

**Channel Surfing Knowledge:**

**A Narrative Criticism of Edutainment Television Programming**

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THESIS

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This dissertation is dedicated to my mother Patti, my father Gordon, and my brother Phillip.

I am what I am because of you.

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## SUMMARY

In the last ten years there has been an increase in the amount and popularity of edutainment programming. While the body of literature surrounding edutainment is wider than deep, the concept is traditionally conceived of as a pedagogical strategy employing the tactics of entertainment. In this study, a specific subset of edutainment is examined: adult-oriented, science-based, edutainment television. In academia edutainment has been studied through various methodological and theoretical lenses, in particular that of behaviorism and Albert Bandura's theory of social learning.

This study takes a new approach. Focusing on television, it looks at narrative components, paying special attention to the genres that inform modern edutainment: drama, documentaries, and reality television. A rhetorical approach, this study is a narrative analysis of four popular edutainment programs spanning nearly 40 years. *Wild Kingdom*, *Connections*, *Modern Marvels*, and *MythBusters* are examined to identify and organize the narrative approaches each show has employed in their various runs. The analysis identifies aspects of each show's narrative tactics as they support the strategy of edutainment. With narrative elements identified relationships between them bring to light the strengths and weaknesses of edutainment television as a pedagogical approach.

The study proposes a theoretical framework for analyzing and interpreting edutainment television programs. This contribution to rhetorical and educational theory is applied to two categories of learning: casual and formal. The rhetorical tactics of edutainment television are applied to these types of learning opportunities to identify and address potential advantages and

disadvantages for learners in myriad situations who may be learning on their own or in tandem with an instructor. The study offers a new two-dimensional model of interpreting the balance of education and entertainment in this genre of work as well as calls for a “narrative literacy” among instructors and adult learners alike.

## 1. INTRODUCTION

“The hero of this story is an adult female kangaroo.”

-Opening line of the television show *Mutant Planet*

When I was young I grew up with television shows such as *Mr. Wizard*, *3 2 1 Contact*, and *Sesame Street*. As I got older there were programs for me such as *Beakman's World* (a Saturday morning science show that taught me how to make edible glass), *Bill Nye the Science Guy*, and *Where in the World is Carmen San Diego*. *Clifford the Big Red Dog* and *Wishbone* provided lessons in parable form from the canine perspective and *Reading Rainbow* rounded out the day with the latest kid's book. I cannot think of a single American I know who is not familiar with *Mr. Roger's Neighborhood*.

In the fourth grade all of the boys in my class were put into a room and shown a movie. That was my first sex education class. The second would come in the ninth grade. It was also a movie. In neither class did a teacher speak to us about sex.

As I got older, the Discovery Channel provided hours of programming, more than I could ever hope to watch. The History Channel followed in the same vein. And now it turns out I just missed growing up with an entirely different generation of children's programming including *Blue's Clues*, *Dora the Explorer*, and *Bob the Builder*.

It appears that all this edutainment programming relies on storytelling. This is no surprise as so much of our lives are wrapped up in the creation and retelling of stories. I want to understand the television programming that I have enjoyed for most of my life by looking at how it uses

storytelling. I also want to see what can be done to improve it and to use its benefits to help other media who engage in educational endeavors. I ask three questions about edutainment:

1. What rhetorical strategies does edutainment employ in order to edutain?
2. How does edutainment use storytelling (narrative) to educate and entertain?
3. What are the narrative elements of edutainment and how have they changed over time?

Ultimately this dissertation explicates my two theories of narrative edutainment describing how producers use stories to teach and how learners use stories to learn where education and entertainment are combined. This required examining education literature as well as work on television genres. I began the study with a wildly optimistic view of edutainment but that view has dimmed over the course of this study.

This study starts, in chapter 2, with a review of the literature regarding edutainment as a concept and field of study. In chapter 3 I introduce the method of narrative analysis as a rhetorical criticism and explain its position in the literature and application to this study. Chapter 4 is my narrative analysis of a specific segment of edutainment I call Science-based, Adult-oriented, Edutainment (SAE). Chapter 5 is a look at how three important television genres have informed edutainment on the airwaves. After exploring how SAE uses narratives in different ways I use this to outline my two narrative theories of edutainment in chapter 6 which begins with an explanation the notion of “suspension of disbelief.” Chapter 7 is a discussion of my theories as applied to pedagogy for adult learners in formal and casual learning environments. I conclude the study in chapter 8 by summarizing my work and outlining the form future work could take to further explore the subject, apply these theories to adult learning scenarios, and suggest steps adult learners can take to enhance their learning opportunities in formal and casual settings.

## 2. REVIEW OF LITERATURE: EDUTAINMENT

### 2.1 Early Years

All of the shows from *Sesame Street* to *MythBusters* and through to *Dora the Explorer* have one thing in common: they entertain and educate. These types of shows are called “edutainment” programs.

The origin of contemporary edutainment is murky. During the Second World War the US military contracted with Warner Bros. to create a series of animated films about the eponymous *Private Snafu* (Alpers, 1998). These were humorous cartoons designed to educate soldiers about how to perform their duties by exemplifying what not to do<sup>1</sup>. Bugs Bunny has a cameo in the episode titled *Gas* and Theodor Geisel, better known as Dr. Seuss, was a staff writer. While they certainly contained elements of propaganda their utility was in educating soldiers by making the material entertaining.

In 1948 Disney began producing a series titled *True Life Adventures* in which animal life is dramatized to make learning about their world more interesting. By any contemporary standard this series would be considered edutainment (Hightower, 2004). It may also be the beginning of the documentary as a form of entertainment.

### 2.2 Television Programming

*USA Today* (Arnold, 2005) places the creation of edutainment in 1969 with the airing of the first *Sesame Street*, but this is probably only true if edutainment is limited to television. The same

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<sup>1</sup> The Private Snafu films are freely available at the Internet Archive ([www.archive.org](http://www.archive.org))

article defines edutainment, which “has Hollywood taking notice,” as “TV shows and DVDs that combine lessons with entertainment for children.” It also notes that edutainment is a billion dollar industry with a single program, *Dora the Explorer*, earning over \$250 million in four years. This aligns with *Private Snafu* and *True Life Adventures* in contending that edutainment is essentially film or television programming. However, other media have claimed the moniker. Wheeler (2009) contends that edutainment devices are pedagogical approaches employing technologies not originally intended for learning.

Perhaps the most globally pervasive use of edutainment has been in health advocacy and advancement. In the book *Entertainment-Education and Social Change* (2004) several authors (Singhal, Cody, Rogers, Sabido) lay out in-depth examples of how edutainment television programming has improved the quality of health in societies ranging from the United States to Mexico to India to Kenya to Brazil to Egypt to South Africa. The most common implementation in health advocacy is to create dramatic shows (such as the detective show *Jasoos Vijay* in India which discusses issues of HIV/AIDS or the telenovelas of Central and South America) and instill in them positive health policies enacted by popular protagonists.

### **2.3 Museums**

Museums began to see themselves as both informers and entertainers in the 1970s (Donald, 1991) and the phrase appears in conjunction with an exhibit about the wombat in the National Museum of Natural History. While this shift occurred for some pedagogical reasons, commercial interests and slumping tickets sales also drove the push for edutainment in museums (Dilevko and Godlieb, 2004). Scientists have teamed with television producers and museums to

create other forms of edutainment. For example, the British Broadcasting Corporation worked with researchers to create a television program called *Walking with Dinosaurs*. The show was wildly popular and after being ported to the United States a live action stage performance was founded called *Walking with Dinosaurs: The Live Experience*. Ken Lacovara, a paleontologist and researcher with Drexel University, referred to the franchise as the “gold standard” for edutainment (Maher, 2007).

A particularly popular exhibit that is several reinventions old and quite well traveled is *Body Worlds*. Real human bodies, deceased, are displayed in various poses and performing common tasks. This provides an opportunity for viewers to see muscles, bones, and tissue in a more detailed and realistic way than perhaps any other exhibit in the world. The wildly popular exhibit has generated much revenue and has even driven debate over the ethics and morality of using real bodies for educational purposes (Tong, 2007; Guyer, 2007; Tenenbaum and Taranto, 2007; Jones, 2007; Younger 2007). The very creator of the project, Gunther von Hagens, uses the word edutainment to describe his work and goals (Moore and Brown 2004).

## **2.4 Computer Software**

Perhaps the first computer-based educational application was an educating machine built by B. F. Skinner in 1958 which he compared to a private tutor<sup>2</sup>. It was rudimentary by today's standards and was deeply rooted in the theories of behaviorism that he championed and that dominated during that time period. The theory behind his system was simple: ask the student a

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<sup>2</sup> See Robert Kentridge's A Hyptertext History of Instructional Design <<http://www.coe.uh.edu/courses/cuin6373/idhistory/skinner.html>> and The National Academies Press biography of Skinner <<http://www.nap.edu/readingroom/books/biomems/bskinner.html>>

question and reward a correct answer. Early computer software held true to this view. Many a modern student has taken a keyboarding or typing class using software that rewards correct keystrokes. Early versions of this software were simple and so were rewards. Over time correct keystrokes saved the planet from alien invaders and even the Super Mario Brothers were able to save the princess because of the keystrokes of millions of children. Today, students help SpongeBob Squarepants and his friends with their ever-improving keyboard skills. The rewards and punishments have changed but not the underlying approach.

Simon Egeneldt-Nielsen (2005) provides a particularly good overview of edutainment in terms of computer software<sup>3</sup>. His description, confined to computer software, is apt if limited:

“Edutainment titles are characterized by using quite conventional learning theories, providing a dubious game experience, relying on simple game play and are mostly produced with strict reference to a curriculum” (p. 10). He draws on the work of game designer Chris Crawford (1982) in contending that all games employ or rely on learning as a motivator even if it is not the “manifest” motive. This may be true but lacks a purposeful relationship necessary to call computer software edutainment. Egeneldt-Nielsen points out that early edutainment software, born in the 1970s, was highly influenced by television practices and computer terminology.

The term appeared in marketing departments in the 1980s when education was seen as a niche market at which products could be aimed (Haddon, 1988). Software companies especially embraced the concept though for primarily economic reasons (Selwyn, 2002). Ito (2006) puts the genesis of edutainment in the 1980s with a rapid increase in computer software which sought to educate and entertain. From the 1980s through the 1990s and even after 2000 educational

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<sup>3</sup> Egeneldt-Nielsen’s work is available at his website: <http://egenfeldt.eu/public.htm>

software has mostly reflected the surprisingly prophetic wish of John Thorndike as early as 1912: “If, by a miracle of mechanical ingenuity, a book could be so arranged that only to him who had done what was directed on page one would page two become visible and so on, much that now requires personal instruction could be managed by print” (Saettler, 1968, p. 52).

In 1984 then Senator Al Gore introduced a bill to establish the National Educational Software Corporation which would have fostered investment in, and development of, entertaining courseware for schools (Wyatt, 1985). By the end of the 1980s researchers began to seriously investigate the elements of useful educational software. Thomas Malone and Mark Lepper (1987a, 1987b) laid out five elements of good educational software games: challenge, curiosity, control, fantasy, and interpersonal motivations. In 1999, Professor James Bosco, Chair of the Consortium for School Networking and researcher of distance and online learning, testified before the US Patent and Trademark Office that software developers saw edutainment software as a burgeoning market ripe for expansion and potentially quite profitable (Bosco, 1999). More recently, training and safety industries have adopted games and simulations to help combat the estimated \$170 billion in costs related to industrial safety problems (Trybus, 2008). They tend to incorporate four of the elements Malone and Lepper lay out; however, they specifically avoid fantasy instead trying to ground their software in reality.

Egeneldt-Nielsen identifies three generations of edutainment software research. The first generation focuses on the success of imparting facts (Skinner’s machine fits nicely here). The second generation looks at the dialectic between a player and computer games. Today there is a shift towards a third generation of research that sees software as one element in the constellation of education including students, educators, subject material, and software (Egeneldt-Nielsen, 2007b). A majority of the existing research focuses on the first generation (Cavallari, Hedberg,

Harper, 1992; Dempsey, Rasmussen, Lucassen, 1996). There are more recent studies (Kirriemuir, McFarlane, 2003; Mitchell, Savill-Smith, 2004) but even these tend to examine software in terms of education instruments more generally, not necessarily edutainment (Egeneldt-Nielsen).

## **2.5 Theoretical Underpinnings of Edutainment**

There are several theoretical frameworks underlying the construction and implementation of edutainment. Chief among them is Albert Bandura's social cognitive theory (Singhal and Rogers, 2004) which provides an "agentic conceptual framework" (Bandura, 2004, p. 76) within which to analyze symbolic interaction between people (Bandura, 1986; Bandura, 2001). Agentic in this sense refers to having agency, or the ability to act. By looking at symbolic interactions through this lens a researcher can determine the elements and interactions in a social system of influence because "[i]n this dynamic interplay, personal agency and social structure operate as interdependent determinants in an integrated causal structure rather than as a disembodied duality<sup>4</sup>" (Bandura, 2004, p. 76). Ultimately the model claims to be able to describe and perhaps predict the adoption of psychosocial programs in diverse cultural groups because certain generic characteristics will reappear over time. Thus, by looking at edutainment through this model one might be able to use what is considered entertaining in a culture to influence education. Peoples' actions are motivated by their goals (Bandura, 1986; Locke & Latham, 1990). To this end, edutainment attempts to change actions by influencing the information individuals have and the goals they set predicated on that information.

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<sup>4</sup> See also Bandura, 1997; Giddens, 1984

Singhal and Rogers (2004) also point out that while edutainment in various forms existed before the 1970s (*Private Snafu* and *Mr. Wizard* for example), little work was done by communication researchers which led to a late coming of theoretical work on the subject. But eventually edutainment was looked at through various theories including audience involvement (Sood, 2002), dramatic theory (Kincaid, 2002), uses and gratifications and agenda-setting (Sherry, 2002), and even Habermas' theory of communicative action (Storey and Jacobson, 2004).

## **2.6 Criticism of Edutainment**

There are those who posit edutainment is fundamentally flawed. Educational purists may argue that while the primary motivation of the market is to satisfy the wants of anyone who can afford the product, a major tenet of education is to satisfy the desire for knowledge of anyone who seeks it regardless of financial means (Sumner, 2008). Edutainment is sometimes seen as what education devolves into when it becomes overly commercialized. Dilevko and Godlieb (2004) contend that the use of edutainment in museums “dumbs down” information promoting entertainment at the expense of education, the primary thrust of a museum: “the antithesis of the type of serious study, knowledge acquisition, reflection, contemplation, and critical inquiry with which libraries—and museums—are traditionally associated” (p. 9).

Some research (Dede, Ketelhut, Ruess, 2006; Squire, 2005) indicates that edutainment must be leveraged in conjunction with other education modes such as instruction in order to be useful.

The computer game *Oregon Trail*, for example, does not stand alone but supplements a teacher like any textbook might.

The possibility for edutainment to be disrupted by commercial interests exists and is probably likely. Bagust (2008) points out that studios manipulate images of nature and other subjects in order to make them more consumer friendly and more economically viable. This can lead to edutainment-in-name-only whereby commercial interests are supported at the expense of education and, more importantly, the expense of the **credibility** associated with something called “educational.” Further, even the best intentioned edutainment authors run a substantial risk of relying too much on entertainment at the expense of education (Malone and Lepper, 1987a).

Paradoxically, edutainment may drive away the very consumers it aims for. Some consumers are weary of the impact educational components may have on the entertainment value of a product. For example, some game players complain edutainment software takes control away from players and forces them to follow a predetermined path. This reputation, earned or not, causes consumers of edutainment to stereotype the materials and pigeonhole it into “boring” or “bland” knockoffs of “real” entertainment (Brody, 1993; Buckingham & Scanlon, 2002).

Another argument made by educators and researchers is that some edutainment will dumb down or oversimplify the education process. Some question whether learning should be fun in the first place (Okan, 2003). The goal of incorporating entertainment components may even challenge fundamental assumptions about education strategy (Healy, 1999; Kafai, 1996). Perhaps the difficulty and frustration related to learning are experiences students need in order to deal with problems later in life (Egeneldt-Nielsen).

## **2.7 Working Conception of Edutainment**

While there is certainly a body of work on edutainment, there is a noteworthy lack of cogent bodies of literature in terms of defining edutainment in any great detail. There is no peer reviewed journal dedicated to the topic of edutainment<sup>5</sup>. One serial, *Lecture Notes in Computer Science*, produced the first volume of *Transactions on Edutainment I* (Pan, et al, 2008). This title was released in 2008 and if another volume is released it will mark the first substantial, print-only serial directly on the subject of edutainment. In 1989 the first of three conferences on entertainment-education was held at the University of Southern California and since several “soap summits” have occurred across the country looking at edutainment on television (Singhal, Cody, Rogers, Sabido, 2004). In 2006 the First International Conference on Edutainment was held in China. This conference and the following two released proceedings collections titled *Technologies for E-Learning and Digital Entertainment* (Pan, et al, 2006; Pan, et al, 2007; Pan, et al, 2008). In all of these texts the primary thrust is computer science including development and implementation of technologies with little discussion of communication or education theory. The Technical Committee for Service Robots of the IEEE Robotics and Automation Society has a special emphasis on the role robotics plays in edutainment. The group lists no journals as regularly serving this cause<sup>6</sup> though the journal *Communication Theory* did devote the 12(2) issue to the topic.

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<sup>5</sup> According to WorldCat there are no journals with edutainment in the title or with the stated aim of studying edutainment specifically. The Library of Congress does not list any peer reviewed serial with edutainment as a stated topic area. Ulrich’s Periodical Directory lists no serials with edutainment in the title, subject, or subject keywords. There is a single journal called *Web Developer*, which is now defunct with the occasional topic of edutainment. The University of Illinois and Oregon State University have no listing of a repeat publication of a peer reviewed collection of specifically edutainment writings.

<sup>6</sup> <http://www.service-robots.org/applications/edutainment.htm#mozTocId205104> – accessed 20 April 2009

Much of the literature on edutainment comes from sources dealing with education and technology more generally. *The Journal of Computing in Small Colleges*, *Journal of Educational Technology Systems*, *Educational Technology*, *Simulation & Games*, *Technology Review*, *Australian Journal of Educational Technology*, *Educational Researcher*, *Teaching Sociology*, *Journal of Science Education & Technology*, *British Journal of Educational Technology*, and *Educational Technology Research & Development*, are some of the established journals which deal with issues of edutainment. None have the stated or implied goal of dealing with edutainment specifically, but their individual articles often converge on related topics. Coming from different epistemological viewpoints they, and others like them, provide an interesting aggregate of knowledge but do not provide a coherent body or field of literature upon which to build clear definitions of edutainment.

Studies about edutainment tend to pull method from various fields including Cognitive Psychology, Critical Studies, sociological fields, and social sciences. Early research relied on self reporting surveys and content analyses of edutainment messages (Singhal and Rogers, 2004). Some work has been done with viewer feedback letters and emails (Law and Singhal, 1999) and others (Singhal and Rogers, 1999; Sypher, 2002) have pointed to the potential utility in employing focus groups and interviews among other social-scientific research methods. Rhetorical analyses, in particular, appear sparse.

However, there is some work to build on in this vein. Mark and Lepper (1987b) argue that many edutainment activities include motivations beyond learning itself. This is to say consumers are motivated to play a game for fun or watch a film for enjoyment and learning is either not a pursuit or a secondary one. But, Egeneldt-Nielsen contends that works rightfully considered

edutainment rarely include motivations for play other than learning the subject material so that the entertainment component is subordinate to, and exists only in the pursuit of, learning.

Egeneldt-Nielsen argues that edutainment should not be thought of as a distinct genre but as a series of titles that share assumptions about motivation and learning theory that are marketed differently than entertainment-only products of a similar type<sup>7</sup>. Egeneldt-Nielsen argues that the salient aspect of edutainment is that the primary motivation for consuming it is “extrinsic” (p. 84). Presumably, people consume edutainment firstly to learn content whereas entertainment is a byproduct of the pedagogical design of the product. This is different than typical entertainment products where consumption itself is the primary motivator: people consume entertainment to be entertained.

There is also the issue of appropriation. Sometimes entertainment products are used in educational contexts. Most students in the last thirty years (and certainly the last ten) have seen movies in their classes. It is common to show Hollywood films as examples or as subjects of study. Music videos and commercials are shown in communication and cultural contexts, movies that chronicle an historic figure or event appear in history and sociology classes, and books that are adapted to film can form the capstone of a literature unit. The game *Sim City* is used to discuss city planning and the Massachusetts Institute of Technology, University of Southern California, Virginia Tech, and Drexel University, among many others, have employed the resources of *Second Life* to make material more interesting and available. Early attempts

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<sup>7</sup> It is important to note here that Egeneldt-Nielsen’s work was only in reference to computer software, but his general principles apply easily and aptly to the broader notion of edutainment. See pages 84-85 for a series of observations about edutainment titles, especially as contrasted with non-edutainment computer games.

generally recreated stereotypical education environments like lecture halls and museums (Salmon, 2009).

Because not all materials used as edutainment were originally conceived of as edutainment it can be confusing whether this thing or that thing is edutainment in the academic sense or another of the many pedagogical tools of an educator. Role playing and public performance are used on students of all ages and types. Sometimes these are used simply to make the educational component more entertaining which may well be an example of edutainment. But if the primary motivation for employing role play is to simulate (such as job training) or to force an encounter (such as might happen in a psychologist's office) then edutainment may not be an appropriate term.

It can also be difficult because infotainment and edutainment are easily confused. The difficulty of separating out various types of information can be quite significant (Lemish, 2007). Even as recently as 2007, publications were putting the term edutainment in quotes, implying it was a contrived or pop-culture term. Okan and Egeneldt-Nielsen offer some of the most in-depth and exhaustive discussions of edutainment but themselves do not offer a clear, direct definition of the term. Okan, speaking to edutainment software, offers this:

“Similarly, ‘edutainment’ suggests overtly entertaining learning materials, which contain messages addressed to both parents and children. Through explicit educational claims, edutainment software encourages the parents to believe that this software is beneficial in developing children’s skills in a variety of subjects. They also raise learners’ expectations that learning can be enjoyable and fun”<sup>8</sup> (p. 256).

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<sup>8</sup> Note the use of quotation marks even by an author who, writing in 2003, puts the term edutainment in quotation marks lending the appearance that the term is not yet cemented or popularly accepted.

In 2000, McKenzie used the term “technotainment” to describe a prevailing trend to lace otherwise simple tasks and tools with technology for technology’s sake. There is a substantial trend, which likely began with television and exploded with the personal computer, to compulsively consume information even to the point of receiving information as a form of entertainment (Morrisett, 1996; Wurman, 1989).

