com: <http://www.collapsus.com/>
- Suler, J. (1999, March). *To Get What You Need: Healthy and Pathological Internet Use*. Retrieved September 16, 2011, from The Psychology of Cyberspace: <http://users.rider.edu/~suler/psygyber/getneed.html>
- Sun, T., Chang, T.-K., & Yu, G. (2001). Social Structure, Media System and Audiences in China: Testing the Uses and Dependency Model. *Mass Communication & Society*, 4 (2), 199-217.
- Szulborski, D. (2005). *This Is Not a Game: A Guide to Alternate Reality Gaming*. New-Fiction Publishing.
- Thursby, J. S. (2006). *Story: A Handbook*. West Port, CT: Greenwood Press.
- Thwaites, H. (2000). Visual Design in Three Dimensions. In R. Jacobson, *Information Design* (pp. 221 - 245). Cambridge, MA: The MIT Press.
- Tobias, R. B. (1993). *20 Master Plots and How to Build Them*. Cincinnati, OH: Writers' Digest Books.
- Tognazzini, B. (n.d.). *First Principles of Interaction Design*. Retrieved November 20, 2011, from Ask Tog: <http://www.asktog.com/basics/firstPrinciples.html>
- Tossberg, A. (2000). Swingers, Singers, and Born-Again Christians: An Investigation of the Users and Gratifications of Internet-Relay Chat. *Master's thesis*. Ames, Iowa, USA: Iowa State University.
- TV Tropes. (n.d.). *Archetypal Character*. Retrieved October 30, 2011, from TV Tropes: <http://tvtropes.org/pmwiki/pmwiki.php/Main/ArchetypalCharacter>
- University of Houston. (n.d.). *The Educaitional Uses of Digital Storytelling - Rubrics*. Retrieved September 3, 2011, from University of Houston: <http://digitalstorytelling.coe.uh.edu/pdfs/samplerubric.pdf>
- USA Network. (2011). *Burn Notice*. Retrieved July 15 2011, 2011, from USA Network: <http://www.usanetwork.com/series/burnnotice/>

- USA Network. (2011). *Covert Affairs*. Retrieved July 12, 2011, from USA Network: <http://www.usanetwork.com/series/covertaffairs/#>
- Van Sijll, J. (2005). *Cinematic Storytelling: The 100 Most Powerful Film Conventions Every Filmmaker Must Know*. Studio City, CA: Michael Wiese Productions.
- Walker, J. (2004). Distributed Narrative: Telling Stories Across Networks. *Internet Research Annual* , pp. 91-103.
- Wang, F.-Y., Carley, K. M., Zeng, D., & Mao, W. (2007, March). Social Computing: From Social Informatics to Social Intelligence. *IEEE Intelligent Systems* , 22 (2), pp. 79-83.
- Warschauer, M., & Ware, P. (2008). Learning, Change, and Power: Competing Frames of Technology and Literacy. In J. Coiro, M. Knobel, C. Lanksheak, & D. J. Leu, *Handbook of Research on New Literacies* (pp. 215-240). New York, NY: Lawrence Erlbaum Associates.
- White Wolf. (n.d.). *List of Archetypes*. Retrieved October 30, 2011, from The Unofficial White Wolf Wiki: http://whitewolf.wikia.com/wiki/List_of_Archetypes
- White, H. (1961). Critical Responses: The Narrativization of Real Events. *Critical Inquiry* , 7 (4).
- Wikipedia. (2011). *The Lord of the Rings*. Retrieved October 27, 2011, from Wikipedia: http://en.wikipedia.org/wiki/The_Lord_of_the_Rings
- Wolf, W. (2005). Intermediality. In D. Herman, M. Jahn, & M.-L. Ryan, *Routledge Encyclopedia of Narrative Theory* (pp. 252-253). Oxfordshire: Routledge.
- Wolff, A., Mulholland, P., Zdrahal, Z., & Joiner, R. (2007). Re-Using Digital Narrative Content in Interactive Games. *International Journal of Human-Computer Studies* , 65 (3), pp. 244-272.
- Wurman, R. S. (2001). *Information Anxiety 2*. Indianapolis: Que.
- Yourgrau, B. (2009, July 29). *Thumb Novels: Mobile Phone Fiction*. Retrieved October 28, 2011, from The Independent: <http://www.independent.co.uk/life-style/gadgets-and-tech/features/thumb-novels-mobile-phone-fiction-1763849.html>
- Zapp, A. (2004). 'A Fracture in Reality': Networked Narratives as Imaginary Fields of Action. *Networked Narrative Environments: As Imaginary Spaces of Being* , pp. 62-81.