As an ever-increasing rivalry between the numerous news outlets spirals out, producers of news have begun adopting the tactics of entertainment producers (Delli, Carpini, Williams, 2001; Postman, 1985; Postman, 1992). A television show like *Entertainment Tonight* reports on entertainment while adopting many of the tactics of a news broadcast, often taken to extremes. Infotainment “privileges privatized soft news—about celebrities, crime, corruption and violence—and presents it as a form of spectacle, at the expense of news about political, civic and public affairs” (Thussu, 2007, p. 8). Put another way, infotainment uses information as a tool in the trade of entertaining. Even the political arena has encroached on infotainment with late-night comedy and daytime talk shows becoming significant sources of political information for viewers (Moy, Xenos, Hess, 2005). For example, Thussu contrasts Fox News with the Public Broadcast System’s news programming. More generally, for-profit news providers compete with one another and rely on increasingly entertaining programs whereas the non-profit organizations (PBS and the BBC for example) employ more traditional methods.

“Technotainment,” along with infotainment and edutainment, form a triangle of interrelated concepts. For example, a game show such as *Jeopardy* might best be considered infotainment. While it might be easy to mistake it for edutainment because it informs the viewing audience, the informing is a byproduct only. The primary thrust of the show is to entertain via the competitive nature of the game. The game relies on information but only rewards that information

contestants already possessed. This is different than edutainment where the primary thrust would be to inform the audience using entertainment elements. *The Daily Show* and *Colbert Report* utilize current events information to produce a humorous program but the information is only a means toward an entertaining end. The goal of each program is not to educate but to use current events and the audience's predispositions in order to construct humorous situations.

With the complex of variables that can influence entertaining, educating, and technological programs, it is no surprise when Okan cites Buckingham and Scanlon's (2000) approach to edutainment in which it is seen as a hybrid genre<sup>9</sup> that "relies heavily on visual material, on narrative or game-like formats, and on more informal, less didactic styles of address" (p. 255).

Okan goes further saying:

"The purpose of edutainment is to attract and hold the attention of the learners by engaging their emotions through ... vividly coloured animations. It involves an interactive pedagogy and ... totally depends on an obsessive insistence that learning is inevitably fun" (p. 255).

Okan, Buckingham, and Scanlon work primarily with edutainment computer software. Though Egeneldt-Nielsen does as well, his attempt to define and describe edutainment is broader, embracing the multimedia nature of the concept and the complexity this involves: "Edutainment is potentially a broad term which covers the combination of educational and entertainment use on a variety of media platforms including computer games" (2007a, p. 1). It draws heavily from

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<sup>9</sup> Buckingham and Scanlon write the term "edu-tainment" to make their point.

behaviorism and cognitivism. Thus, edutainment is an approach to educating a person using entertainment as a pedagogical tool<sup>10</sup>.

## **2.8 Examples of Edutainment**

By way of clarifying, here are three examples of edutainment products, each from a different medium.

### **2.8.1 Sesame Street**

First aired on 10 November 1969 and still in production, *Sesame Street* is the longest running children's program in the United States. Sesame Workshop is a non-profit group that produces the show and is the modern incarnation of the Children's Television Workshop. As of 2006, *Sesame Street* had won 109 Emmy Awards (Hill, 2006). The program may be the prototypical example of edutainment. When Joan Cooney began working on the project she included both television producers (entertainers) and educational researchers and practitioners (educators) (PBS, 2008). This ensured that the show would embrace both constituent elements of edutainment. *Sesame Street* uses humor and music to make learning more accessible to children.

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<sup>10</sup> None of the authors cited in this chapter believe tools exist in a vacuum. Each, in their own way, acknowledges the significance of the relationship between society and technology (used loosely); each feeds the other simultaneously. Apple had the following to say: "The new technology is not just an assemblage of machines and their accompanying software. It embodies a form of thinking that orients a person to approach the world in a particular way. Computers involve ways of thinking that under current educational conditions are primarily technical. The more the new technology transforms the classroom into its own image, the more a technical logic replaces critical, political and ethical understanding. The discourse of the classroom will centre on technique, and less on substance. Once again 'how to' will replace 'why'." (1991, p. 75).

### **2.8.2 Bangs, Flashes, & Fire**

The Chicago Museum of Science and Industry, like most major science museums, offers many educational programs that are designed to make science accessible by making the content more exciting. According to the museum's website the show is aimed at people from the fourth grade and up. The museum describes one of their programs, *Bangs, Flashes, & Fire* like this:

“See how chemistry plays a part in our lives through fire, explosions and flashes of color that together will help us answer everyday questions like ‘Why is static electricity a concern at a gas station?’ and ‘How do fireworks get their colors?’” (Museum, 2009).

### **2.8.3 Nobel Prize Educational Games**

The Nobel Foundation, the organization that awards and promotes the Nobel Prize, has a game portal designed to educate people about each Nobel Prize winning concept. *Educational Games* are simple games that are played online. In order to win the game a player must learn and then apply the underlying principles involved. For example, one game is called *The Blood Typing Game*. Patients are wheeled into an emergency room and the player takes the role of doctor. Players then follow the procedures to draw and type the blood. This requires players to learn the real life procedure and underlying science. If a player can correctly type the patient's blood and provide a proper transfusion the patient lives. If not, the patient dies.

## **2.9 A Working Conception and Context of Use**

To construct a working conception of edutainment I combine several of the conceptions outlined previously:

**Figure 1. Select approaches to the concept of edutainment that inform the working definition of this study**

Egeneldt-Nielsen: Edutainment should not be thought of as a distinct genre but as a series of titles that share assumptions about motivation and learning theory that are marketed differently than entertainment-only products of a similar type. The primary motivation for consuming it is “extrinsic.”

Wheeler: Edutainment devices are pedagogical approaches employing technologies not originally intended for learning.

USA Today: TV shows and DVDs that combine lessons with entertainment for children.

Egeneldt-Nielsen: Edutainment titles are characterized by using conventional learning theories, providing a dubious game experience, relying on simple gameplay (sic) and are mostly produced with strict reference to a curriculum.

Crawford: All games employ or rely on learning as a motivator even if it is not the “manifest” motive.

Egeneldt-Nielsen: “Edutainment is potentially a broad term which covers the combination of educational and entertainment use on a variety of media platforms including computer games” drawing heavily from behaviorism and cognitivism.

Bandura: The model claims to be able to describe and perhaps predict the adoption of psychosocial programs in diverse cultural groups because certain generic characteristics will reappear over time. By looking at edutainment through this model one might be able to use what is considered entertaining in a culture to influence education in that society.

Locke & Latham: Edutainment attempts to change actions by influencing the information individuals have and the goals they set predicated on that information.

**My working conception:** Edutainment refers to rhetorical strategies that use entertainment tactics designed to help consumers understand, retain, or apply a given subject matter.

Dilevko and Godlieb: Edutainment in museums “dumbs down” information promoting entertainment at the expense of education, the primary thrust of a museum: “the antithesis of the type of serious study, knowledge acquisition, reflection, contemplation, and critical inquiry with which libraries—and museums—are traditionally associated.”

Okan: Edutainment suggests overtly entertaining learning materials, which contain messages addressed to both parents and children. Through explicit educational claims, edutainment software encourages the parents to believe that this software is beneficial in developing children’s skills in a variety of subjects.

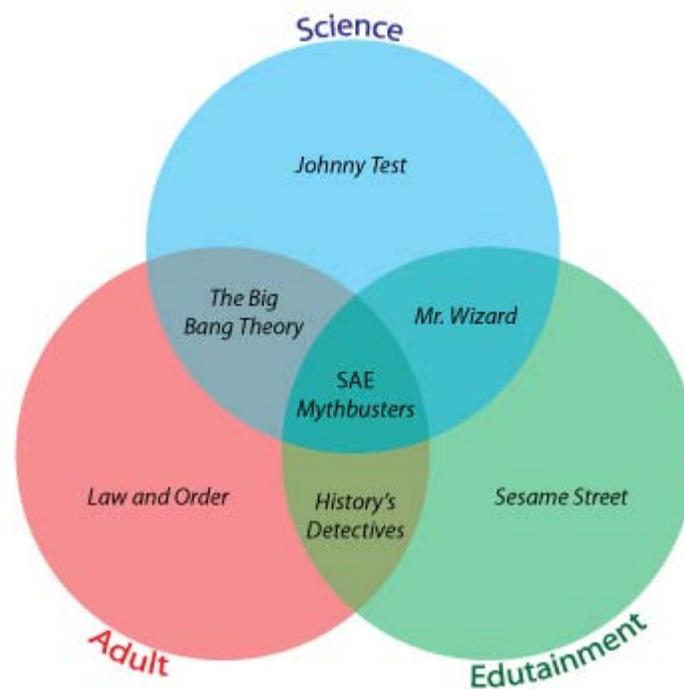
Buckingham and Scanlon: Edutainment is a hybrid genre that “relies heavily on visual material, on narrative or game-like formats, and on more informal, less didactic styles of address.”

Okan: The purpose of edutainment is to attract and hold the attention of the learners by engaging their emotions through ... vividly coloured animations. It involves an interactive pedagogy and ... totally depends on an obsessive insistence that learning is inevitably fun.

Based on work in the field and drawing from definitions put forth by other scholars, I adopt a working conception of edutainment. I conceptualize edutainment as such: rhetorical strategies that use entertainment tactics designed to help consumers understand, retain, or apply a given subject matter. I place bounding parameters on my conception based on the specific context I am interested in studying:

1. The programming is originally produced for television. Hollywood movies, even if shown on television, are not generally part of this genre. A program designed for and sold to schools for students to view on television would be appropriately called edutainment if it employs entertaining elements as a means to aid education.
2. The shows I am concerned with seek to educate the audience while entertaining them. *Sesame Street* is a good example. I am also interested in commercial products such as *MythBusters* because while they are produced to turn a profit their commercial appeal is the educational component (*MythBusters* seeks to educate the audience about whether certain myths are true and underlying scientific principles).
3. The shows convey extrinsic knowledge. For example it must inform on facts which would be true or useful regardless of the edutainment product. Teaching the rules of a game does not make the game itself edutainment.
4. The shows convey new understanding to the audience and not merely employ the use of information in entertainment. *The Daily Show* relies heavily on topical humor but the goal of the show is not to educate about the news of the day, rather to use the news of the day as a tool for humor. Along these lines, most game shows are not edutainment but more appropriately “infotainment.”

Rather than address all of edutainment I am most interested in science-based, adult-oriented edutainment (SAE): television programming designed to be edutainment and that covers materials of a scientific nature aimed at adult viewers (typically 18 years and older). For example, *Sesame Street* is not included in this category because it is not aimed at adults or primarily science-based. The television show *CSI* is somewhat science based and aimed at adults but does not have as a primary goal the education of viewers. Figure 4 illustrates the components of SAE (science, adult-oriented, and edutainment) with examples of each.



**Figure 2. Science based Adult-oriented Edutainment programs**

## **2.10 Significance of SAE**

Neil Postman is not the first or last to argue that technology's role in society should be taken seriously. But his arguments are timely and incisive. Drawing on Marshall McLuhan (1962, 1964), Walter Ong (1967), Lewis Mumford (1963), and a litany of historical examples, Postman advances three important claims relevant to the study of edutainment.

### **2.10.1 Ecological Perspective**

First, he points out that communication media are ecological in nature. The world before the printing press is not simply the same as the world after the printing press minus the printing press. All communication media interact and change each other making it impossible to simulate what today's world might look like without a given medium. Moreover, no medium can avoid or ignore the implications of any other. Television writers went on strike from 2007 to 2008 in part because of issues related to television content being provided online. DVDs often come loaded with computer software such as games. In order to study one medium, it is important to be aware of others. In order to improve one medium, it is important to look to other media for help, examples, and ideas.

### **2.10.2 The Serious Business of Entertainment**

*Entertaining Ourselves to Death* (1985) tackles the convergence of entertainment, education, and information head on. Postman opens the book by highlighting some of the ways that entertainment has begun to infest the rest of American society: Nixon blaming his makeup people for political problems, glamorous television newscasters, the invention of "news of the day" (a term he uses to mean hollow, unnecessary news driven by a need to have something to discuss in perpetuity), and the replacement of Washington DC and New York by Las Vegas as

the symbolic capital of the nation. The argument Postman lays out includes statements about the role unnecessary technology plays in driving the constant and contrived need for information.

Without using the word he is referring to McKenzie's "technotainment."

The book concludes with a chapter, *Teaching as an Amusing Activity*, in which Postman contends that education in America relies too heavily on entertaining students. This leads to a weakened curriculum and, ultimately, weakened students. Television has radically shifted the way people receive, process, and employ information. The medium has permeated society and altered the educational approach used in schools and by parents. Postman ultimately evaluates this change to be a bad one.

### **2.10.3 Technopoly**

*Technopoly* (1992) follows up on the issue of entertainment in the United States but focuses more on the use of technologies themselves than the content provided through them. Postman argues there are three fundamental phases a culture can experience. The first is tool-using in which people operate in a utilitarian sense with most energy spent on surviving and societal function. The second phase is what Postman calls "technocracy." At this point society begins to recognize that the world can be improved through systematic investigation, science competes with religion for domination in the general discourse, and traditions are questioned. Postman points to Francis Bacon, who may well have helped father what is now known as the scientific method, as a catalyst for technocracy in Europe during the 17<sup>th</sup> century.

The third phrase, technopoly, is where the culture and its members become almost subjugated by the technology they champion. The only nation to reach this third phase, according to Postman, is the United States which embraces technology with almost reckless abandon. The telegraph

transformed the idea of information replacing quality with quantity and speed. The news could only become entertaining because people could receive so much of it from so far away so often and quickly. Radio made it possible to transport the voice of real people across the world almost at will and personalities were born because words belonged to individuals instead of names on paper. But the one technology that moved the United States into the world of a technopoly was the television. The new medium completely transformed how and when people received information. With a medium that **promoted** technology, was **itself** a successful technology, and provided easy and entertaining access to the **experts** of technology, an important shift occurred: “the primary, if not the only, goal of human labor and thought is efficiency ... technical calculation is in all respects superior to human judgment ... and that the affairs of citizens are best guided and conducted by experts” (p. 51). Television birthed our technopoly and we are now grappling with the birth pangs.

### **2.11 The Significance of Edutainment and Television**

Edutainment represents the very thing Postman fears; that information and entertainment will become so intertwined that one cannot separate the two. Or worse, that no one will want to.

Postman describes today’s world of computer driven instant access:

“...the genie that came out of the bottle proclaiming that information was the new god of culture was a deceiver. It solved the problem of information scarcity, the disadvantages of which were obvious. But it gave no warning about the dangers of information glut, the disadvantages of which were not seen so clearly” (p. 60)

“... Information has become a form of garbage, not only incapable of answering the most fundamental human questions but barely useful in providing coherent direction to the solution of even mundane problems” (p. 69).

“There is almost no fact, whether actual or imagined, that will surprise us for very long, since we have no comprehensive and consistent picture of the world that would make the fact appear as an unacceptable contradiction” (p. 58).

## **2.12 Research Questions**

It could be argued that edutainment is a technoplist approach to education. It has roots in the very causes and history Postman describes in both of his books. Whether this is a good or bad thing is yet to be determined. But to assess edutainment we must better understand it.

Television may have started things off but the personal computer, handheld devices, and Internet have exploded the possible implications, good and bad, of edutainment in our technopoly. The earliest and perhaps most influential edutainment examples took the form of movies, videos, and television.

As television has dominated the communication landscape and is capable of appropriating movies and videos, it is an important part of the edutainment field. In this text I address the narrative component in SAE. I have three research questions:

1. What rhetorical strategies does SAE employ in order to edutain?
2. How does SAE use storytelling (narrative) to educate and entertain?
3. What are the narrative elements of SAE and how have they changed over time?

While addressing these questions I will keep a keen eye toward the idea of genre. The goal of this study is not to define a concrete genre of edutainment television. But, I have outlined an area of discourse on television and labeled it, so an important aspect of this study is to determine where edutainment fits among the various genres of television programming. In order to answer these questions I employ a rhetorical criticism of SAE via narrative analysis. Besides addressing these research questions this dissertation adds to the literature of edutainment theory by providing an example of how narrative elements of edutainment can be usefully addressed through rhetorical analysis; providing new information about how edutainment is conceived, delivered, and executed on television; and suggest new theoretical approaches to studying and creating edutainment programming in the future.

### **2.13 Conclusion**

Because communication tools are ecological it is impossible to see Internet edutainment in a vacuum. Nor is it possible to see classroom education as wholly separate from what people see when they watch television. To that end, understanding edutainment on television can help understand and improve edutainment in other media Chapter 5 addresses the implication of television genre in the development of edutainment over 60 years. Further, by focusing on a specific subset of edutainment, SAE, it is possible to dive deeper into the material to provide richer analysis and more useful conclusions than would be possible in a broad approach.

### 3. NARRATIVE ANALYSIS AS METHOD

#### 3.1 History

One of the foundational notions Kenneth Burke put forth was the difference between motion and action: people act, everything else moves (Littlejohn, 2002). An important distinction between acting and moving is what Burke called motives (1945) which play a part in human communication he referred to as dramatism (1973). Motives are how people understand, construct, and navigate the symbolically created world around them. Fundamentally, these motives collide with locations and external stimuli to create dramatic situations and actions. The idea that communication ought to be conceived of in dramatic terms is based on a long history of communication as story because humans are “essentially a story-telling animal” (MacIntyre, A., 1984, p. 216). Put another way: “life is not *like* a drama; life *is* a drama” (Griffin, 2003, p. 314).

Walter Ong (1967) provides a strong accounting of how stories have existed with, and been altered by, the changes in media throughout the last several thousand years. The common theme throughout his work is the persistence of the story as a form of communication. Perhaps the most prominent work in the field, Fisher’s narrative theory (1984, 1985, 1987, 1989) is useful because it operates from a simple premise: people are narrative beings who “experience and comprehend life as a series of ongoing narratives” (1987, p.24). Life stories are narratives consisting of conflict, characters, settings, and other elements of the story structure. Narrative theory provides a way to “interpret and assess” human communication (1989, p. 6), and it is especially useful for examining the complexities of communication *over time*. All human narratives, and lives, are intertwined, each with their own actors and timelines. Strong arguments derive their power not from facts or data, but rather from the aptness and believability

of stories that encompass them (Fisher, 1987). Fisher goes so far as to say that “one’s life is a story that participates in the stories of those who have lived, who live now, and who will live in the future” (1984, p. 6).

Ochs and Capps (1996) take narrative theory further proclaiming, “narratives are versions of reality” (p. 21). Some narratives emphasize objective truth (fidelity to reality), while others struggle with “memory and the relativity of point of view.” Through narratives, reality can be reflected, embellished, or created. People and organizations create a vision of themselves that they hope will remain in the minds of the audience through their storytelling. Rhetoricians have approached this phenomenon using, among others, fantasy theme analysis, chaining theory, and dramatic criticism. This creation of reality, or embellishment of it, can be for the benefit of the storyteller, or for winning over an audience to a particular point of view. The narrative impulse is deeply embedded in people and was a prime component of Goffman’s (1959) theories of “front stage” and “back stage” presentations.

Symbols play an important role in the narrative approach to communication. Burke (1968) and Mead (1948) influence Fisher’s notion of humans as “symbol using (symbol-making and symbol-misusing) animals” (Fisher, 1984, p. 6). These symbols are “meant to give order to human experience and to induce others to dwell in them to establish ways of living in common” (p. 6). Symbols are one of the crucial ways in which stories are constructed. Another is the concept of “narrative rationality” which addresses the ways stories are told and the ways stories are judged (Fisher, 1984). Fisher contends that the various ways we tell our stories are influenced by our individual histories and culture. This means that our stories are shaped by society and, more important to the project at hand, that society is shaped by the multitude of stories people live and share.

Formally, the study of narrative theory probably starts in 1966 when the journal *Communications*, volume 8, published a collection of proposals for concepts and methods for studying narrative texts (Herman and Vervaeck). Todorov (1969) introduced the term narratology by saying “we wish to develop a theory of narration...narratology, the science of narrative” (p. 10). Of particular note is the work of Vladimir Propp (1968), an early thinker in structuralist narratology. One of Propp’s most significant contributions is his systematic approach to analyzing narratives. This paved the way for analysis of texts within a framework that could be shared and described more concretely. For example, using Russian fairy tales he identified 31 narrative functions (pp. 25-83). Another narratologist, Eco (1983), identified narrative elements of James Bond novels. According to Herman and Vervaeck systematization has advantages to narratologists including pattern recognition, highlighting author intentions, and relationships between texts and culture. However, formalists tend to look for explicit cues taken directly from the text. Biases of the critic are to be avoided. In reality this is a difficult task and modern narratologists recognize there is a “point of departure” where their own inferences and opinions must be accounted for by more than just the text itself.

Foss’ approach is a synthesis of two narrative legacies. The first is rhetorical and draws on Burke and Fisher among others. The second is the narratologists such as Todorov, Propp, and Eco. The method I employ in this study, coupling Foss and scene analysis, brings together these legacies in a useful combination. For instance, the rhetorical notions of storytelling as persuasive rhetoric (citing Fisher and Warnick for example) are useful for addressing discursive elements of education’s social inducements but the more systematic approach to its construction and analysis as outlined by narratologists such as Gerald Prince (1987) provide useful analytical tools and schemas.

With Todorov's notion of narratology in mind, the remainder of this chapter outlines the approach I use to investigate SAE. My analysis concludes with a narrative theory of edutainment.

### **3.2 Television as Medium**

“New Media” has traditionally been the study of the newest media for communication. Information technology is the “defining activity of modern man and American society” (Gilder, 1990, p. 47) because we “live inside our televisions, computers, and telephones as much as we live inside our homes.” Emphasizing heavily those technologies with broad appeal and accessibility (social networking and related tools play a prominent role in current new media analysis because of the pervasiveness they have via the Internet) the field seems to spend much time looking at the *now* and less time looking at the *then*. Modern communication study in terms of media is perhaps 90 years old (Peters and Simonson, 2004). The power of film and radio were addressed early on (Lazarsfeld and Stanton, 1941; Cantril and Allport, 1935) often through a lens of propaganda and social control giving rise to communication models such as transmission, injection, and technological semiotics. Hall (1973) and McLuhan's (1964) work with television took place while the technology was still relatively young and fascinated the world. Most of the seminal texts in new media were written about media early on in their development precluding much retrospective work.

There are exceptions: Ong (1967) chronicles the importance of the shift from aural-oral cultures to literate to alphabetic ones. Febvre and Martin (1976) describe the world before and after the printing press and *Electrifying America* (Nye, 1990) describes the impact of electricity on the

United States from an historical perspective. The postal service is chronicled by Richard John (1995) and James Carey (1988) certainly addresses a multitude of media in discussing important impacts communication and society have on one another.

In fact, there is no shortage of literature on television itself (Minow, 1961; Hughes, 2004; Dornfeld, 1998; Silvia and Kaplan, 1998; Adare, 2005; Rapping, 2003; Jarvis and Joseph, 1998; Collins, 2009) with much devoted to news dissemination, the impact of violent or sexual images on youth, and political ramifications. There is even literature dealing with the educational possibilities provided by television, some of which I outlined earlier, but there is a dearth of literature pertaining specifically to edutainment programming on television with an eye for longitudinal change.

In 1990 Gilder wrote about the coming revolution of communication technology driven by the combination of micro processing, fiber optics, and advanced software. He prognosticated that television would give way to "telecomputers" capable of merging various media. Gilder contended that more important than a single technological capability was what he called domonetics: the effects and contexts of society and culture with regard to technology. It refers to the complex interactions of technology and peoples' lives etymologically drawing from the words "domicile," "connections," and "electronics." In a sense, he was somewhat right. Fiber optics has allowed for blazing data transmission; Verizon offers Fios, a service that delivers a blended television/Internet service directly to homes over fiber optic cables. But at the core of online video watching is television's format and context. If domonetics are important to study, then television technology represents an important sector of context and culture. Now more than ever it is important to investigate edutainment on television before we can effectively study it in other contexts. Some of those reasons include:

1. Television as a medium has matured enough that it no longer succeeds on its value as a novelty and is instead taken for granted, a dangerous view to have of any technology so ubiquitous.
2. With hundreds of channels available to consumers over digital cable and satellite systems there is more selection than ever. This leads to all sorts of niche programming and differentiation among content so many channels employ edutainment and make a tidy profit doing so.
3. As the medium has matured so too has the content. Edutainment is more sophisticated now than ever and takes many forms.
4. Most longitudinal studies of television content either do not include current programming in great depth or do not focus on edutainment. This is an important gap in our collective knowledge since so many people watch edutainment programming today.
5. While other edutainment formats are worthy of investigation in their own right, television, as a still highly popular yet seasoned platform, sees an audience of millions, is often the most popular version of re-appropriated materials (i.e., *How Stuff Works* was first a popular book but is now shown on several channels as a popular television show and the video content on the website is often just clips of the television program; PBS, History Channel, Disney, and Discovery among others sell educational programs which are typically just massaged editions of their television programs), relies upon the millions of dollars tied to the success and failure of television edutainment<sup>1</sup>, and is itself a still

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<sup>1</sup> In 2007 one estimate put money spent on television advertising at over 153 billion dollars just in the United States (TNS, 2007)

evolving ecosystem of programming and technology. Moreover as television competes with newer media it will crucial to critically assess it in historical and contemporary contexts.

It appears to me that since **edutainment** has developed into a commercialized product often created by some of the same Hollywood sources that create **entertainment**, the tactics of Hollywood may be infiltrating edutainment to titillate audiences. This might make edutainment production easier by replicating procedures and approaches Hollywood already has in place, and promoting crossover materials for commercial gain.

Edutainment has only recently begun to be chronicled in much detail. There is little descriptive data available about edutainment programs especially with regard to narrative composition<sup>2</sup>. Narrative analysis has been used on Hollywood before. Take for example Meyer and Stern's (2007) use of the television show *Lost* to examine gender via a narrative analysis. They rely on the fact that television narratives provide many rhetorical dimensions for analysis (Foss, 1996) and that narratives reflect the societies that create them providing a critic with much needed insight into rhetors and audiences (Thornburn, 1987). In terms of practical utility, since SAE programming is constrained by time and money, we can learn what is valued through narrative analysis by determining the "political economy" surrounding a given narrative element (Meyer and Stern, p. 315). Put another way, given the near infinite number of choices SAE producers could make in their work, the ones they actually do make reveal what SAE producers value themselves, and what they believe their audiences value. This is crucial in all phases of understanding, evaluating, and improving any body of work.

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<sup>2</sup> One should see Sood, Menard, Witte (2004) for a brief discussion of dramatic theory underlying edutainment

Plot structures, character archetypes, and underlying narrative strategies in SAE can be investigated by a narrative analysis. By critically analyzing how these elements relate to one another it is possible to answer my research questions.

### **3.3 Research Questions**

As television has dominated the communication landscape and is capable of appropriating movies and videos, it is an important part of the edutainment field. In this text I address the narrative component in SAE. I have three research questions:

1. What rhetorical strategies does SAE employ in order to edutain?
2. How does SAE use storytelling (narrative) to educate and entertain?
3. What are the narrative elements of SAE and how have they changed over time?

In order to answer these questions I employ a rhetorical criticism of SAE via narrative analysis. In this chapter I explain, in detail, how I will conduct the narrative criticism of selected units of analysis (the television programs).

### **3.4 Method for Selecting Units of Analysis**

Though narrative analysis has existed for many years, and numerous critics have employed it to cover a variety of topics<sup>3</sup>, very little work has been done applying narrative analysis to edutainment. To that end I will use a narrative analysis to explore SAE. The specific qualities of

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<sup>3</sup> See Foss, pp. 381-382 for a collection of narrative studies.

SAE are defined in the previous chapter. With these principles in mind I take a longitudinal approach to studying edutainment. Television shows range in broadcast date from the 1960s and continue on to programs still being produced and aired as of 2011. Titles are selected based on popular success, length of run, and to provide a broad selection of producers (for-profit, not-for-profit, US and UK based). A longitudinal approach is important because it allows me to study changes in narrative structure over time enhancing the utility of this study in terms of television and edutainment history since it will account for work spanning at least 30 years, rather than just contemporary programs.

### **3.5 Selected Units of Analysis**

#### **3.5.1 Connections**

*Connections* was a television series that originally aired in the United States in 1979 on the Public Broadcasting System (PBS) though the first season is a production of the British Broadcasting Corporation. The series ran for ten episodes and explored what the show called an “Alternative View of Change.” It explored historical events and how they combined to bring about contemporary society and its various processes and technologies. Conceptually similar to Henry Jenkin’s (2006) notion of convergence, the program was an attempt to contextualize the innovations we accept today by explaining the historical connections underlying them. In 1994 a twenty episode sequel aired on The Learning Channel. In 1997 a third season aired but with only ten episodes.



**Figure 3. James Burke hosting an episode of Connections<sup>4</sup>**

### **3.5.2 Wild Kingdom**

*Wild Kingdom*, famously sponsored by Mutual of Omaha, is a wildlife edutainment program designed to educate about the diversity of animal life, environments, and their interactions. The original show ran from 1963 to 1988 and in 2002 it was revived on the cable channel Animal Planet where it still runs as of 2010. The program won four Emmy awards and the National PTA (parent-teacher-association) identified it as an excellent show for family viewing (Wild Kingdom, 2009). Mutual of Omaha claims the show pioneered and helped foster the use of “suspenseful story around the very real challenges faced by the hosts and camera crews in the wild” (Wild Kingdom).

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<sup>4</sup> As accessed under fair use via a Wikimedia project at:  
[http://en.wikipedia.org/wiki/File:James\\_Burke\\_\(historian\).jpg](http://en.wikipedia.org/wiki/File:James_Burke_(historian).jpg)



**Figure 4. Wild Kingdom's Marlin Perkins<sup>5</sup>**

### **3.5.3 Modern Marvels**

*Modern Marvels* has been running continuously since 1995. The show focuses primarily on specific technologies and inventions though sometimes episodes cover broader topics. For example there is an episode on rockets specifically and another episode on space travel more generally. The program is shown on the collection of cable channels collectively called the A&E Television Networks<sup>6</sup> but most notably the History Channel. The show's format is an hour-long documentary style investigation that often includes animation, videos, images, and interviews with experts. The show transitions to commercial with trivia-style facts, relies on archival footage when discussing historical events, and employs a somewhat predictably rigid format to the show including music and segment timing.

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<sup>5</sup> As accessed under public domain at: [http://en.wikipedia.org/wiki/File:Marlin\\_Perkins\\_Wild\\_Kingdom.JPG](http://en.wikipedia.org/wiki/File:Marlin_Perkins_Wild_Kingdom.JPG)

<sup>6</sup> Including channels: A&E, Bio, History Channel, History International, History in Espanol, Military History



**Figure 5. A frame from the opening sequence of Modern Marvels<sup>7</sup>**

### **3.5.4 Mythbusters**

*Mythbusters* was first produced for the American audience and while it still is today, versions of the show exist in several other countries. The program is produced by an Australian company for the Discovery Channel, an American cable channel. Myths, especially urban legends are put to the test through dogmatic adherence to the scientific method. The show uses two main characters and several supporting cast members who have entertainment and science backgrounds. Often the program will test myths submitted by viewers and air shows arranged around a common theme (for example there have been at least six episodes devoted exclusively to Hollywood myths). First airing in 2003 and running still today, the program is a cornerstone of the Discovery Channel lineup and the two primary protagonists have garnered something of a cult following even off the show with presentations and special demonstrations around the world (Nvidia teamed with the pair to create compelling presentations of the company's visual technologies).

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<sup>7</sup> As accessed under fair use via a WikiMedia project at:  
[http://en.wikipedia.org/wiki/File:Modern\\_Marvels\\_title\\_credits.jpg](http://en.wikipedia.org/wiki/File:Modern_Marvels_title_credits.jpg)



**Figure 6. A frame from the opening sequence of Mythbusters<sup>8</sup>**

### **3.6 Procedure**

Foss (2004) outlines four specific requirements for narrative. First, the unit of analysis, in this case episodes, must contain events, be they active (expressing action) or stative (expressing a state or condition). Second, those events must be chronologically linked; the order of events in relationship to each other is significant. Third, the chronological relationships must also include causal elements; at least some events must occur in relation to or because of other events.

Fourth, the narrative must be about a “unified subject” (p. 334); a larger framework is necessary to contextualize the events and their relationships. Foss’ notion of narrative draws, in part, from Burke’s notion of drama because the rhetorical approach to narrative persuasion relies on motives and calculated acts. Thus, purpose and agency are issues at the heart of a rhetorical notion of narrative

Foss continues on to outline a more concrete approach to examining narrative that begins by identifying the “dimensions of the narrative” (p. 335). Foss uses this term loosely to apply to the prototypical elements and often ones that can be concretely identified and counted. In this study I am most interested in, but not limited to the items Herman (2002) and Herman & Vervaeck

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<sup>8</sup> As accessed under fair use via a Wikimedia project at:  
[http://en.wikipedia.org/wiki/File:Mythbusters\\_title\\_screen.jpg](http://en.wikipedia.org/wiki/File:Mythbusters_title_screen.jpg)

(2001) identify as important: characters, narrators, settings, events (in the way Forster uses plot and Herman & Vervaeck use “narrative” and “narration”), and relationships between events (such as temporality and causation).

Foss’ approach is broad but is grounded in the general approaches put forth by David Herman and Herman & Vervaeck in their respective works on narrative theory. Though the four requirements outlined by Foss have not always been widely accepted as necessary (i.e., E. M. Forster (1990) used the idea of causality to differentiate story and plot), modern narrative theory does generally demand them. And while other scholars have suggested further requirements for narrative text (i.e., Prince (1987) and Herman and Vervaeck place great emphasis on the need for and role of a narrator), the more commonly accepted in contemporary literature tend to fall within the four listed above.

I selected two non-consecutive runs of each television program to provide greater context:

**TABLE I**  
SELECTED EPISODES FOR STUDY

<i>Connections</i>	Series 1 (10 episodes)	1978
	Series 3 (10 episodes)	1997
<i>Wild Kingdom</i>	African Wild 2 (10 episodes)	1963-1988
	Modern Series: Season 5 (12 episodes)	2007
<i>Modern Marvels</i>	Selections (20 episodes)	1998-2006
<i>MythBusters</i>	Season 1 (13 episodes)	2003-2004
	Season 6 (11 episodes)	2008

Each of these television episodes has a runtime of approximately 30-50 minutes. I watch each episode on a flat screen television that is 37" diagonal. The shows are all on standard DVDs (not Blue-Ray or HD-DVD). I have acquired the shows on DVD and will view the episodes one at a time. They will be viewed in order grouped by show and collection. For example, all the episodes of *Wild Kingdom* Series 1 are watched in order followed by all the episodes of *Wild Kingdom* Series 2 in order. After all the *Wild Kingdom* episodes have been viewed and narrative structures have been recorded then I begin the process with *Connections*. This will help me maintain chronological consistency (shows are viewed from oldest to newest) and make it easier for myself, as the critic, to recognize changes in narrative elements over time.

Drawing from Foss' work the narrative analysis entails examining each episode for embedded narrative structures. Foss calls this step "discovering an explanation for the narrative" (p. 338). Here the narrative structures are challenged as a means of determining their strategies, strengths, and weaknesses. While watching each episode I critically analyze narrative structures, elements, relationships, and other significant items relevant to analyzing how SAEs use narrative structures in the pursuit of edutainment. This might require watching a show more than once or going back to a previous episode after noticing a possible relationship between it and a later one. Being a critical approach, the method is one of immersion requiring considerable time with the material and a somewhat fluid process. It is less structured but the approach has been shown useful in other studies (see for example Olson, 1987).

### **3.6.1 The Scene Function Model**

In order to focus the examination of the episodes I employ Scene Function Theory as developed by Porter, Larson, Harthcock, and Nellis (2002). By using Chatman's (1978) notion of scene in tandem with O'Sullivan, Saunders, and Fiske's (1994) logical sequencing of events, the Scene Function Model is an approach to describing and understanding the narrative role of elements within a scene as well as the role of a given scene within a larger narrative.

I consider this theory useful since their model "identifies specific, discrete narrative functions within a scene that show how those scenes advance or enhance the narrative" (p. 3) but I wish to employ one element of the model. I combine scenes as outlined in the Scene Function model with Foss' narrative criterion.

The Scene Function Model breaks scenes into two categories: kernels and satellites. “Each kernel scene moves the story in a linear direction, and if one of the kernel scenes were removed, the storyline would be considerably altered” (p. 6).

“[Satellite] functions represent discrete purposes for scenes found in a variety of television narratives. On the surface, these satellite scenes may seem to be superfluous or “throw-away” scenes. However, satellite scenes serve a number of different functions...If the satellite scene were eliminated, the reader of the text would still be able to follow the...structure of the narrative. The actual story would remain intact” (p. 6-7).

### **3.6.2 Constraints of the Approach**

Shows produced for US audiences are generally designed to run in an hour timeslot but contain commercials throughout. British shows (such as *Connections*) are designed to be viewed uninterrupted. Since the shows are on DVDs I cannot recreate the experience of taking breaks during the American shows. Further, while I will likely need to view shows several times or take notes throughout, the shows are consumed, in practice, by audiences who watch the show in full or in part on television. And while modern television tools such as personal video recorders allow viewers to watch a show out of order, I cannot recreate the experience others have had watching the show. Another important but unavoidable discrepancy will be watching the shows in sequence. By seeing several episodes of a show in order, back to back, I am likely to pick up trends and changes in narrative structure that typical viewers would not notice as they view episodes a week at a time.

### **3.6.3 Philosophy of Rhetorical Criticism**

Whether an investigator lists his or her work as a critical or qualitative effort, rhetorical analysis is an imprecise process. The work is systematic, but one process does not mean one

outcome. A major component of rhetorical analysis is the relationship between the critic and the rhetoric he or she will analyze. This relationship is mediated by the critic's experience, knowledge, biases, and goals.

Rhetorical criticism draws on a strong sense of symbolic communication. Humans create and use symbols. We interpret the world through symbols and meanings we attach to them. "We are interested in what happens when [people engage in] an act of shared meaning and interpretation through the use of symbols" (Hauser, 2002). In the case of this study, the television programs are physically constructed, but their meaning is symbolic. Symbols, being subjective in nature, require careful use and critical evaluation. This interpretative process is the route the critic takes, in this case myself, in order to process his or her experience, knowledge, biases, and goals in order to recognize the relationship between symbols and the value symbols carry in given contexts.

In this study I will evaluate a plethora of symbols, meanings, and artifacts. I will do so with these biases in mind: (1) I am an American doctoral candidate, (2) I am biased toward supporting education a positive for all people, (3) I employ rhetorical criticism because I am biased towards interpreting educational and entertaining acts through a symbolic framework in which television is one of the media I regularly contact, (4) I am biased to believe that narrative is one of the more powerful lenses through which rhetoric can be addressed, and (5) I want to understand the powerful relationship between symbolic acts the and people who perform them.

These biases, especially the last, help me focus my study of edutainment by interpreting edutainment as a collection of strategic and tactical symbolic acts and thus rhetorical criticism seems like a powerful framework for addressing the items in this study. Criticism brings with it

methodological strengths (the ability to address issues of social good and power relationships) and weaknesses (less predictive power and less certainty). Another researcher could certainly study these same television programs using the method I articulate in this chapter, but disagreement should be expected. Instead, the value of this criticism is to articulate strategies and tactics of edutainment on television, to explore them always aware of my biases, and to provide arguments in support of a new theory of edutainment.

### **3.7 Conclusion**

There are several narrative strategies to be studied. Narrative functions (Herman) are important to storytelling. Typical narrative functions include heroes, villains, sages, advisors, etc. SAE likely employs many of these functions and through the critical method of narrative analysis the rhetorical strategies employed by SAE can be ferreted out. Another aspect of narrative is the idea of embedded stories. These embedded (and often crucially related) narratives create much more sophisticated avenues of entertainment and education. Determining how these multiple plot lines scaffold an episode (and therefore the information contained therein) is a significant aspect of creating a narrative theory of edutainment. Another thing to remember is that values can be introduced or evidenced in SAE but, often, narratives rely on the values authors and consumers bring to the materials. The result of storytelling is the convergence of the author/reader or producer/consumer. This makes a narrative theory of edutainment so important.

## 4. NARRATIVE ANALYSIS OF SAE

In this chapter I make several important observations about the rhetorical approaches each show takes. I review particular instances and overall trends that illustrate the rhetorical power these shows have through their use of narrative. 1) I discuss their fundamental claims of narrative fidelity, 2) I examine the changes in each program over time, and 3) I look at how small fictions are introduced into the narratives which the shows claim adhere so strongly to reality. These are important underlying issues that address my research questions. In the next chapter I address the issue of edutainment as a convergence of television genres over time.

### 4.1 The Fundamental Claim: Narrative Fidelity

All of the television programs I analyze in this study claim fidelity to reality. This refers to whether a story appears to represent reality in the eyes of audience members (Fisher, 1989). They do this in varying ways and some are explicit while others implicit. But, they all claim it without fail. In *Connections*, the opening scene finds the host and narrator, historian James Burke as himself, breaking the fourth wall and asking viewers to look at the manmade objects in their room and consider the impact they have had on the viewer's life. The next line of the episode, "Well, that's what this series is going to be about. It's about the things that surround you in the modern world and just because they're there they shape the way you think and behave and why they exist in the form they do" makes it clear that the show is designed to relate to the real world that audience members exist in.

In the opening of each episode of *Mythbusters*, the narrator asks the question, "Who are the Mythbusters?" The answer comes, "Between them more than 30 years special effects

experience. They don't just tell the myths, they put them to the test." Comments throughout the show indicate the cast believe strongly in the scientific method. From the Discovery Education website: "The MythBusters use the scientific method to prove or disprove common beliefs about physical science<sup>1</sup>." The ethos of the series is one of scientific rigor, and adherence to the facts of the story. In many episodes the hosts explicitly explain the scientific method and praise its importance. The show often makes a point of showing researchers trying to learn the truth behind stories and guests are brought in to provide either context or expertise (the premier episode features a folklorist).

This adherence to fact is taken further by *Wild Kingdom* where the hosts not only involve outside experts but venture out into the wild to chronicle their own adventures for the show. This table shows the outside experts in each of the first ten episodes of *Wild Kingdom*.

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<sup>1</sup> <http://school.discoveryeducation.com/teachers/myth-busters/>

**TABLE II**  
**CHARACTERS IN EARLY EPISODES OF WILD KINGDOM**

<b>Episode</b>	<b>Characters</b>	<b>Roles</b>
01	Marlin Perkins Jim Fowler Sibello Simon Batwana Tribe	Host of Show/Storyteller Researcher/Storyteller Game scout (guide) Game scout (guide) Authority (3 <sup>rd</sup> party)
02	Marlin Perkins Jim Fowler Warden Miller Warden Pallister Warden Tiki Ranger Ronny Biologist Atkinson	Host of Show/Storyteller Researcher/Storyteller Warden (supervisor) Warden (supervisor) Trooper Trooper Shooter/Tagger
03	Marlin Perkins Jim Fowler Maasai Tribe Dick Danny Chief	Host of Show/Storyteller Researcher/Storyteller People of Kilimanjaro Wildlife Expert (Sage) Authority Figure
04	Marlin Perkins Tom Allen Yom Deko Ben Lambert Clive Ludwig Wagner	Host of Show/Storyteller Researcher/Storyteller Park Ranger (sage) Park Ranger Helicopter Pilot Park Ranger (sage)
05	Marlin Perkins Jim Fowler Jonathon Scott (Biologist) Vivian Bristow Andy Kaylor	Host of Show/Storyteller Researcher/Storyteller Sage/Storyteller Ranger Jim's Assistant
06	Marlin Perkins Alex Jon Hopcrab Dr. Phillip Caul	Host of Show/Storyteller Pilot Expert of Lake "dedicated to conservation" "Foremost authority on flamingos"/Sage
07	Marlin Perkins Dr. Itani Dr. Norakoshi Ramadani	Host of Show/Storyteller Prof Kyoto University Researcher Local Refuge Worker

08	Marlin Perkins Sandy Appleman Karen Ross Dr. Tashmerie	Host of Show/Storyteller PhD Candidate/Sage PhD Candidate/Sage Local Vet
09	Marlin Perkins Jim Fowler Brian Thrang Doug Jon	Host of Show/Storyteller Storyteller/Rider Ranch Warden/Sage Expert Motorcyclist Ranch Warden
10	Marlin Perkins Jim Fowler Warren Garst Jewels DeCott Bill Miller	Host of Show/Storyteller Storyteller/Rider Wildlife Photographer Head of Lions & Tigers Photographer

Although episodes were generally 30 minutes or less, each episode manages to include multiple outside experts who play important roles in making information available to the audience and moving the narrative along. In more recent models of narratology, these are “helpers” (Prince, p. 40). In the table, where a person’s description includes the title “sage” this refers to a person who speaks on camera as an expert on a given subject.

Other examples of the shows displaying expertise include in just one episode of *Mythbusters*:

- Jo Ann Wyman is the “piercing expert” who explains and carries out the process on Adam
- The team “enlists the help” of Delta Star West is a company that manufactures large electrical machinery

- Heather Joseph-Witham is a folklorist that explains the background of some myths in early seasons
- John Morris appears to be a hobbyist but the show titles him a “Cannon Expert”
- Michael Greene is the arborist that provides assistance in picking logs for a cannon
- Chris Niemer provides foundry services at his shop called The Crucible
- The team calls in “expert pyrotechnician” Jack Morocco
- A second “pyrotechnician” is called closer to the end of the episode
- The San Francisco Crime Lab “generously offered” to supervise the experiment
- Bruce Gendron is the patrol officer from the SFPD to help the team explore alcohol testing myths.

And in one episode of *Modern Marvels*:

- Paul Pacult is the editor of Paul Pacult’s Spirit Journal
- David Wondrich is the author of Esquire Drinks
- Dale DeGross authored The Craft of the Cocktail
- Anchor Brewing’s Brewmaster is Fritz Maytag
- Maker’s Mark Master Distiller David Pickerell
- Frederick Booker Noe III is the great grandson of Jim Beam

- Jim Beam's master distiller is Jerry Dalton
- William Bergius has perhaps the most specific research title ever: Single Malt Historian
- The distillery manager for Scotland's Laphroaig is Robin Shields
- Willie McCallum is the distillery manager for Tormore Distillery in Ireland
- Thomas Lee is Glendronach Distillery's Brewer
- The CEO of Cloonaughill CelticMalts is Riannon Walsh
- General Manager Julio Bernejo of Tommy's Tequila
- Eduardo Vallado is the director of operations for Tequila Sauza
- The head of the Sauza Agricultural Program in Mexico is Servando Calderon
- Desmond Payne is the distillery manager of Beefeater Gin
- Keith Greggor, Chief Marketing Officer, Skyy Vodka
- Agnieszka Kuta, Quality Control Manager, Belvedere

It is easy to see how heavily these shows rely on helper characters to provide support by ways of credibility, authority, or legitimacy. They can inculcate a feeling of accuracy and formality in the mind of the viewer. SAE programs not only make claims themselves, but rely on experts, officials, and others who can testify to the accuracy of the information.

When the SAE programs are relying on their own regular characters, they construct rhetorical arguments to convince audience members the information and, in a sense the show, is legitimate. Whereas *Connections* stages the displays, and *Mythbusters* take viewers inside the process of developing experiments, *Wild Kingdom* goes out and conducts primary research as part of the show. Put another way, *Wild Kingdom* is conducting research while the other shows report on research.

Not an exception, but to a lesser degree, *Modern Marvels* does not make an explicit claim. However, the show makes a point of specificity that clearly serves to increase credibility and create a sense fidelity to reality. The opening line of an episode about bathroom technology is “...everything you ever needed to know about the most used and least discussed room in your house” again relating the material everyday experiences in the lives of audience members. The show only covers things that either currently exist or have existed in the past. In an episode about bridges the show displays numerous stills and video clips of the bridges in the past and present. Experts are interviewed on camera so you can actually see the person you are listening to. In explaining how an “artificial island” had to be created to hold up the San Francisco Bay Bridge the show cuts to decades old footage of the actual construction of the bridge. I interpret this to be an effort on the part of the show to prove its accuracy and fidelity to truth. In another episode about the Petronas Towers of Malaysia the opening scene is documentary and news footage from the celebration of the building’s completion. Rather than **say** the building was opened at a certain time, *Modern Marvels* **shows** you the opening of the building: they provide proof for their claims.

The show has no host, but the persistent voice-over narrator explains historical facts and pieces together simple narratives, generally explaining functional processes or historical events, in a way that feels more like an accurate textbook than a creative story.

#### 4.1.1 Hosts

In comparing edutainment to entertainment forms, one difference jumps out right away. All the shows in this study have. The only possible exception is *Modern Marvels* though the voice-over narrator is the same consistent voice and occasionally speaks in the first person plural voice indicating that the narrator is part of a group. The interesting part is that the hosts are all “real people,” not actors by trade, and typically experts in their field. They are not actors playing a character but instead are themselves hosting a project of their own work. There is a sense that they are sharing their own work with the audience as opposed to playing a character within a larger performance. In fact, according to IMDB (2011a, 2011b, 2011c, 2011d, 2011e, 2011f) none of the hosts had ever performed in a movie or television show prior to their roles as hosts on the television programs in this study<sup>2</sup>.

Save for *Modern Marvels*' narrator, Lloyd Sherr, whom IMDB (2011f) does list as having played himself while narrating, each program's host is performing science research in one form or another and bringing the audience in on the experience almost ethnographically. Burke and Sherr use their shows to share results; Jamie and Adam to share the experimental research (each show is a collection of experiments aimed at answering a question); and Martin & Fowler use *Wild Kingdom* to highlight their own fieldwork in the wild. When shows use experts the audience views them based on the perceived frame (Tannen, 1984) created in the dyadic

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<sup>2</sup> Adam Savage had a small background roll in the 2001 film *Ever Since the World Ended* and the narrator of *Modern Marvels* was never on screen, though this narrator role was his first on television or in film.

interaction of television show and audience members. Television shows with expert hosts tend to include materials that reinforce the host's expertise and in turn the expert host provides context, excitement, and validation of results (Smith, 2010).

#### **4.1.2 Transparency**

In a 2009 *Popular Mechanics* article, *Mythbusters* was referred to as “gonzo engineering” (Webster). I do not know that I would go that far, but there is definitely a sense on the show, especially in early episodes, that they are shunning the typical polish and production value normally associate with American television and instead inviting a camera crew into their sparse office and workspace to chronicle their investigation of questions everyone wants an answer to. Many episodes legitimately feel like two guys with a workshop set out to test myths for themselves and had fun doing it.

In one scene, from the first season, the two hosts are shown working in a small office, with little room around the table, adorned with the kinds of decorations you might find in a garage workshop or home office rather than the polished corporate offices of a production company. Later in the same episode the team heads out in search of a toilet to destroy. Rather than show up with a gleaming toilet in hand or go to a commercial vendor, Jamie and Adam search out a used toilet from a scrap yard.

In all the shows a particularly useful narrative device is used, what Propp terms the “helper.” These are characters that have knowledge or expertise in a subject area and provide it to other characters, especially the hero. In conventional stories the helper might be wizard who teaches the young hero to harness magic or it might be the soldier that gives critical information to his unit. In SAE helpers are often employed and appear to always be human (rather than objects or

animals). In *Modern Marvels*, helpers are used in great abundance. These usually take the form of one sided interviewer-less faux interviews in which a seated expert in a given field related to the topic of the episode provides specialized knowledge that the narrator can use and reference later in the episode.

Less often, the helpers are active and speak while physically showing how to complete a task or process (such as the wood workers that physically carry out operations in a mill while explaining the process). All the programs in this study employ helpers to varying degrees. *Mythbusters* relies on the same type of helpers, though uses them more sparingly. Early episodes of *Wild Kingdom* employ these helpers but infrequently and often only in passing. For example, the hosts might relay the information but credit the helper as the source. Or, the helpers might be shown carrying out a task while the hosts provide the spoken information. For example, in *Wild Kingdom* the cameramen and production experts are shown preparing for various outings at the start of some episodes.

*Connections* takes this a step further. There do not appear to be any episodes where an onscreen helper speaks or provides information within the narrative of the episode. However, the host, Burke, often credits the success of one historical person with the work of another: As Burke tells the story of electricity, Edison's incandescent light bulb is possible because of the work of helper Hermann Sprengel and his development of the necessary air vacuum pump.

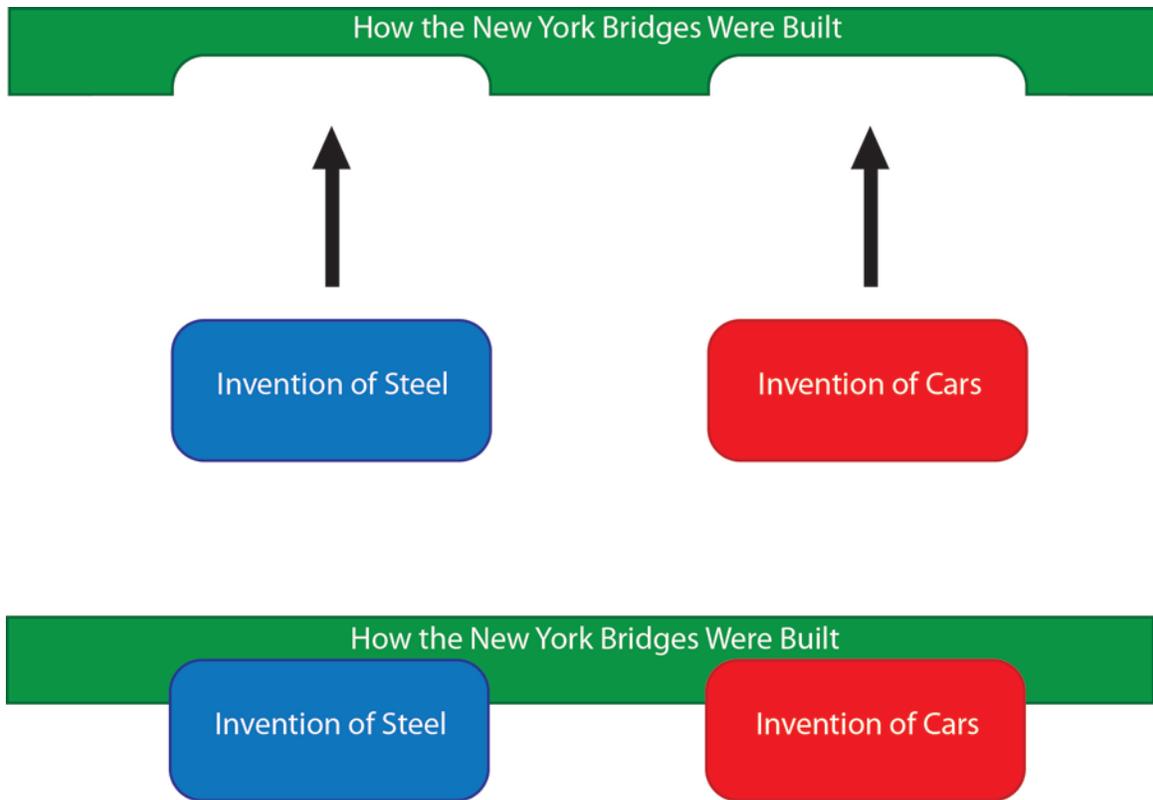
#### **4.1.3 Sub-Narratives**

In narratological terms sub plots are that that are smaller and support larger, more primary plots. I break narratives in SAE episodes into two categories. The first are what I call primary narratives and the second I call sub-narratives. Primary narratives are the overarching

narratives that either span an entire episode or a significant segment. For instance, in first generation episodes of *Wild Kingdom* there are generally two to four primary narratives. These are stories that stand alone and contain all necessary contexts within themselves. In practice, these could each be their own short episode. In second generation episodes of *Wild Kingdom* (those starting in 2002) there is generally just one primary narrative: the entire episode follows the exploits of a person or group.

While first and second generation episodes have a different approach to primary narratives they share in common their use of sub-narratives. These are the short plots that do not provide information in totality but instead are just sufficient to provide information necessary for the internal consistency of a primary narrative. For example, *Modern Marvels* relies heavily on sub-narratives. In a 42 minute episode these sub-narratives typically last less than a minute and provide just enough background or context to keep the primary narratives moving along.

In this image one episode about the bridges of New York City is illustrated in part:



**Figure 7. Two sub-narratives are used to construct the larger primary narrative**

The primary narrative of how New York City bridges were built relies upon the sub-narratives of automobile invention and steel production to explain the history of the bridges. However, the audience doesn't need entire primary narratives about cars and steel, instead small pointed stories that provide enough information to make cars and steel understood, contextualized, and interesting will serve the needs of the primary narrative, at least as structurally defined by Foss. *Modern Marvels* and *Mythbusters* employ numerous sub-narratives throughout their episodes but perhaps no show on television has a better mastery of the sub-narrative than *Connections*. While

*Mythbusters* seems to employ the most individual sub-narratives, *Connections*' use of this device to increase understanding, clarity, and interest is perhaps the most powerful part of the show.

#### **4.2 Changes Over Time**

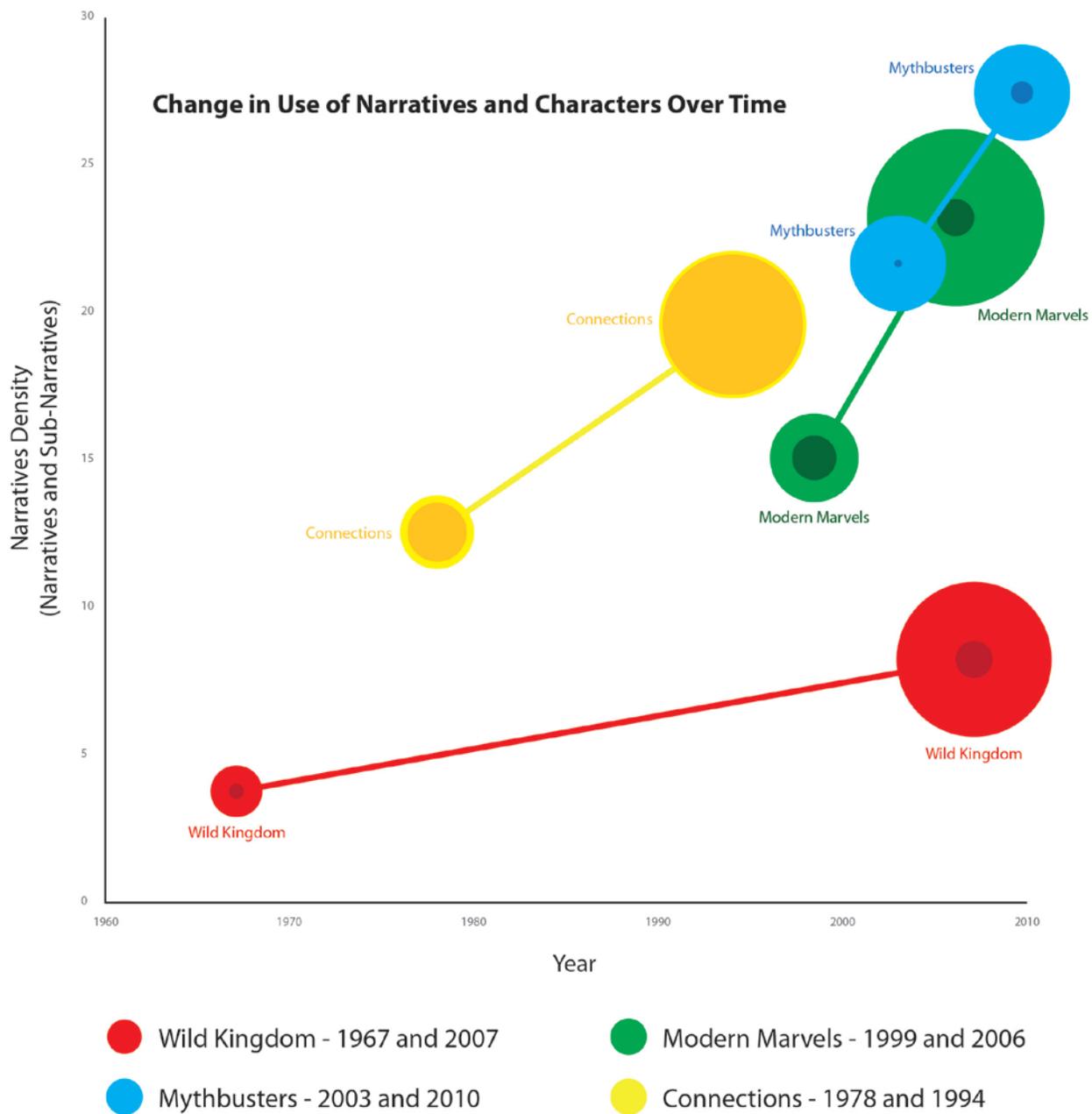
In this section I refer to a concept I call narrative density. Where Prince talks about narrativity being the degree to which a story seems oriented towards fulfilling audiences' temporal and conflict demands, I use density in the same vein as physical scientists. Density is the number of narratives that exists within a given amount of time. As the number of narratives in a given time increase, so does the density. This is akin to the density of an object increasing as atoms of material are added to the same volume.

The first and most obvious change in SAE over time is the increasing narrative density, the number of narratives and sub-narratives within a given period of time. Newer SAE programs rely on an increasing number of narratives and characters. In the table below two episodes from each SAE program are used to show the change in narrative density and character use over time.

**TABLE III**  
**NUMBER OF NARRATIVES AND CHARACTERS IN SELECT EPISODES OF SAE**

Program	Year	Narratives	Characters
Connections	1978	12	10
Connections	1994	19	20
Mythbusters	2003	22	13
Mythbusters	2010	27	13
Modern Marvels	1999	15	12
Modern Marvels	2006	23	24
Wild Kingdom	1967	4	7
Wild Kingdom	2007	8	11

This information is translated to a graph in figure 8. The X axis shows the passage of time while the Y axis tracks the number of narratives in the episodes. The size of the circle represents the number of characters used in the episode and the darker circle in the middle represents the number of characters who were ancillary (referenced by a narrative, but not a participant in the narrative).



**Figure 8. Change in the use of narrative and characters over time**

Narrative density was not the only change over time. Video quality has improved over time and music tastes will change as well as clothes and makeup. However, there appears to be a clear and marked change in how these elements are *used* across time. I contend that over the last 30 years the style of SAE programming has become more aggressively dramatic. It seeks to not only report on conflict but amplify and, if necessary, create conflict.

Music in older programs was used to highlight specific scenes, or was used as the subject of the content. But in later programs, music (the score in film studies) is practically ubiquitous with little or no breaks. Modern Marvels often employs music, usually related either historically or topically to the material being covered. In an episode about government policies during the Revolutionary war the show used the wind and percussion music of a marching army while in another story about the American south during prohibition music including the twanging strumming of a banjo was used.

Sometimes the music serves the same purpose with regards to narrative tempo as fight scenes in action movies or chase scenes in a thriller. Episodes of *Mythbusters* use quite a bit of music. Softer music is played while the background of a myth is explained and then much heavier, louder music is played when a particular segment is about to begin. The net effect here is to draw attention to the story and then energizing the audience by indicating a competition or battle (between the Mythbusters and the myth) is about to commence. At one point in the episode *Lightning Strikes/Tongue Piercing* the process of mixing two liquids in a plastic cup is accompanied by heavy metal guitar riffs. The producers of SAE are using music as cues to the audience to help form an opinion around the content in a given scene. Music can make action more intense, a failure more emotional, or an inanimate object come alive (Fairchild, 2011).

Contemporary SAE programs no longer just chronicle the actions of a host or subject they couch the entire experience in terms of success or failure. Whereas the drama of older SAE programs was derived from the educational material itself, now the most exciting part of a show is rooting for the hosts or subjects to succeed or fail. The first generation episodes of *Wild Kingdom* relied heavily on the drama of scientists doing good for the animals and science by learning about the animals. In second generation episodes, researchers are often pitted with a task, given constraints, and the narrator worries that expeditions will “fail”, “come to a halt”, or end in “bitter disappointment.”

#### **4.2.1 Narrators**

Each of the shows have hosts but only some of them have narrators. Wayne Booth outlines three types of narrators (1961). The first is an implied narrator, the disembodied voice of a narrative who is not represented in the story by any particular character. This is the god-like voiceover. The second is a dramatized author who is not visible within the narrative but speaks in the first person and is aware of his relationship between the characters and the audience. The third type is a dramatized narrator visible within the narrative. Each program in this study approaches narration differently moving along what Norman Friedman (1955) called the point-of-view scale and Stanzel (1984) conceptualized as gradations. The distinction between embodied and disembodied narrators within a narrative is a recent issue in narratology (Herman & Veraeck) and creates interesting dynamics in SAE.

For instance, in the first generation episodes of *Wild Kingdom* the narration is handled by the show’s hosts: dramatized narrators. Sometimes they were on screen and other times they were not. But it was always clear who was speaking and from which viewpoint. Compare this to

second generation episodes of *Wild Kingdom* where there is no personified host but instead a disembodied voice providing context and background in addition to describing what the viewers see on the screen. This might appear to be an implied narrator; however, I contend this narrator is more appropriately considered a dramatized author. I argue this because the narrator seems hardly third-person. While the voice generally speaks in the third person the sense of anxiety when reporting failure, urgency when describing action, and heartbreak when discussing death clearly indicates an empathetic actor who is rooting for success and worried for failure. This is an important change in the program over time: the scientists who are characters in the narrative are allowed their distance and rationality while an additional character, the narrator, is allowed to enhance the dramatic effect of the story through the use of rhetorical devices (e.g., tempo, conflict, paralanguage) that might undermine the experts performing field work.

*Mythbusters* takes this narrative approach further. The program's narrator is never seen on camera and is sparingly referred to by the hosts. And while the narrator usually refers to people and events on the show in the third person he does occasionally use the term "we" indicating he is part of the team. He talks about the team trying to decipher "perplexing results" from experiments or after much work, "At last! A direct hit!" In another show about building a cannon from medieval tools the team constantly flirts with disaster while wrapping molten metal around the log with their expert guide (dramatic music accompanied):

"They've got to pull the band tight while it's red hot and rivet it in place. The band is cooling and shrinking before they can hammer the rivets home...Just four more to go...medieval techniques take some mastering but each band is going on easier than the one before...It's looking more like a cannon, but there's still no barrel...They've come too far to stop now."

Later, the same team worries over fears the log will explode when put under such intense pressure and the narrator tells us that “Once more in the name of mythbusting Jaime and Adam head into the world armed, dangerous, and set on destruction.” *Mythbusters*’s use of a narrator in addition to multiple hosts is perplexing from a narratological perspective but ingenious from the vantage point of audience members seeking a more dramatic approach to science. It creates an atmosphere where the hosts can explain their own work within a sub-narrative and then the narrator can take over and guide the audience through the primary narratives of a given episode. Further, the main hosts of the show Adam and Jamie often compete with one another or disagree about the best way to approach a problem. These competitions (usually implicit but occasionally explicit in the forms of contests or races) enhance the dramatic tension in the episode and increase the number of narratives and sub-narratives. This could lead to confusion and bewilderment for audience members without a clear and decisive voice but the disembodied narrator, above the squabbles of the on-screen talent, provides a clear source of information and a firm hand in directing the action in episodes of *Mythbusters*.

In episodes of *Connections*, the first season of the show is exclusively narrated by a dramatized narrator. But in later episodes there are occasionally additional characters given the privilege of dialogue and explanation. These are generally historical figures portrayed by actors but they allow for an additional viewpoint, even if slight, and provide a second voice for the host, Burke, to respond to or otherwise engage. So even in a show with a single host, there is occasion to add narrators to sub-narratives for the sake of creating opportunities for humor or tension caused by dissonance.

It is clear that over the last 30 years a shift has occurred in SAE and the role of narrators has changed. 30 years ago shows were hosted by dramatic, on-screen talent whose voice was the

single authority within the program. But, as time has progressed additional narrators (implied narrators and dramatized authors) have been introduced. These voices allow for increased drama, provide a valuable source of additional narratives and sub-narratives, and shift hosts and characters with real world knowledge and credibility into the role of protagonist allowing for more dramatic and narrative options on behalf of the various shows' producers.

### **4.3 Fictional Narratives Embedded in Realistic Narratives**

Present in all shows, but increasingly prevalent in modern episodes, dramatic elements are introduced through narrative and descriptive presentation. For instance, in earlier episodes of SAE characters are presented as static figures that do not change over the course of time. Marlin Perkins and Jim Fowler do not emote much nor are their endeavors framed as competitions. However, later episodes of SAE present characters with opportunities for success and failure. Scientists do not report on their activities, they work to succeed in overcoming challenges and meeting goals. Later episodes of *Wild Kingdom* employ more dramatic language:

Animals are center stage and “these African kings live a half a world away from their cousins ... They almost vanished from the face of the Earth. In their amazing journey back from the edge of extinction the lions have reclaimed lost territories, even taken over new ones.”

“Whales navigate some of the coldest waters on Earth. Capable of going where no human can follow. Each year, the arctic summer unlocks a door into their frozen world. And these whales begin an epic journey. One that may lead to an ocean of riches or to their deaths. Few other animals can do what they do. The whales of the midnight sun.” The accompanying music is as spine tingling as the narration.

“This is one of the few times that a pair of Bowheads (whales) mating has been filmed...During this season, their normal moans and roars are transformed into songs with multiple notes and repeating themes. They could be love songs.”

“Most of these creatures’ world remains hidden from view in freezing cold water that could kill us in minutes. Science hasn’t caught up to these whales. And the little we do know only adds to their mystery.”

“Snatched from the jaws of death, Charlie the Wombat has worked her way into the hearts of two passionate wildlife rescuers...but wombats have made many enemies in the land down under with at least one species on the brink of extinction these marsupials are facing the fight of their lives. Does Charlie even stand a chance? Now, it’s up to wombat crusaders all over Australia to fight and win the war of the wombats.”

“These elephants are like no other elephants in the world. Isolated on the island of Borneo they’ve led mysterious, elusive lives deep in the jungle. But now, a startling new discovery about their origins has inspired this man to risk his life to learn more about them...and the news that they are in immediate peril sets off a desperate race to save Borneo’s Pygmy Elephants.”

“At the foot of one of Earth’s most active volcanoes, lies a hostile world. A constant threat of death surrounds those that live here. But one special creature, the common octopus, is thriving. And researchers are on a quest to find out how. Their mission, to track this extraordinary species puts them directly in the volcano’s destructive path.”

In another episode the chief investigator has four days to catch a lion and tag it for research. The show never explains why he only has four days nor does it explain the consequences of failure. But, the narrator repeatedly reminds the audience that lions have not yet been caught, time is running out, and failure is at hand. After each commercial break the show reminds us of the temporal constraints placed on the scientist with an onscreen countdown showing how many days are left to catch a lion. Interviews with the scientist and his staff increasingly show them worried and desperate to try things they do not want to do. Forcing these temporal constraints on

the scientists is a way of introducing a fiction into the narrative which heightens the dramatic effect of the show.

Narrator Simon Barritt is a professional voice actor who does voice work for commercials, movie trailers, and videogames. In a sense, he is the non-expert actor playing host, a significant departure from Jim Fowler and Marlin Perkins. His deep voice and empathic depictions of the animals and humans are eerily similar to the voice in movie trailers. The pressure of the scientist's timetable is presented with the same dramatic urgency as Superman's task of saving Metropolis from doom. The shift in presentation style, over time, is away from clinical and towards the dramatic. Animals do not wonder about their cousins around the world or strategize with one another over territorial claims like nation states but this rhetoric is a useful way of introducing small lies for the sake of increased drama and increased attention paid by the audience.

*Connections* adds material in a more subtle way. The first is to include small editorial language that potentially colors the view of the material by the learners. Speaking about the first attempts to understand high altitude weather:

“On October the 17<sup>th</sup>, 1883, this ancestral home was the site of a get together by the cream of enlightened gentility to mark the grand opening of a new weather station on top of the highest highland in Highlands. Refreshments were offered to the guests, and provisions were loaded for the journey to come by numerous factors and guillies and other unpronounceable lower Scottish orders. It was a grand, ludicrous, overdone affair in the way that all Victorian philanthropic occasions were. If this were any other country in the world they would have dropped the whole thing until the rain stopped. But this was 19<sup>th</sup> century Scotland and they were bent on serious matters. So they gritted their teeth and cheerfully did their duty as the rain filled up their bagpipes. The really nice thing that science did for the Victorians was to make them all lunatics in the same way.”

Burke goes on to talk about the “silly flags” that the townspeople were waving “as they were supposed to.” The weather turned to sleet so everyone could have what “they were supposed to have when doing their duty, a thoroughly rotten time.” Eventually Burke explains that this was the start of cloud recording (creating cloud atlases) and begins to tell a story about how weather and magnets are related. But at no point in the show does Burke connect either his sarcastic or condescending language to the content of the show. While he describes with flair and paints a picture to be sure, it isn’t clear why he is painting the picture in the first place. A reading of this episode, including not just the words spoken but the way the words are delivered, seem to support that he is arguing, even if indirectly, that modern meteorology came into being *in spite of* its Scottish roots, not thanks to it. The sarcastic tone in his voice and images of peasants celebrating while Burke undercuts their value to society can lead the audience to interpret his view of the Scottish as discouragers rather than enablers of science. This would be an interesting reading of history if Burke intends this interpretation. If he does not, and simply wanted to add some humor or paint a picture for the sake of entertainment, then he runs the risk of accidentally teaching the casual adult learner that Scotland was antithetical to or a begrudging mother of modern weather studies. Adding additional details to enhance the entertainment component of edutainment can impact the education aspect of it.

In another example, Burke is telling the story of the invention of RADAR. He, like most sources, credits the working idea to Heinrich Hertz in the late 1800s and to Watson-Watt who would later work with the British Air Ministry. As Burke tells the story, the British military asked Watt to create a “death ray” to which Watt replied he could not. But, he said:

“What about me giving you a way to find enemy aircraft in the sky, telling you how far away they are and in what direction. We could call it radio detection and ranging or RADAR for short.”

For the sake of the narrative structure of the show *Connections*, Burke is combining disparate facts into a cohesive story. However, not only did Watt not come up with the name RADAR, neither did the British. It was the US Navy in 1940. But to include the more correct version would have complicated this sub-narrative Burke was trying to share in a short amount of time. In condensing narratives into highly dense SAE episodes, Burke has conveyed a fiction. In trying to teach the history of RADAR, he has incorrectly credited its naming agent and convoluted the timeline of RADAR in military use. This might seem somewhat trivial as he does correctly teach the acronym RADAR, but if the point of the show is to show the interconnectedness of historical items, then it's incredibly important each of the facts be true and that sub-narratives accurately support primary narratives. In this episode, Burke as a teacher has lied to his students for the sake of a better story since RADAR as a response to a request for a death ray is more interesting than an unrelated story that takes place across the Atlantic. And why would a casual adult learner think to question him?

There is a second way *Connections* asks us to suspend our belief. The host challenges us to consider alternative universes and to re-contextualize our own lives by directly challenging our assumptions and our experiences.

“So exhausted and desperate you may have to make a decision to give up and die. Or, to make somebody else die because they won't accept you in their home voluntarily. And what in your comfortable urban life has ever prepared you for that decision?”

This is precisely the scenario characters are faced with in zombie apocalypse scenarios like the television program *The Walking Dead*.

“Inside the temple domain there were 65 towns. 400,000 animals and it took 80,000 people just to run the place. It’s little wonder that centuries after the Greeks and Romans came here gawking like peasants at a civilization that made their efforts look like well dressed mud huts. It still has that effect today. You come here from the great modern cities, full of the immense powers of modern technology at your fingertips, press a button, turn a switch. And this place stops you dead.”

“Kuwait represents the immense power of technology used in a way most of us have never experienced. Because we’ve lived with the kind of change it can bring for more than 100 years. Here it’s been focused. Change has been instant and total.”

“By the middle of the 19<sup>th</sup> century the balloon enjoyed the same kind of reputation the backseat of the motorcar did in the 1940s. It was rather often used for purposes for which it had not originally been designed. I mean Frenchmen in particular would cruise along with their girlfriends dropping empty Champaign bottles on the gaping peasants below and returning to Earth to announce their engagement. Mind you, this was all serious science.”

This kind of fiction is different. Anthropomorphizing animals, applying narrative templates to their travels, and exaggerating the significance of an act are types of fanfare that can make information exciting or intriguing. But when Burke challenges traditional notions of ethics, societal achievement, and technological impact, he incites learners to go beyond the literal facts of the show and entertain competing notions not accepted by the audience members. Put another way, Burke is simultaneously pointing out the things we accept as reality and those things we do not accept as reality. This dialectical tension in the information might encourage learners to open their mind to a new perspective, or might cause learners to undervalue the “facts” to which the show tries to introduce them.

*Mythbusters* engages in the same type of drama-inducing narrative by introducing additional information into the narrative. At the outset of the show the hosts and narrators present a rational, scientific question and start by outlining clear experiments designed to find the answer to a given question. In a sense, episodes start out the way a research scientist would answer a question: conduct an experiment and find the answer. Inevitably, the straightforward approach is not enough and increasingly complex (and dramatic) approaches are taken. In one episode designed to find out if a car fire can cause the bumper to explode a standard approach is taken first: get a car, set it on fire, and see if the bumper explodes.

But they do not get the answer they are looking for. So the *Mythbusters* go to the lab, take one car part, and set it above a torch to melt or break the piece. This scene involves cut scenes to a thermometer. Jamie and Adam become worried that they might start a fire, and eventually a black cloud is unleashed that cause the duo to evacuate the laboratory. The production crew is obviously aware of possible dangers in the approach but rather than avoid them, they employ the drama of an increasingly dangerous situation to make the scientific approach more exciting. Adam goes so far as to say “We don’t want a safe failure, we want a boom. We want this thing to become a projectile ... to hopefully cause the catastrophic failure.” The episode includes an interview with a woman explaining her experience in a similar situation where her leg was “broken in 20 places” (with requisite squirming and empathy from the hosts) and ultimately concludes with the hosts, and the San Francisco bomb squad, placing explosives in a car to cause the catastrophic failure they desperately seek. In other episodes where multiple approaches are possible the hosts and other members of the *Mythbusters* team are divided up and compete for the best option and in other episodes the constant failure of Jamie and Adam’s experiments drives them to frustration and their successes to jubilant celebration.

The show clearly inserts dramatic inaccuracies into a process, hailed by the hosts, as objective and pure. These are sometimes blatantly false. In an episode about bamboo used as a torture weapon the team worries they will run out of time because of the “end of the growing season” when earlier in the episode they celebrate that their location in California creates the perfect atmosphere for growing the plant. The team is not, in reality, constrained by the bamboo growing season (Farrelly, 1984; Philinshelton, 2009) especially since they could alter the production schedule – that they even point out is months long in the introduction to an episode – to allow even more time if needed but its dramatic effect on the show is useful for the narrative. The scientific method is hailed and flouted at the same time and these deviations from rigor help to enhance the dramatic effect of the show. For example, in one episode about using thousand year old tools to build a wooden contraption, Adam decides to cheat (after finding a manual bore too time-consuming) and quips “I’m not doing anything they wouldn’t have done if they had a chainsaw.”

In another episode about shooting arrows from horseback during medieval times, the second team (Grant, Kari, and Tori) dress as anachronistic barbarians even pointing out themselves: “This isn’t very accurate. We are the invading hoards? This isn’t the History Channel.” A telling line from the show’s narrator comes in this episode when he says of the supposedly scientific method: “They had to fudge the method.” This about a pair of self-described “experts.” In yet another episode, while trying to create plaster molds of a human head, tension is created and highlighted on the show by including a scene that is unnecessary to the narrative of the program but makes the show more entertaining by engaging the characters themselves, rather than the show’s primary content:

- Narrator:** But getting the plaster mold to form is proving to be a headache.
- Adam:** (working the mold press) No, no, no. Come on. Aww.
- Jaime:** Adam's really hard on my tools. He'll tend to plow through things without thinking.
- Adam:** (still working the mold press) God. Everytime. I hate this frame, it's ripping my fingers to shreds. A little more comfort in your design. That's all I want.
- Jaime:** It'll toughen your fingers up. It's good for you.
- Adam:** Fuck you. My fingers don't need toughening. (the expletive was bleeped)

In an episode about driving a convertible car in the rain, the team tries to determine whether speeding up will keep the driver from getting wet if the top is down. As is common at the outset of a *Mythbuster* episode, Jamie and Adam discuss using a scale model of the scenario before jumping right to the main experiment. The pair routinely explain that starting with a scale model and moving towards the larger experiment is part of the scientific method. While Adam appears to attempt this part of the shows discourse, Jamie appears to be focused on one thing, driving a Porsche:

- Jamie:** So, does this mean we get to drive a really fancy car really fast in the rain?
- Adam:** We do, but we're in sunny California and that presents a little bit of a problem. I think just as we did in *Running in the Rain* we're going to have to manufacture our own rain here.
- Jamie:** It's a bit of a chore but I think we can that. We still get to drive a fancy car really fast in the rain though, right?
- Adam:** [appearing hesitant or worried] Yes, but slow down there cowboy. I think perhaps we ought to take this model car and run some shop tests, sprinkle some water on it, look at it on high speed, see if we can see if there is anything at all to this myth.
- Jamie:** And then we get to drive a really fancy car fast in the rain?

**Adam:** [appearing almost exasperated] OK, we'll get some driving lessons, we'll wet down some tarmac, we'll go out next thing and drive a fancy car, alright?

**Jamie:** Alright.

**Adam:** [looks away slowly and shakes his head as if in disbelief]

It's possible the crew was attempting to shoot a short parable scene where a headstrong Jamie wants to jump right in and the better-knowing Adam explains the importance of scaling up within the scientific method. If that is the case, I think it fails. As the scene, short though it is, moves along it appears that Adam, champion of reason and caution, eventually gives up and caves to the demands of Jamie's more precocious whims. If the attempt was a parable about the need for caution and forethought, it seems just as likely to me that a viewer might read the scene differently and see *Mythbusters* as a vehicle for the giddy energy of a child wanting to jump to the fun part of a project with little regard for preparation. This scene comes just three and a half minutes into an episode that opened with the disclaimer: "I know it looks like we have fun on this show but we spend weeks and sometimes months planning how to do our myths safely. So please, don't try this at home." As if to enhance the tension created by the competing interests of excitement and caution, while Adam gives this warning, Jamie is standing next to him in a full bomb-squad suit holding a grapefruit-sized grenade with a lit fuse.

Another possible reading of this scene is that rather than purposely trying to convey a learning moment, the crew of *Mythbusters* was attempting to infuse the show with humor by creating an awkward tension between the two lead characters. If this is the case, the show is shooting a contrived scene between two actors in the middle of a show that otherwise claims fidelity to the mythbusting team going about their experiments. Forced acting such as this doesn't fit well with

the ethos of the show and would be an instance of fiction introduced to make the program more interesting through the use of caricature and humor.

A final example from the *Mythbusters* comes from another fiction. In an episode about whether medieval townspeople could have constructed a wooden cannon overnight, the team illustrates the difficulty in boring wood with hand tools. In the middle of the episode Jaime says the myth is busted because there is no way the work could be done that quickly. Later in the episode, the team uses modern tools to construct the device and in a final flourish destroy the cannon with 5 pounds of black powder. The narrator asserts that the Mythbusters have proven that you can construct a cannon from a large piece of wood. However, that was not the question they asked at the beginning of the episode. The goal of the work seems to have morphed over the course of the episode so that the show could entertain the audience with the cannon fire (and eventual destruction) while showing the work as a success, rather than failure. This is a case where the edutainers essentially lie in order to make the dramatic components of the narrative more compelling.

*Connections* and *Modern Marvels* do not take heightened drama to the same extreme but do engage in a parallel approach. Burke likes to take *Connections* viewers through possible worlds where this invention or that discovery did not happen:

“If the Norse hadn’t won their battle in the Middle Ages, England would be speaking French today.”

“Without gunpowder from Asia, Europe would not have adopted the commerce systems we enjoy today.”

Burke then asks his audience to imagine themselves in these possible worlds. This alternate reality is a fiction that forces the audience member to consider themselves in relation to reality. Rhetorically, this serves to invite the audience to engage the SAE in a less superficial manner by heightening the degree to which SAE rhetoric is audience-centered. When the audience members consider themselves in an alternate reality it necessarily forces them to at least consider their own reality and, (in the view of the SAE producers) hopefully, consider the truths being taught in the SAE.

But perhaps the most powerful fictions SAE programs introduce are the simplest. In *Wild Kingdom* some animals are named or anthropomorphized to make them relatable. *Connections'* host Burke hails James Watt as the "hero" of the story when explaining the history of water pumps. *Mythbusters* often uses a crash test dummy named Buster whom is dressed, lavished with praise and admiration for his "work", and earned a funeral when the dummy was replaced by a newer version (other inanimate team members include Ted, Deadblow, and Sparky). Even the myths themselves, being imbued with human-like properties, "kick our ass" on the show and cause the Mythbusters to sometimes go home with "our tails between our legs." *Connections* constantly gives causal powers to objects sometimes crediting them with our modern way of life: "Whiskey changed the world."

*Modern Marvels*, like the other programs uses visual aids to help explain or clarify concepts and processes. In all the programs in this study, visual aids are scientifically inaccurate or suffer from failures of visual design that would drive Edward Tufte (1983, 1990, 1997, 2003a, 2003b, 2006) quite mad. The visuals are, however, useful in describing a basic principle and are often entertaining employing humor to various degrees. These inaccuracies are a rhetorical decision to create compelling and entertaining visuals at the expense of design rigor.

In one image from an episode of *Mythbusters* explaining why swimming in maple syrup might be more difficult than water because of the syrup's non-Newtonian physical properties animated versions of the show's hosts are seen swimming, slowly, through a sludgy gunk. Another image shows host Adam as an unskilled chef with a clump of spaghetti on his mixing spoon. Though paired with a narrator's explanation they provide little information, but are engaging.

An image of designer William Van Allen from an episode of *Modern Marvels* about the Chrysler Building is a hybrid between a real photo of the man and images from an architectural design. In fact, this layout is purely for the sake of aesthetics and removes information from the photograph (removing context) and inserts artificial information (the faux design that is not Van Allen's work) suggesting a non-existent relationship between the two.

*Modern Marvels* often uses historical video from various time periods ostensibly to provide context but in many cases merely to entertain. In the same episode about the Chrysler Building, footage of 1920s flappers is shown dancing the Charleston. None of the interviews or narration discusses the social atmosphere of the 1920s, reference the dancing, or in any meaningful way connect the video clip to the content of the show. In fact, the only discussion of the period is about the economic revival in Europe. The dancers are just for fun but appear connected by the placement of the footage within the episode.

In *Connections*, Burke explains the Newcomen Engine. When Burke enters the underground mineshaft a poster is on the wall. However, in the video the image is animated and illustrates the process by which a steam engine works. While highly instructive, a Harry Potter-style animated poster on the wall of the mine contradicts the ethos the show cultivates when Burke is presenting from a real mineshaft (or the many other places from which he narrates). The contrast between a

fake diagram and a real location creates a rhetorical tension: the fictional quality of the diagram undermines the reality-based setting the character occupies. The overall sense of the scene is one of fancy, not reality. This fiction, nestled within truths, creates a more compelling and potentially more successfully educational experience.

During the introduction of one episode from the first generation of *Wild Kingdom*, Marlin Perkins uses model objects to explain how researchers in the wild are tracking elephants in the wild. A chimpanzee in the scene, little Pierre, and has nothing to do with the episode. Marlin introduces his little friend in this and other episodes for no reason related to the content of the episodes. Rhetorically, the chimp's presence likely serves to arouse interest on the part of audience members but is distracting from the narrative of the show.

#### **4.3.1 Fabricating Narrative**

Another aspect of SAE production is the selected elements included in each episode. SAE programs are not broadcast live; they are shot, reshot, and edited to create polished final products. This means producers know the results of each narrative before and during the production of the episodes. So, the inclusion of successes, failures, explanations, and other narrative elements are all choices left to producers. Given 42 minutes to explore myths, the *Mythbusters* inevitably fail multiple times before eventually reaching a conclusion. If the point of the show is to determine the validity of a myth (the show's explicit goal) it is often unnecessary to show the failed experiments when others would more directly illustrate and prove the results. However, these additional components are necessary for a compelling narrative through which audience members can connect with characters, experience drama, and become

further connected to the material. Interviews and segment recaps are conducted by and between characters to discuss experimental results and determine what to try next.

Rather than cut out the inaccurate or unproductive portions of the show's endeavors, producers include these segments to build a cohesive narrative with all the ups and downs of a Hollywood flick. These interactions are fiction: more people than just the characters on screen are involved in the experiments and the actors often know the results of the experiment when shooting these scenes. Stylistically the program is informed by the documentary genre of television programming in that you occasionally see other members of the production crew but only as background as they are impacted by the actions of the hosts. These are scenes purely for narrative design, not shot to reflect the reality of experimental science.

#### **4.4 Conclusion**

With the narrative elements outlined in this chapter in mind, the next chapter explores the contribution three genres have made to edutainment, drama, documentary, and reality television.

## 5. EDUTAINMENT AND TELEVISION GENRE

### 5.1 Television Genre

Television draws from films, and films draw from literature. Joseph Campbell (1949) argued that we live in a world of journeys and adventures. The “hero’s journey” is a prototypical structure that many stories follow. Campbell called this journey the monomyth and it is comprised of typical characters like heroes, villains, guides, etc. as well as typical plot elements like birth, obstacle, failure, resurrection, triumph, or death. Campbell even argued that some of these basic elements are common to nearly all cultures and pervade film and television.

#### 5.1.1 Genre

One of the earliest modern uses of genre as a systematic way of addressing rhetoric was Edwin Black’s 1965 “generic criticism.” He laid out three principles: (1) “there is a limited number of situations in which a rhetor can find himself”; (2) “there is a limited number of ways in which a rhetor can and will respond rhetorically to any given situational type”; (3) “the recurrence of a given situational type through history will provide a critic with information on the rhetorical responses available in that situation” (1978, p. 133).

In his essay, *The Rhetorical Situation*, Lloyd Bitzer contributed to the development of genre when in 1968 he proposed that, “from day to day, year to year, comparable situations occur, prompting comparable responses; hence rhetorical forms are born and a special vocabulary, grammar, and style are established” (p. 13). Thus, as various rhetorical artifacts are constructed, similarities among them (derived from recurring situational variables) enable audiences and critics alike to order and categorize them into genres.

Karlyn Kohrs Campbell and Kathleen Hall Jamieson edited a book titled *Form and Genre: Shaping Rhetorical Action* as a result of a Speech Communication Association's national conference in 1976. Campbell and Jamieson defined significant form, referring to recurring patterns in a rhetorical artifact, as, "repeated use of images, metaphors, arguments, structural arraignments, configurations of language or a combination of such elements into what the critics have termed 'genres' or 'rhetorics'" (p. 3).

### **5.1.2 Film and Television**

Audiences who witness and interpret artifacts often recognize characteristics, lump artifacts into genres, and react predictably (Coe, 1994). So it is not surprising that films were, from the outset, somewhat formulaic. This led to a small number of genres in the movie industry. Stein (2012) identifies 11 film genres: comedy, drama, action/adventure, mystery/suspense, romance, western, crime, horror, fantasy/science fiction, musical, and foreign (this list is written from the perspective of the American film industry). Genres are important because they "enable us to organize film types, thereby helping [viewers] determine a film's basic structure" (p. 164). Genres also serve the fiscal interests of producers because "categorizing movies within established genres ... helps producers and distributors to market their products more easily" (p. 164). Cross-genre films and hybrid films do exist, but in general, films are not only created with genres in mind, but awards organizations in the film industry reinforce these genres.

Commercial television was born in 1941 (Brinson, 2007) and as it grew in popularity and matured it drew heavily from film but because of the constraints and possibilities of the medium different approaches slowly took root. Larger casts were possible in television and seasons

spanning 13-25 hours of programming allowed for more complex storylines. However, as the networks turned away from single sponsors towards the now ubiquitous collection of 30-60 seconds advertisements shows had to be structured around 8-12 minute segments and include enough plot twists so that each episode contained stories but also left viewers excited about watching the next episode. The major genres of television programming are based on those of films but a few variations have become the mainstays of television programming: situation comedies, dramas, sports, soap operas, and the recently popular reality television.

### **5.1.3 Television Genres.**

In an application of genre to television programming specifically, Lefstein and Snell draw on the work of Bakhtin (1981, 1986). In particular Bakhtin writes:

“...we speak only in definite speech genres, that is, all our utterances have definite and relatively stable typical forms of construction of the whole. Our repertoire of oral (and written) speech genres is rich. We use them confidently and skillfully in practice, and it is quite possible for us not even to suspect their existence in theory...[Even] in the most free, the most unconstrained conversation, we cast our speech in definite generic forms, sometimes rigid and trite ones, sometimes more flexible, plastic, and creative ones” (1986, p. 78-79).

While Bakhtin’s work was directed at speech and written acts (his work is often used in anthropological and sociological work), Lefstein and Snell use this notion to undergird their own explanation that genres encompass multiple social and semiotic dimensions (2011) and that while it is a “fuzzy” concept in many ways, discourse is generally structured at multiple levels and:

“Contexts of activity frame participants’ expectations about what genres might be relevant: For example, an utterance will be identified as a ‘joke’ more readily in a stand-up comedy routine than in a religious sermon. Conversely, participants signal to one another the relevant context of activity through manipulation of generic features: telling a string of jokes in a ‘sermon,’ or preaching by a comedian may transform participants’ interpretation of the social situation” (p. 41).

Their next statement is an important one studying edutainment in terms of television genre:

“Moreover, because genres are constituted by recurrent semiotic activity in similar social situations, such stretching (or breaking) of genre conventions can transform the cultural model of the genre itself” (p. 41).

At this point, it seems difficult to call edutainment a distinct genre. In fact, it appears to mirror the hybrid nature that Egeneldt-Nielsen used to describe edutainment theory in as much as no existing genre is adequate to describe it, but there is probably not enough evidence or consistent qualities across artifacts to outline a genre in the traditional sense. Edutainment pulls from the genres of drama, documentary, and reality television. While each of these genres have, over time, relied upon and intersected one another, there is a generic tradition in each that justifies recognizing them as cogent bodies. This does not yet exist in edutainment, especially in SAE. If edutainment is a **developing** television genre, then its changes over time are an important element as a source of education (whether that education is of substance or merely perceived) can reflect or shape the society that engages it. It would be comparably small in number and draw on styles from other genres. In particular it appears that modern edutainment draws from reality television as well. It is worth examining how these genres meet in what we call edutainment. Jason Mittell (2001) argues that:

“Texts exist only through their production and reception, so we cannot make the boundary between texts and their material cultural contexts absolute. Genres transect these boundaries, with production, distribution, promotion, and reception practices all working to categorize media texts into genres... We need to look we need to look beyond the text as the locus for genre and instead locate genres within the complex interrelations among texts, industries, audiences, and historical contexts” (p. 7).

Jane Feuer, a genre theorist says, “one of the most common characteristics that makes television genres unique is TV’s ever-present tendency to cross genre lines, such as with the combination of the crime show, soap opera, and documentary style in *Hill Street Blues*” (p. 158). In fact, since as long ago as the 1960s the combination of various genres within single television shows, even single episodes, has “confounded” television and media scholars (Woodman, 2005, p. 954).

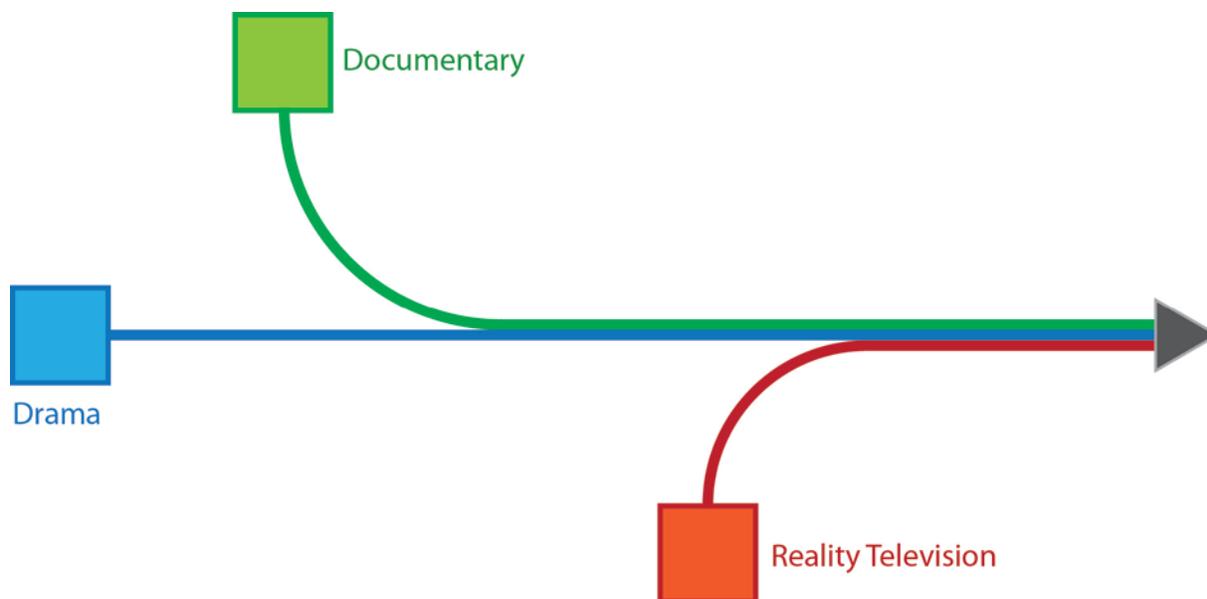
So, determining a location in the spectrum of television genres might be difficult in looking to find edutainment’s home. This fits well with the interdisciplinary nature of edutainment discussed in chapter 2. Conceptually, edutainment draws on education and entertainment. But, education and entertainment draw from any number of sources. It might seem, at this point, seductive to throw in our lot with Mittell and decentralize the text in investigating a genre of television that draws from disparate fields. But, I do not agree with his approach. Mittell’s point that the audience figures prominently in how television messages are developed is strong, but categorization of texts by their attributes is useful for illustrating from where each type draws inspiration, material, and procedure. To this end, where does edutainment figure in the genres of television and where might it be heading?

## **5.2 Edutainment Theory in Relation to Television Genre**

“Teachers now often use mainstream entertainment films as a substitute for books and sometimes as a supplement to textbooks. Teachers also use films as a source of information and as material to be critically analyzed” (D’Sa, 2005, p. 9).

The classroom cannot be separated from the culture in which it exists, and today that means classrooms cannot be treated separate from the media that learners consumer in and out of class (Weinstein, 2001). In order to fully evaluate the role edutainment strategies and tactics might play in other learning environments, it is useful to relate the generic roots of the approach to others on television. This is particularly important as creators of educational television programming (not necessarily limited to edutainment) often do not articulate the motives or goals behind their productions (Frosslund, 1991; Bates, 1988). So, in order to consider the implications of edutainment, we must consider the lineage of programming that has lead to today’s materials.

Edutainment does and has drawn primarily from drama, documentaries, and reality television, though the tactics of comedy are certainly employed (and soap operas were a home for edutainment content though the format itself is rarely invoked to create original material). I will discuss these three genres as they relate to edutainment and in the order I contend they were invoked by edutainment content producers.



**Figure 9. Drama, documentary, and reality television inform edutainment television**

### **5.2.1 Drama**

Edutainment as a formal endeavor has its roots in public service addresses and social manipulation, generally in the areas of military and propaganda and later public health. While large groups like the military created targeted cartoons, such as *Private Snafu*, and many other programs were created to teach children how to act, for example *Lunchroom Manners* starring Mr. Bungle and produced by Coronet Instructional Films in association with Cortland State University of New York's College of Education. These short films matched the style used in other programs of the 1950s and 1960s such as the famous *Mr. Wizard* show aimed at children.

A prominent approach for large scale edutainment aimed at adults early on was to use the already popular television programs, especially telenovelas in Central and South America, and insert plot elements that showed protagonists taking positive actions or antagonists taking negative actions.

For example, in these casual learning opportunities the main character might worry he has a disease and so go get tested. He might explain the importance of using a condom during sex or might quit smoking or using drugs. These early approaches relied heavily on social learning as outlined in theory by Bandura and generally involved a bad situation being corrected by appropriate actions or a protagonist being rewarded for positive actions.

The essential premise of early edutainment was to use the vehicle of drama (though as a tactic comedy was used) to deliver a piece of education. Those watching the show would hopefully relate to the situation and act in accordance in their own lives. The educational component of these shows was quite direct: *Wild Kingdom* explained how animals acted, *Mr. Wizard* taught children from his workbench in the lab. The drama in these programs was minor compared to today; usually it derived from the information itself (what would happen if you mix this chemical with that chemical? Let's find out...) or some amount of drama infused into a story surrounding the facts such as in *Wild Kingdom* when the scientists would set a trap for the animals to study and viewers had to hope it worked according to plan. The shows drew from the dramatic and serial genres of television even if the shows themselves were not particularly striking.

Using the evidence in this study and drawing from the literature, it is apparent that this trend started to change at least in the 1990s but perhaps earlier. The style and delivery in *Connections* was quicker paced and certainly had more "reveal" moments and an attention to the use of suspense, but there was no buy-in necessary on the part of audience and no drama for the only on-screen actor and host James Burke.

### 5.2.2 Documentary

This genre has been a staple in television for decades (Kilborn & Izod, 1997) but can be quite tricky to define (Zoellner, 2009) as standards and techniques have evolved rapidly as have topics deemed acceptable for television programming (Nichols, 2001). There are multiple sub-genres of documentary that share some traits. Derek Bousé outlines four types of documentary based on approach, not content: *direct cinema* attempts to reveal natural action, *ethnographic* film attempts to introduce members of one culture to members of another, *cinema vérité* tries to capture spontaneous behaviors, and *observational* cinema where audiences learn from observing rather than being told what is significant.

All of these approaches share a common thread:

“We do expect that a documentary will be a fair and honest representation of somebody’s experience of reality” (Aufderheide, 2007, p. 3). Documentaries are a “part of the media that help us understand not only our world but our role in it, that shape us as public actors” (p. 5).

So it is no surprise that the approach was picked up early on by edutainers. As the popularity of nature documentaries skyrocketed in the 1950s and 1960s the genres of drama and documentary began to collide with Disney at the forefront later joined by the BBC in England, creating entire dramatic narratives about the lives and social structures of animals (Bagust). Bousé, who proposed categorizing documentaries by style even allowed an exception for nature documentaries because of their content: “it seems reasonable to consider that [nature documentaries] may actually be more closely related to popular entertainment than to traditional documentary” (p. 121) even using the phrase “gladiatorial spectacle” to describe some content. The merger between drama and documentary is heightened in later nature edutainment programs

that “tended to place more emphasis on dramatic action, on storytelling, and in later decades on the creation of animal characters” (p. 126), where natural science programs employed other structural genres such as comedy, drama, and tragedy, with animals instead of humans.

### **5.2.3 Reality Television**

It is difficult to pinpoint the birth of reality television. The furthest back one can trace the concept is likely to the 1948 program *Candid Camera*. Game shows popular in the 1950s and 1960s might also be considered “reality” shows of a sort. But, most reality television literature places the start of our modern conceptions in 2000 (Madger, 2009; Curnutt, 2011) when the still running and still popular show *Survivor* hit the air (as an import from Europe) though Peterson does refer to this as the “(re)emergence” of reality television. Though, prior to *Survivor*, the shows *Cops* (1989), *Real World* (1992), and *Road Rules* (1995) hit the air to various levels of popularity and critical acclaim<sup>1</sup>. One factor motivating the surge in reality programming is economics; it is cheaper to produce a reality show than a scripted one (Curnutt), in fact, *Cops* was created as a cheap, unscripted alternative during a Hollywood writer’s strike (Peterson, 2007). But economics do not explain the sheer popularity of reality programming including titles like *American Idol*, *Survivor*, *Big Brother*, *Iron Chef*, the *Bachelor*, and many others. Over the last decade several sub genres have emerged including competitive shows, makeover shows, exploration shows, candid camera programs, and most notable for this study, documentary style reality shows.

The genre of reality television has become so popular and active that it has begun to consume itself. *Death Valley* is an MTV scripted show that acts as a reality show about a crew making a

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<sup>1</sup> It should be noted that as of this study, *Cops* and *Real World* are the longest running television shows on the Fox and MTV networks respectively.

reality show about police fighting vampires and zombies. *I Survived a Japanese Game Show* is a reality show about Americans competing in game shows in Japan. A style of television show (based on the popular mockumentary format made famous by the movie *Spinal Tap*) called observational programs (Thompson, 2007) uses the format and visual style of reality programs but the content is fictional and scripted. *The Office*, *Parks and Recreation*, *Arrested Development*, *Modern Family*, and a number of other popular programs use this approach. Of particular note is a show called *The Hills* which ran for six seasons on MTV and employed a mixture of reality and scripted material. A spin off of a previous MTV title, *Laguna Beach*, it was quite popular and itself generated a spinoff show called *The City* which focused on the life of another member of the cast. *The Hills* and the rest of its franchise are interesting because the producers play an active role in creating the scenarios the actor encounter and thus the line between reality and fiction is blurred to a significant degree.

There is another element of reality television fairly unique among the various television genres. Reality television often reflects a temporal awareness. This means that with tools like the Internet, viewers themselves can become part of the show. In singing competitions like *American Idol*, *The Voice*, *X-Factor*, and *The Sing Off*, audience members can vote online and with their phones between and even during episodes and play an active role in the outcome of the show. Shows like *Survivor* aren't in real time, but are shot so a consistent amount of time passes between weekly airings and final episodes and results are closely guarded secrets (often the target of massive online attempts to spoil results (Jenkins, 2006)).

### 5.2.4 Genre Bending

None of these genres exist in a vacuum. In fact, they often interact with one another. Thompson points out that the comeback of the televised documentary in the late 1960s may have been an attempt by television networks to earn back credibility lost to game show scandals and liberalizing of content. In a sense, the networks were using documentaries to provide educational content (whether they did it for PR reasons for educational ethic is a fair question) to the audience because things went awry when they relied too heavily on drama. This is at the same time that serial dramas and science fiction were entering a potent period of success so it is not surprising that documentaries and dramas, seemingly opposite endeavors, drew strength from one another. Nature documentaries were rife with drama:

“‘Science-based’ input, while still important, was already taking a ‘back seat’ to entertainment imperatives. This evolution finally reached its apotheosis in the 1950s and 1960s in Disney live action shorts and feature films ‘starring’ animal protagonists in full-blown ‘human’ dramatic narratives of loss, love and family” (Bagust, p. 218).

The two have even formed a hybrid genre known as the docudrama which generally uses the documentary approach but with a persuasive or policy-oriented goal (D’Sa, 2005). Modern reality shows frequently employ the documentary style of film but are powered by an engine of drama. Character conflict, back stories, and obstacles are engineered by the production crew of the show but are delivered in a documentary format. It is not hard to see reality television as a docudrama unfolding before the viewer (for example: *Jersey Shore*, *Keeping Up with the Kardashians*, *Kendra*, *Teen Mom*).

### 5.2.5 Significance

Having seen three of the strongest influencers of edutainment, what is the significance of this lineage? In the 1950s and 1960s most people could count the number of television channels available to them on one hand. Every television network was a generalist of sorts. The same channel that aired news on weekday evenings ran children's cartoons Saturday morning. Documentaries, dramas, comedies, sports, and news all aired on the same set of channels. Today, things have changed radically. Thanks to cable there are hundreds of channels available to consumers, and, by extension, hundreds of channels available to learners. Channels are not only delimited by general subject area but are in some cases divided down to individual sub-genres.

- ABC Family is a Disney-owned channel that caters its family friendly content 24 hours a day.
- Nickelodeon aims all of its content at children though there are portions of the evenings in which they air reruns of older, family friendly shows.
- Comedy Central shows only comedies and related materials.
- ESPN, a sports programming network also owned by Disney, has split into:
  - ESPN Classic
  - ESPN U (for college sports)
  - ESPN 3 (an online channel)
  - ESPN News

- ESPN 3D
- ESPN Mobile
- The SyFy channel focuses exclusively on various types of science fiction movies and television programs.
- Any number of 24 hour news channels including FOX, MSNBC, and CNN compete for the latest breaking news.
- HGTV and other channels like it focus on home and gardening issues.
- Food Network is the most popular of a group of channels that cover a wide ranging list of topics related to food.
- Lifetime is a network that aggressively targets female demographics.
- Cartoon Network almost exclusively airs cartoons though they are aimed at children and adults alike based on viewing time.
- AMC (originally American Movie Classics) has recently added original television dramas to its usual assortment of American movies.
- IFC, the Independent Film Channel shares those films created outside the Hollywood system.
- BET aims to serve the African American segment of the television audience.
- SOAPnet airs nothing but soap opera programming.

This list is but a small fraction of the hundreds of channels available and I list these items here to make a point: with hundreds of possible channels, each differentiates itself by style or content.

Viewers come to these channels expecting a particular type of content. Of particular note are a few others: truTV exclusively airs reality, documentary, and news programming; Fox Reality (an all reality show channel) and Nat Geo (a channel that airs materials similar to the National Geographic magazine) combined to create Nat Geo Wild; TLC (The Learning Channel) and Discovery Channel along with several other channels such as the History Channel claim to air primarily educational or learning materials such as edutainment.

But, what happens when channels such as Discovery or History or Nat Geo attempt to stay in the field of educating viewers but venture into the various formats that inform edutainment programming? Adults at home and classroom teachers alike go to these kinds of channels to find edutainment programming for personal learning opportunities or to use in classroom settings.

However, this is likely convoluted by the dynamic use of genres that inform edutainment.

For example, Discovery Communications has the explicit mission statement of not only entertaining but providing nonfiction programming that “enlightens, educates and inspires positive action.” Their portfolio of channels includes Discovery, TLC, Animal Planet, Science, Investigation Discovery, Planet Green, Military Channel, and Fit & Health. They aim to show people the “wonders of science and show how science is a vital part of their everyday lives” and do so through a number of television programs.

In a three hour segment in January 2012, Discovery aired three titles: *How it's Made*, *Dual Survival*, and *American Chopper* in a row, one after another. The first show is a dry and direct explanatory program drawing heavily from the documentary genre with no drama or character-

driven plot. The second show is a docudrama where the two hosts simulate being lost in the wilderness and must use their own survival knowledge to be survive until they are rescued. The show is a docudrama that follows these two men while they occasionally teach the audience a strategy for surviving alone in the wild. The third show is a reality program about family-owned motorcycle companies, and their employees, that follows the business and personal affairs of the characters. The show is billed as a reality program though much of the onscreen plot is in part determined as an outcome of the business relationship between Discovery and the motorcycle business.

**TABLE IV**  
EDUTAINMENT ELEMENTS OF THREE TELEVISION PROGRAMS ON THE  
DISCOVERY CHANNEL

<b>How It's Made</b>	<b>Dual Survival</b>	<b>American Chopper</b>
Low narrative density <sup>2</sup>	Medium narrative density	High narrative density
Low suspension of belief <sup>3</sup>	Low to medium suspension of belief	Medium suspension of belief
Heavily weighted towards education	Seems to balance education and entertainment	Heavily weighted towards entertainment
Draws primarily from documentary	Draws from docudrama, though more heavily from drama	Draws from reality television

<sup>2</sup> Narrative density as theory addressed in chapter 6

<sup>3</sup> Suspension of belief as theory addressed in chapter 6

These three shows represent different rhetorical strategies and different implicit goals. *How It's Made* is the most clearly educational and *American Chopper* is the most clearly entertainment-oriented of three. *Dual Survival* appears to fit somewhere in between the other two. If a viewer decided to turn on the Discovery Channel to watch something educational, they might start with *How It's Made*. If he or she continued watching television for another two hours they would have spent at least a third of their time watching a show with little educational value but lumped together with other more clearly educational programs on a channel that touts the nonfiction, educational element of its programming.

Because modern television channels differentiate themselves by genre, learners can all too easily conflate educational and entertaining programming because the various genres have been blended to inform edutainment programming. It is difficult to imagine that current reality television shows are truly nonfiction.

For instance, truTV whose slogan is "Not reality. Actuality." has this posted on their website<sup>4</sup>:

**Q:** Is truTV a reality network?

**A:** No. Our focus is on series that feature real-life situations. That is why we're using the theme "Not Reality. Actuality." for the network. The goal is to let people know that truTV programming is different from typical reality shows, which often involve contests or other highly staged events.

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<sup>4</sup> <http://www.trutv.com/about/faq.html>

The company claims to avoid contests or highly staged events different from typical reality shows. However, the most prominent shows on their channel are: *Wipeout* (a game show of contrived physical contests like obstacle courses), *Hardcore Pawn* (a reality show that follows the staff at a pawn shop in Detroit), *Lizard Lick Towing* (a reality show that follows the staff at a towing company), *Full Throttle Saloon* (a reality show that follows the manager of a seasonal biker bar), *Vegas Strip* (“This action-packed drama puts you up close and personal with the tough-as-nails police officers of the Las Vegas Metropolitan Police Department, giving you a never-before-seen look at the wildest street in the world.” – it is a reality television program), and *Forensic Files* (a crime docudrama show that examines court cases and in some instances explains the law or science behind the investigation and trials). Assuming game shows are not reality television, then *Wipeout* and perhaps *Forensic Files* are two of the only shows the channel airs that are **not** reality television programs. A characteristic of all these reality programs is that they are produced and edited. This makes a critical examiner question the authenticity of the “reality” component of the shows.

The History Channel is home to *Modern Marvels*, included in this study, but before and after many episodes a slew of reality programs air including the titles *American Restoration* (a reality show about a team of restoration experts), *American Pickers* (a reality show about individuals who comb garage and estate sales looking for goods that can be sold at a profit), and *Swamp People* (a reality show about groups of people who live in the swamplands of the southern United States. Documentary style shows like *UFO Files* have become the stuff of Internet joke and even the premise of an episode of *South Park* lampooning the attempt to conflate documentaries with conspiracy theory.

Conflating the concepts reality, documentary, drama, nonfiction, and education are common on these channels that, along with so many others, identify themselves as belonging to a type of content. Even casual learners who are paying close attention are forced to consider the merits of programs on right after one another, on the same genre-defined channel, with the same marketing strategies. As channels driven by content employ increasing amounts of reality television using the rhetorical strategies of documentary and drama, learners outside the classroom will need a sort of narrative literacy. The genres of television and their constant recombination demand it of anyone who seeks edutainment rather than entertainment.

Edutainment draws from the work of documentary traditions (Salomon, 1983; Bates, 1987; Laurillard, 1991). What does that imply for its use in classrooms with instructors, and in casual learning environments like the home? Koumi (1991; and Greg, et al, 1995) provides a compelling argument for the view that documentary style educational television programs can help increase interest in a subject area, but fail at actually teaching. The conclusion reached is that informed teachers are necessary to convert enthusiasm imparted by television into actual learning. Hopefully, teachers in classrooms are balancing these two interests in useful ways, a notion that has been considered in the teaching literature (D'Sa).

### **5.3 Conclusion**

This chapter discussed the importance of genre on television as it informs SAE. In the next chapter I consider the implication of these ideas and work towards a narrative theory of education.

## 6. NARRATIVE THEORIES OF EDUTAINMENT

To summarize the progress of this study so far: I conducted a narrative analysis of SAE programs in chapter four and chapter five explored the impact of drama, documentary, and reality television on edutainment television programming. Based the work so far, in this chapter I put forth my two theories of edutainment: suspension of belief and a dramatic theory of edutainment. After explicating the theoretical framework I will use my narrative analysis to explain and provide support for the theories.

### 6.1 Edutainment and Suspension of Belief

In the blockbuster film *Transformers* (2007) the opening sequence begins with narration:

“Before time began, there was the Cube. We know not where it comes from, only that it holds the power to create worlds and fill them with life. That is how our race was born. For a time, we lived in harmony. But like all great power, some wanted it for good, others for evil. And so began the war. A war that ravaged our planet until it was consumed by death, and the Cube was lost to the far reaches of space. We scattered across the galaxy, hoping to find it and rebuild our home. Searching every star, every world. And just when all hope seemed lost, message of a new discovery drew us to an unknown planet called... Earth.”

This opening narrative serves two purposes. First and most simply it provides a back story and context for the rest of the film. But, more importantly it provides understandable facts and a framework in which the audience can understand and accept unbelievable facts that will be crucial to the movie. Consumers of fiction materials remain undisturbed when confronted with unrealistic scenes or small logical breeches in the plot. “Instead, they show considerable tolerance towards lacking realism and plot inconsistencies” (Boecking and Wirth, 2009, p. 2).

The term typically used for this concept is suspension of disbelief (Coleridge, 1979; Holland, 1967; Slater and Rouner, 2002). “The term signifies the suppression of certain information by the media user, meaning a user does not scrutinize the content of a fiction story, but engages in it” (Boecking and Wirth, p. 2). With roots in the work of René Descartes (Gilbert, Krull, Malone, 1990) this concept’s use within communication research is not homogeneous (Busselle & Johnson, 2004; Busselle, Ryabolova, and Wilson, 2004; Shrum, 2004; Slater and Rouner, 2002) but the underlying principles are clear:

- Audiences are willing to accept non-true statements for the sake of a fictional narrative
- Audience members are willing to overcome a small sense of cognitive dissonance for the sake of a fictional narrative
- Audience members must know the narrative is a fiction (Holland; Iser 1985)
- Audience members who decide to accept the fictional world perceive it in the same way as they do the real world. (Eco, 1994 as referenced in Boecking and Wirth)

Take, for example, the *Transformers* movie. It is a story about aliens born from an “All Spark” which is a cube that floats through space, visiting planets, and turning machines into living beings. No one knows where the All Spark comes from (as the narrator is quick to point out) but its powers are well respected. The film tells of the robot aliens and their voyage to Earth as part of a centuries old civil war. Humans are now caught in the middle and must work with the good ones to defeat the evil ones or Earth will be destroyed. In the end, a mix of human spirit and technology triumph over the destructive aliens.

The commercial success of *Transformers* is dependent on audience members who are willing to be told lies in order to create a compelling and cohesive story. The audience knows there likely is not an All Spark and the chances of being caught in a robot civil war are unlikely. But the story is compelling because people who watch the movie know there are falsehoods in the film and that they are there for entertainment purposes. In the case of non-fiction, people refuse to believe what they think is untrue; a single lie can destroy a story. But in this case, audience members are willing to suspend their disbelief for two hours in order to experience a narrative that would be impossible if writer and viewer were confined to the laws of reality.

Storytellers accomplish this in fiction by grounding the back-story in truths audience members are familiar with. *Transformers* explains mechanistic robots; Superman garners special powers from our yellow sun; Batman requires the death of rich parents to fulfill his superhero duties; the X-Men are the result of genetic mutations and government experiments; the cyborgs in *Battlestar Galactica* were created by humans; Frankenstein used newfangled electricity and necromancy; *Star Trek* and *Star Wars* were highly dependent on technology as a narrative device (*Star Trek* often relying on real human history); and even the *Planet of the Apes* goes out of its way to employ social conventions human viewers can relate to. All of these fictions rely on facts. It is by grounding the stories in events or facts that *are* relatable to an audience that authors are able to sell the events or facts that will *not be* relatable to an audience. Storytellers tell lies in order to employ narrative for entertainment value. They help the audience suspend their disbelief.

## *Star Trek* as an example of Suspension of Disbelief



**Figure 10. Suspension of disbelief illustrated**

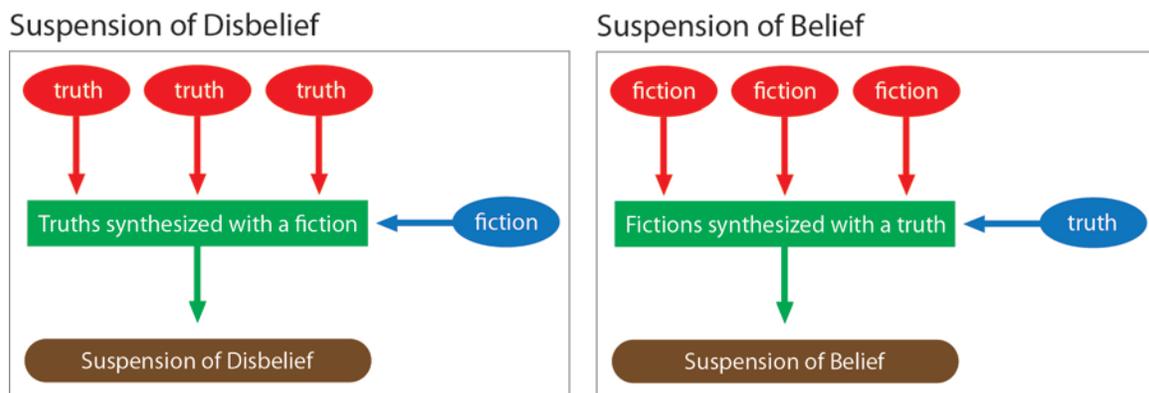
The reason suspension of disbelief is important is because entertaining an audience often requires stepping outside their comfort or knowledge base in the form of fictions. However, cognitive dissonance will prevent consumers from readily accepting fictions. But, when people go into an entertaining experience willing to suspend disbelief cognitive dissonance can be overcome and the audience members will accept the individual fictions within the context of the entertainment experience. After the experience, audience members continue to understand reality according to the pre-entertainment knowledge. So, audience members relinquish the lies after leaving the theater and readers no longer accept the fictions after closing their book.

## 6.2 Theory of Suspension of Belief

After analyzing the SAE in this study I propose a theory of edutainment built on a rhetorical strategy complimentary to suspension of disbelief. In SAE storytellers tell relatable lies so that audience members will believe new truths. Put simply SAE uses white lies to make new facts easier to believe. My first narrative theory:

Whereas entertainers rely on suspension of **disbelief** to have audience members use facts to adopt fictions, edutainers rely on suspension of **belief** to use fictions to have audience members adopt facts.

Suspension of disbelief in fiction is built on a system of basic truths allowing for lies while I am concerned with SAE's system of small lies allowing for the acceptance of new truths.



**Figure 11. Suspension of disbelief compared to suspension of belief**

The power of suspension of disbelief is that in a fiction producers supply many small truths to the audience so that when they start to supply untruths the audience members need only make a small leap to incorporate the new information and create a compelling, and believable, fictional world with internal consistency. The more truths the producers supply, the more grounded in reality the fiction will be. The more grounded this fictional world, the easier it is for audience members to accept the differences and spend time engaging the fictional world as opposed to questioning it. Audience members demand narrative consistency within the fictional world, but not fidelity with reality. And when the audience members leave the fictional world they bring home with them a small bit of the fiction. If the entertainment was a positive experience for the audience, members take away a willingness to engage the material on its own terms. For example, friends having just viewed the science fiction movie *Iron Man* (2008) can argue whether the protagonist, Tony Stark, should have used his invention to make weapons or peace. The invention itself is a fiction and does not exist in the real world, but in the context of the film there are enough truths the friends can relate to that they easily assimilate the rules of the fiction to think about how it might work in reality.

I contend that edutainment turns this on its head by providing a series of small narrative untruths that audience members can relate to so that once the edutainment activity has ended, audiences take a bit of truth away with them. Put another way, entertainment convinces you to entertain a lie by providing relatable truths where edutainment convinces you to entertain a truth by providing relatable lies. Edutainment requires audience members to temporarily suspend some of their beliefs for the sake of taking new away new permanent truths.

If the success of edutainment is measured by whether audience members learn truths, then it makes sense that the rhetorical strategy of edutainers will be to maximize the number of truths

accepted and/or the degree to which those truths are accepted. After conducting the narrative analysis it seems that the rhetorical strategies of edutainers appears to be just that: the use of narratives that employ small untruths for the sake of audience members retaining new truths.

### **6.3 Dramatic Theory of Edutainment**

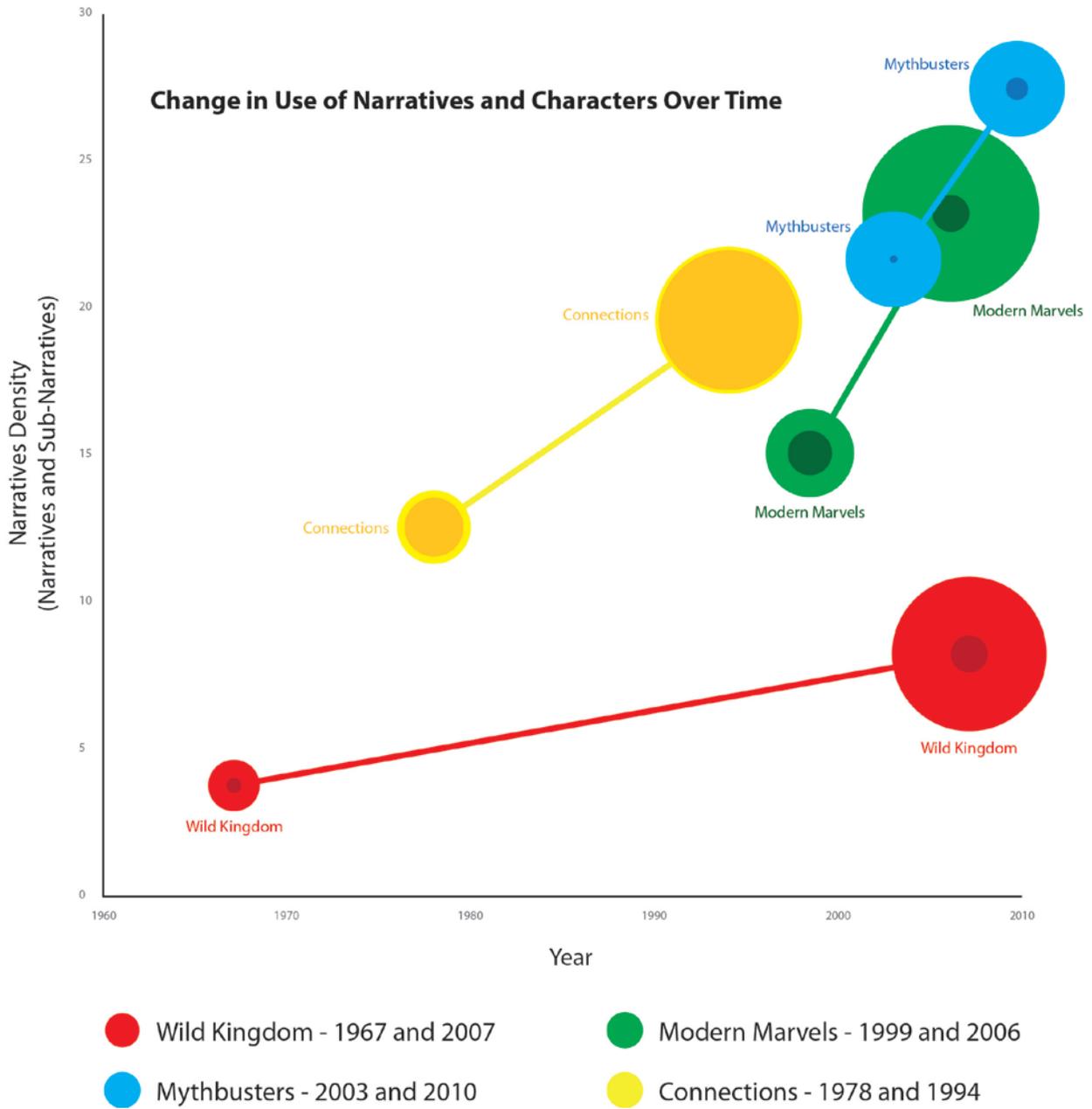
Based on the results of my narrative analysis I make several observations:

1. Over time, SAE programs tend to increase narrative density (the number of narratives and sub-narratives within a given period of time).
2. Over time, SAE programs increase the number of characters they include.
3. Over time, SAE programs increase the use of dramatic rhetorical tactics to increase a sense of drama and conflict.

My second narrative theory:

Edutainment programming relies on rhetorical elements designed to introduce **drama** in the educational material, especially numerous narratives and characters to create compelling stories. Further, over time, edutainment becomes increasingly dramatic employing narrative devices to induce tension, emotion, and surprise while additionally relying on **production styles** that replicate the approaches of **Hollywood**.

As illustrated in figure 12 the narrative density and number of characters in narratives appears to increase in SAE programs over time.



**Figure 12. Change in use of narratives and characters over time**

As a spot test of this theory I selected two additional SAE programs, not a part of this study, to compare to one another. The first, from 1979, is *The Secret Life of Plants* which investigates the link between plants and people. The second, from 2009, is *Inside the Earth* which teaches about the physical structure of the Earth. This spot test is intended to illustrate the difference in narrative approaches between two pieces of SAE thirty years apart. *The Secret Life of Plants* included 9 narratives and 10 characters. While *Inside the Earth* had the same number of characters, it was built from 19 narratives. The second program, the more recent one, relies more heavily on narratives and sub-narratives.

#### **6.4 Two Theories in Tandem**

The two ideas I outline in this chapter can operate independently but likely work better in tandem. For example, there is likely a correlation between suspension of belief and dramatic events in SAE. So, for edutainers to employ suspension of belief they likely have to increase the dramatic nature of their programming. To this end I predict that edutainment will proceed down this line of **increased dramatic elements** and **increased narrative density** for some time.

In chapters two and four I explored the potential for edutainment and entertainment to converge in terms of rhetorical strategy. Having conducted this narrative analysis I am more convinced than ever that the rhetorical strategies of edutainers are moving towards those of entertainers and that their respective tactics are already similar. I also predict that the **rhetorical strategies of edutainers** will likely continue to **converge on those of entertainers** in Hollywood and will continue down this path until entertainment and edutainment **mirror one another past the point of individuation.**

## **6.5 Constraints**

The theories I outline in this chapter are potentially useful but also carry with them constraints.

First, it would be hard to prove that my selected episodes are truly representative of all edutainment.

I carved out a specific subset of edutainment, which I call SAE, and it seems likely that many of the traits I identify in this study belong to edutainment more generally. But, without a larger study it would be difficult to prove this.

Second, rhetorical criticism is an inherently subjective approach. My insights might be different than, or even contrary to those of another critic. Other critics employing my approach would be helpful as would investigators employing different methods to ask the same questions as me.

Third, while my theories are predictive they do not, themselves, suggest an ethic or policy.

While additional research can help determine the practical efficacy of approaches outlined in my theories, there are clear implications for educational theory in and out of the classroom. The next chapter will address how formal pedagogy and casual learning are affected by these trends.

## **6.6 Conclusion**

In the next chapter I set out to apply my narrative theories of edutainment with an eye towards genre as outlined in chapter five and casual and formal learning opportunities for adults. It will be easier to see the implications of my predictions in this light and the theoretical framework I construct in this chapter can be addressed through a notion of narrative literacy.

## 7. APPLICATION TO EDUCATION THEORY

It is likely impossible to separate edutainment from education and as such it is difficult to separate the narrative strategies in edutainment from those in other modes of education. With the narrative theories I have outlined in the previous chapter, it is important to consider the critical implications to learning more broadly.

Starting as early as preschool it appears that narratives and storytelling skills can be used to improve the learning of children (Spencer and Slocum, 2010). In fact, the ability to construct and share narratives is considered an important part of determining the development of young children (Heilmann, Miller, and Nockerts, 2010). Older students increasingly rely on narrative structures to better learn material. One pair of researchers (Atkinson and Mitchell, 2010) argues that narratives are an important part of pedagogy because intentionally creating chances for students to challenge stories undergirding their worldviews are indispensable in engaging them. Watson (2009) goes further arguing that students must grapple with narratives because they are sense-making tools.

If narratives are so important to learning then the power to construct and manipulate them would serve instructors well. Conversely, understanding and being competent in reading narratives would well serve learners. To this end, I assert that “narrative literacy” is a necessary competency for successful learners and consumers in not just formal education, but also the increasingly ubiquitous area of casual learning. I use the phrase “narrative literacy” in much the same way scholars use the term media literacy. First, it is an “umbrella concept ... characterized by a diversity of perspectives and a multitude of definitions” (Koltay, 2011). Vivian (2011) defines media literacy as “possessing the knowledge to be competent in assessing messages

carried by mass media” (p. 6) while Sterin (2012) describes the concept as “the identification, study and analysis of all the processes involved in creating and consuming media content across all media types and platforms” (p. 10) drawing heavily on the concept of media framing. While these are good conceptions I like best the way Stanley Baran conceptualizes the notion of media literacy: “the ability to effectively and efficiently comprehend and use any form of mediated communication” (2012, p. 18). Baran goes further saying that to “fully understand *media* literacy, we must understand why literacy, in and of itself, is important.” Stuart Ewen (2000) points out that literacy was important for an informed populace and “literacy was about crossing the lines that had historically separated men of ideas from ordinary people, about the enfranchisement of those who had been excluded from the compensations of citizenship” (p. 448). I especially like the way Baran’s and Ewen’s notions of literacy intertwine and create a compelling argument for why literacy (in various forms) is necessary for an educated and competent society. This seems like a clear argument for literacy as a necessary component of education.

Baran draws on the work of Art Silverblatt (2008) to outline several important elements of media literacy. Though there are 8 elements outlined in his text, I think four are particularly important: 1.) a critically thinking audience; 2.) an awareness of the impact of media on the individual and society; 3.) an understanding of media content as a text that provides insight into our culture and our lives; and 4.) the understanding that there are multiple points of access to media.

Building on the notions of media literacy outlined above, I conceptualize narrative literacy as: the ability to effectively recognize, comprehend, decode, and internalize narratives. My goal in employing a notion of narrative literacy is to show how narratives constructed, conveyed, and consumed in educational contexts leave an indelible mark on teaching and learning. In this study

I explored how they are used in edutainment. Now I will generalize the strategies and tactics of edutainers and show how we can re-appropriate them in other educational contexts and evaluate the impact of pedagogical communication in edutainment and beyond.

### **7.1 Modes of Learning**

There are two primary modes of learning that are particularly important in a highly mediated society such as the United States. The first is formal education. This is the traditional mode of classroom-oriented pedagogy. In this mode teachers and instructors are considered authoritative (either by knowledge, title, or social influence) and students are considered subordinate learners. There is plenty of educational literature (Long, 2004; Wlodkowski, 2004; Conti & Kolody, 2004) indicating that, especially in adult learning environments, learner-centered pedagogical strategies work well. These strategies may not conceive of students as subordinate in the way a fourth grader is subordinate to his or her teacher, but it would be hard to show that an adult in a vocational school, college, or university is considered on par with the instructor. The faculty set the agenda and assesses work even if they more heavily weight input from students.

The second type of education I wish to discuss is casual learning. Casual learning is a phenomenon whereby individuals learn material, often passively, by consuming media outside of the framework of formal education described above. While there are numerous vectors for passive learning, common ones include websites, films, television, radio, museums, mobile media<sup>1</sup>, book clubs, social learning organizations (like unclasses.com), and other outlets for information ranging from hobbyist to professional insider. I particularly like the description of

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<sup>1</sup> Since 2009 Stanford University offers a course in “The Design of Technologies for Casual Learning”

casual learning offered by an undergraduate student in a 2011 course at Stanford University covering this subject:

“I see casual learning as an experience in which the learning potential of the present moment is activated, whether that moment is standing in line, exploring a museum, hiking through the woods, or sitting in class. Key to this idea is that the learning potential is defined by the learner’s experience of that moment. It is influenced by the external setting, but also the learner’s mindset, needs, capabilities, and desires. I see this as a contrast to the way learning is often structured in school, where what should be learned is defined and determined by others. From a casual learning perspective, the learning potential for two people sitting in the same class or standing in the same line may be different, and is dependent on what each wants to learn, needs to learn, and is capable of learning. Casual learning tools, then, should seek to increase opportunities for learners to uncover, activate, or enhance the learning possible for them at any moment” (Diy, 2011).

Formal and casual learning are not completely separate entities. In Australia authors Percy and Beaumont (2008) explored the problems universities face when they introduce casual learning strategies into the classroom. Another study (Rennie and Williams, 2006) showed that casual learning environments like museums could improve the ability of adults to communicate about science in formal settings. The original notion of casual learning opportunities in education literature probably starts with Coolie Verner in 1959. Verner established the separateness and relationship between the learner and the agency providing the educational opportunity. In contemporary terms Verner’s work in outlining various “methods, techniques, and devices” helps me distinguish between the approaches of the classroom and television.

Conti and Kolody (2004) propose a method of selecting teaching strategies based on Verner’s work. In particular is the significance they attach to the type of student learning; of the three they identify the most notable in casual learning environments are the “engagers” who do not chart learning courses ahead of time (the “navigators”) or are problem oriented (the “problem

solvers”). Engagers are interested in learning primarily for the sake of learning. Edutainment as covered in this study appears to be aimed at this segment of the adult learner population. Conti and Kolody also point out that an important aspect of selecting a best teaching method is recognition of the particular teaching situation.

Casual learning turns the situation on its head: whereas traditional situations are defined by the constraints placed on the teacher and learner, casual learning is where the learner selects the learning type and times his or herself from a variety of pre-determined options. For example, students in a college class show up at the time and place determined by the school and an instructor teaches what he or she can in the given timeframe and with the resources at hand. With casual learning, the teacher (producer of the content) creates and provides the content along with alternatives (or economic competitors) and learners select from these and consume the material at their leisure. With the content of casual learning opportunities not overseen by accrediting bodies, nor regulated by a governing body the choices adult learners make in selecting their learning vectors are incredibly important.

## **7.2 Applying Narrative Theory to Learning Communication**

Casual learning represents a powerful departure from the traditional learning venues that inform most of the education of members of society. This study of SAE has highlighted significant aspects of the narrative rhetoric in edutainment, an important slice of the casual learning landscape. Martin Heidegger (1977) discussed the difference between a thing and the essence of the thing. Just as he says that we are delivered to danger when we take a neutral stance toward the essence of technology, so too are we in danger if we simply gloss over the role of narrative in

the educational process. What I seek to do now is take what I have learned from the study and apply it to the broader field of learning rhetoric (an area that includes pedagogy but is not limited to it).

### **7.2.1 Theory 1**

Let me start with the application of my first narrative theory from chapter six. If edutainers rely on suspension of belief to use fictions in order to have audience members adopt facts then at least at some level there is an element of lying going on in edutainment programming. The ethos of education has traditionally been one of transparency, directness, and above all truth. There has often been a political component to education (such as the hot topics of evolution and climate change in science classrooms) but it has generally been an argument over what the truth is, and not over whether to teach the truth. But what happens to education when that ethos is undercut, even with the best intentions? Consumers of media content read material according to their interests (Harkin, 1999). This means selecting which texts to attend and how to process them. If the small lies become the salient aspects of edutainment it is possible that learners will be drawn to those sources over others even if the information is inferior to alternatives.

This effect can go even further since what learners take away from edutainment can transcend simple facts. If SAE demonstrates a given piece of knowledge in a positive way then learners may take the information to be positive. The same is possible in reverse, learners who learn information presented in negative ways can take a negative attitude towards the information (Blood and Phillips, 1997). This specific application of agenda setting theory is sometimes known as the “media malady effect” (Griffin, 2003) when the correlation between information

and consumer is a negative one. Further, there is a possible “agenda-melding” (Shaw, McCombs, Weaver, Hamm, 1999) that occurs when groups of people rally around a given cultural phenomenon. This can be most readily observed in the literature of fandom (Coppa, 2006; Baym, 1998; Stenger, 2006) but is exacerbated in the digital age where online social networks making joining an interest-based community easy (with reduced barriers to entry) and therefore more likely.

While there is nothing wrong with being a fan or organizing with other fans, this kind of sectarianism (Star Wars vs. Star Trek, original Battle Star Galactica vs. new Battle Star Galactica, old Trek vs. new Trek, or even allegiance to a single channel or production company over others) could lead to negatively biasing decisions made by adult learners in casual environments and force either uneducated decisions, or perhaps worse, decisions about which learning opportunities to take even if the learner is aware of the drawback but engages an inferior source for reasons of allegiance rather than substance. It is not difficult to imagine a scenario in which a potential adult learner watches a show because it is on a channel he or she appreciates even though it is inaccurate or insufficient. The Discovery Channel and the History Channel often cover overlapping topics but in divergent ways.

Another potential problem is that most of education has to do with dealing with missing information and trying to fill in the blanks. Uncertainty and the anxiety associated with incomplete knowledge is a part of learning. For adult learners, approaching a new subject requires, to varying degrees, that people make peace with not having immediate access to entire bodies of knowledge. When people ascertain and incorporate various pieces of information and try to turn an amalgam of data into a coherent image of reality via rhetorical means this can be called a “narrative quest” (Hauser, 2002). These narrative quests seek to fill gaps and bring

closure to experiences and, more importantly here, stories. Consumers of entertaining stories want gaps explained and stories to have neat conclusions.

The idea of narratives in a learning environment having the same level of closure as a Hollywood film without relying too heavily on falsehoods seems almost preposterous especially since it appears that the suspension of believe is a systematic approach on behalf of edutainers to infuse stories with extra information to fill gaps and provide closure. To determine whether this is a threat, consider the difference between *narrative fidelity* and *narrative probability*. Probability refers to the coherence of a story. This is relatively easy for adult learners to evaluate since they only need to compare various elements of the narrative to one another; the truth of each element is of little importance. However, fidelity refers to whether the narrative “rings true with the stories the audience members have known to be true in their lives” (Hauser, p. 196). This element of narrative literacy isn’t as important to the consumers of entertainment as there is little punishment to an incorrect assessment on the part of audience members. But, in the case of edutainment where audience members attribute some level of authority and accuracy to the information presented it is likely more difficult for casual adult learners to distinguish between facts being taught and the untruths added for the sake of suspension of belief. The threat here is that as entertainers use suspension of disbelief there is little risk, but where edutainers rely on similar approaches to engage in suspension of belief they run the very real risk of misinforming the audience members who do not have the information necessary to evaluate the fidelity of the narratives presented.

For instance, if an adult is watching an episode of *Star Trek*, it is reasonable to assume the explanations of physics and space travel might include items that are untrue. Consumers of science fiction assume the producers will use poetic or literary license to mix truth with

fabrication. When faced with a statement that runs contrary to the viewers' own experiences (or falls within a gap in the viewer's knowledge) which would equate to narrative infidelity, the audience member has little problem assimilating this information into the fictional reality of the show. *Star Trek* is a sandbox where science fiction writers and producers can say things that are untrue because viewers will suspend disbelief: narrative fidelity is not as important as narrative coherence which is easier to maintain when the writer is allowed to lie to fit his or her vision.

Contrast this with edutainment where there is an assumption on the part of the audience that the information portrayed in the programming is primarily based on truth. There would be little "edu" in edutainment if the audience could not trust that the information being conveyed was fact. But, with suspension of belief there are times where the creators of edutainment tell lies for the sake of entertainment. This can lead to significant confusion if the audience doesn't know which items are true and which are fake. In science fiction there is no penalty for lying, but there is in edutainment because the goal of the show is undermined. Fiction is not a slave to narrative fidelity in the same way non-fiction is. But, when edutainment departs from fidelity it can create either confusion or unknowing ignorance on the part of the audience because they might not be sure whether to question the offending claim.

This effect could go even further. In the hands of a mischievous edutainment creator, the very same tools that ostensibly teach could instead promote a political or commercial agenda. There is nothing new about mass media being used to sell an agenda, but as the line between entertainment and education is increasingly blurred as described in the previous chapter, the likelihood that commercial and political influencers could use propagandistic strategies under the cover of edutainment increases. I use the word propaganda, and not merely persuasion, because a central tenet of persuasion is choice. Persuasion is about presenting and discussing choices

(Weaver, 1985) while that rhetoric which limits free choice is a type of base or hurtful language. While propaganda has had many denotations and connotations over the years it generally means the manipulation of people through dishonest means or by playing to the psychological rather than rational motives of an audience (Pratkanis and Aronson, 2001). It is in the same vein as Socrates' claim that rhetoric is merely flattery used to manipulate (Plato, 1988).

If ever there was a vehicle for inculcating an agenda in a large segment of society, it would appear that edutainment may serve that purpose well. While all mass media have the ability to serve a propagandistic message, edutainment has additional attributes making it ripe for target. First of all, it is increasingly popular. Second, it is increasingly accessible. Third, for reasons outlined above there is an assumption on the part of audience members that the information contained within the programming will be true and, for the most part, unbiased. Finally, the suspension of belief I theorize would create a window of opportunity to implant an idea that ran counter to the audience members' world view because of the weaker sense of narrative fidelity and openness to new ideas. Edutainment is a means to overcome cognitive dissonance in mass media because those who seek it out are inviting new information they were not previously privy to. A mass media format with barriers to entry that are dropping, and an audience open to new ideas who may not challenge new information as fully and therefore serves as an antidote to cognitive dissonance would be a powerful and much sought after tool.

I am not the first to recognize this potential. Fox news recently accused *The Muppets* and *Sesame Street* of social engineering aimed at children<sup>2</sup>. Politically conservative pundits have, at times, called out National Public Radio and Public Broadcasting for the use of liberal messages

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<sup>2</sup> While I do not personally agree with their point, there is enough internal consistency in the claims that it makes them at least worth contemplating.

in their edutainment and news programming. Fox News has also accused the History Channel of promoting Marxism aimed at kids. Members of the Discovery Channel community message boards have raised the question of whether the Discovery Channel broadcasts pro-American shows. Conservative pundit and politician Mike Huckabee produced a cartoon series designed to teach children about American history. His cartoon series came under fire for being pro-American and pro-Republican propaganda aimed at children in elementary and middle school.

Next, I will apply my first theory to traditional learning. In the classroom the tools of edutainment would seem to have a useful role. They make material engaging and interesting. Further, the instructor or facilitator has the ability to take the confusion sometimes created by edutainment and clarify or correct per the feedback of students. Narrative functions to draw parallels between the story being told and the previous experiences of listeners (Hauser). The more the story being told resembles or aligns with previous experiences of listeners the more likely it is that listeners will believe the story and engage in a desired response. Textbooks use this approach when they use examples that students are likely to have lived themselves.

Teachers in classrooms draw from experiences of their students or assign work that asks them to apply real life experiences to in-class projects. The objective of these approaches is to increase the likelihood of students understanding and appreciating the materials by aligning the in-class narratives with those lived out by students.

This creates a great opportunity to introduce edutainment into the classroom curriculum because teachers can motivate and focus students. But, if an instructor were to incorporate outside edutainment sources such as SAE he or she might be introducing another element: rewarding failure. In each of the shows *Mythbusters*, *Connections*, and *Wild Kingdom* failure is not treated as a negative outcome (this rarely seems to occur in *Modern Marvels*). For example, in

*Mythbusters*, one episode covers myths surrounding the destruction of a piano by fire and the explosion of a bathtub caused by chemical reactions. During the course of the episode the Mythbusters are unable to recreate the conditions of the myth and admit they must take some liberties with recreating it. However, a common component of the show is the dazzling destruction (typically explosions) of items on screen. So while they could not destroy the piano per the myth, they simply blow it up. The same goes for the bathtub, they simply place a bomb in the tub while the gang jumps up and down with joy at having experienced the big bang.

In the show's pilot they are unable to replicate the actual myth about a car with jet engines attached (an explicit goal of the show) so they are forced to cut corners changing the tools and experimental variables. But, they still use the results of the experiment to draw conclusions about the veracity of the myth: they did not test the myth to their own standards of accuracy but consider their work a success. In the end, even after the car fails to operate correctly on the first try they once again violate their own standards of fidelity to the myth in order to launch a rocket car off a ramp and celebrate with joy at their "success."

Take this example from the exploding piano episode (it didn't explode):

**Narrator:** "Hold on. Aren't they forgetting something?"

**Carrie:** "The myth that a piano will explode in a fire is completely busted. But now we want to replicate the results. So we're gonna blow a piano up anyway."

**Grant:** "So, J.D. the regular piano in the fire, kind of sucked. Didn't explode. But we do have a backup piano that we can explode. What do you have for us?"

**J. D.:** "What I think you need is the Mythbuster Concerto in C4."

If one of the traditional beliefs of edutainment is correct, that Bandura's Social Learning Theory motivates people to act in accordance with what they see rewarded in social or mediated settings,

then one of the big lessons a learner might take away from these shows is that you can cheat, close is good enough, and if you fail you can still be rewarded. And while each episode starts with a warning about safety, the shows always include safety personnel, and before any dangerous activity there is a scene showing responsible preparation, the characters often flaunt safety in the actual execution of the experiments:

“I don't think our death ray is working. I'm standing right in it, and I'm not dead yet.”

During an experiment involving quicksand:

“Drown, you bastard!”

With a cloud of gas coming directly at the team:

**The team:** “Wait, wait, wait. Oh my God. Poisonous gas.”

**Narrator:** “While the team holds its breath, let's check out the replay.”

In an episode about exploding compact discs spinning at high rates, the target of the myth is 30,000 rotations per minute. When that doesn't get them the result they want:

“None of those tools were suitable so they purchased a tougher, faster router to direct drive some of the CDs.”

### 7.2.2 Theory 2

The second theory I proposed in chapter six was that edutainment programming relies on rhetorical elements designed to introduce drama in the educational material, especially numerous narratives and characters to create compelling stories; edutainment becomes increasingly dramatic employing narrative devices to induce tension, emotion, and surprise while additionally relying on production styles that replicate the approaches of Hollywood.

If this is true, what effect does the increasing narrative density of edutainment have on casual learners? Brian McHale (1998) used the phrase “weak narrativity”, adapted from Vattimo & Rovatti’s (1988) notion of “weak thought,” to describe plots with many smaller sub-narratives. Though typical of humorous plots, I think this idea has the same effect on edutainment: complex narratives increase the entertainment component and diminish the educational component of edutainment. Therefore, my theory would predict that increased narrative density in edutainment would, overall, diminish the quality of education. If true, this raises a dangerous red flag. The graph on page 69 illustrates that narrative density appears to be increasing over time. This might imply that the quality of education from SAE programming is dropping. If so, casual learning opportunities might become a nasty trap where adult learners are applauded socially for taking the time to enrich their lives but at the same time are enjoying high production values while learning less and less. If true, this means SAE is doing society a disservice.

There is another byproduct of these narratives. In an episode of *Mythbusters* Adam and Jamie test methods of evading a breathalyzer test. The pair drinks alcohol and then a member of the San Francisco Police department tests their levels of intoxication. The first test is of Adam who, after four drinks, exclaims “it’s one in the afternoon and I’m lit.” He has trouble smoothly

rolling his chair to the testing table ends up blowing a 0.03 blood alcohol level. Because they were trying to get to 0.08 (California's legal limit for drinking) everyone on camera is laughing at how easily Adam is intoxicated at such a low level. Even the officer and department staff laugh at it, including one woman who holds her hands up in a driving motion as if to say you are a drunk driver.

I have to admit I laughed the first time I saw this. The show's producers did a good job of building up to a big reveal that turned out to be comically small. Humor can be used to make the learning experience more conducive. But, there is another possible side effect of this scene.

Casual learners might glean from this any of the following:

- A person can feel drunk but still be legally allowed to drive
- At least this particular police officer might not take the issue of drinking and driving seriously (Jamie says to Adam "the officer says you have to drink more")
- Alcohol consumption and the law is not a serious matter

A large portion of adult learners probably see this as simply a humorous part of the episode, but it is not difficult to imagine a learner who sees this and takes away one of the thoughts I have listed or another of his or her own. While it doesn't indict all of edutainment it does raise an important issue: when edutainers rely on the strategy of narrative density (additional narrative elements) for the sake of entertainment they add additional vectors for re-interpretation or mis-interpretation of the material. On the continuum of entertainment to education that edutainment programs reside on, SAE programs weighted heavily towards education would have ignored this

moment and skipped directly ahead to the part of the show where Adam and Jamie were intoxicated reporting how many drinks it took to get there. The show isn't about how to get drunk, it is about actions to take once you already are. So it was for reasons of entertainment that the producers included this scene in the show and nudge the program closer to the entertainment end of the spectrum. There are likely many elements of entertainment that can be benignly introduced to edutainment programs. But anytime edutainers add additional entertainment they invite the kinds of interpretations I list above that might run counter to the message the show is trying to disseminate, or simply counter to the social good.

Now I will apply narrative density to the classroom setting. Textbooks and teachers try their hardest to represent the most information in the least amount of time. If an instructor chose to employ the kinds of rhetorical strategies in his or her class that edutainers use in SAE, one byproduct might be increased information density. For an example of just how densely packed SAE shows can be, below is a diagram of one segment of an episode of *Modern Marvels*. It is taken from the episode about Spirits (alcoholic drinks such as whiskey and rum). Using the Scene Function Model outlined in chapter three and my view of narratives and sub-narratives articulated in chapter six, the illustration (figure 26) breaks apart a primary narrative of the episode *Spirits*.

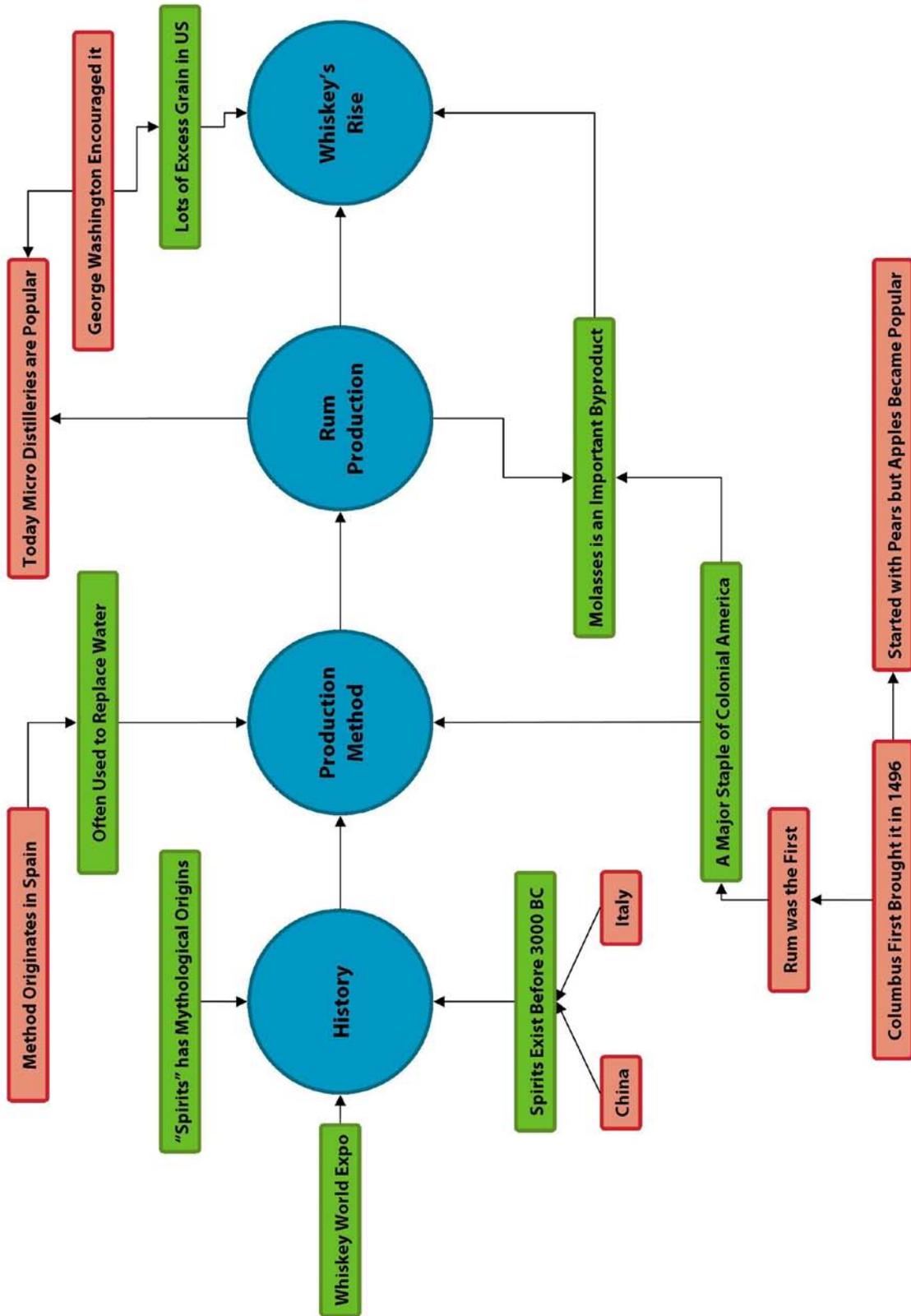


Figure 13. A diagram of the narratives and sub-narratives in the first segment of spirits

The primary narrative of the history of spirits is broken into four kernel scenes (blue circles). These are the linear, driving scenes without which the primary narrative would not be coherent. They are supported by an interconnected web of scenes. Green and red scenes are sub-narratives. They could be removed and the major narrative would remain intact, though the primary narratives might contain less detail or utility. Items marked in red are considered “throw-away” items. These do nothing in particular to advance the story; instead, they provide narrative content, not narrative structure. Removing the items in red would leave the primary narrative intact.

The amazing part of this diagram is that it only represents approximately six minutes of television. And, the chart by no means represents all the information contained in the primary narrative about the history of spirits, simply the narratives and their topics. Imagine this much material presented in six minutes to a group of adult learners. It is impractical to assume they would be capable of storing, recalling, and applying this much information (not to mention the remaining 36 minutes of the program) on a test or paper without significant time to reflect and digest. In my own experience as an adult educator, the amount of information crammed into some of these SAE episodes would be nearly impossible to cover in the same amount of time using the traditional methods of the adult learning classroom.

This is where the instructor steps in. It would be his or her job to help unpack the complex narratives and help the students to understand them better. This is nothing new, the facilitator or teacher is always expected to help students understand complicated ideas. In this case, however, if teachers spent the necessary time to go back through the narratives densely packed into an SAE program they showed in class or asked students to watch outside of class, it might be difficult to assimilate the information back into a format congruent with the rest of a course’s

overall rubric or pedagogical strategy. To this end, it might be seductive for the instructor him or herself to skip the external edutainment source and employ those tactics in their materials.

Whether one could translate directly the strategies and tactics that narrative rhetoric provides edutainers is difficult to predict. I address this issue in the next chapter when I suggest a study to address the question.

### 7.3 A Two Dimensional Scale

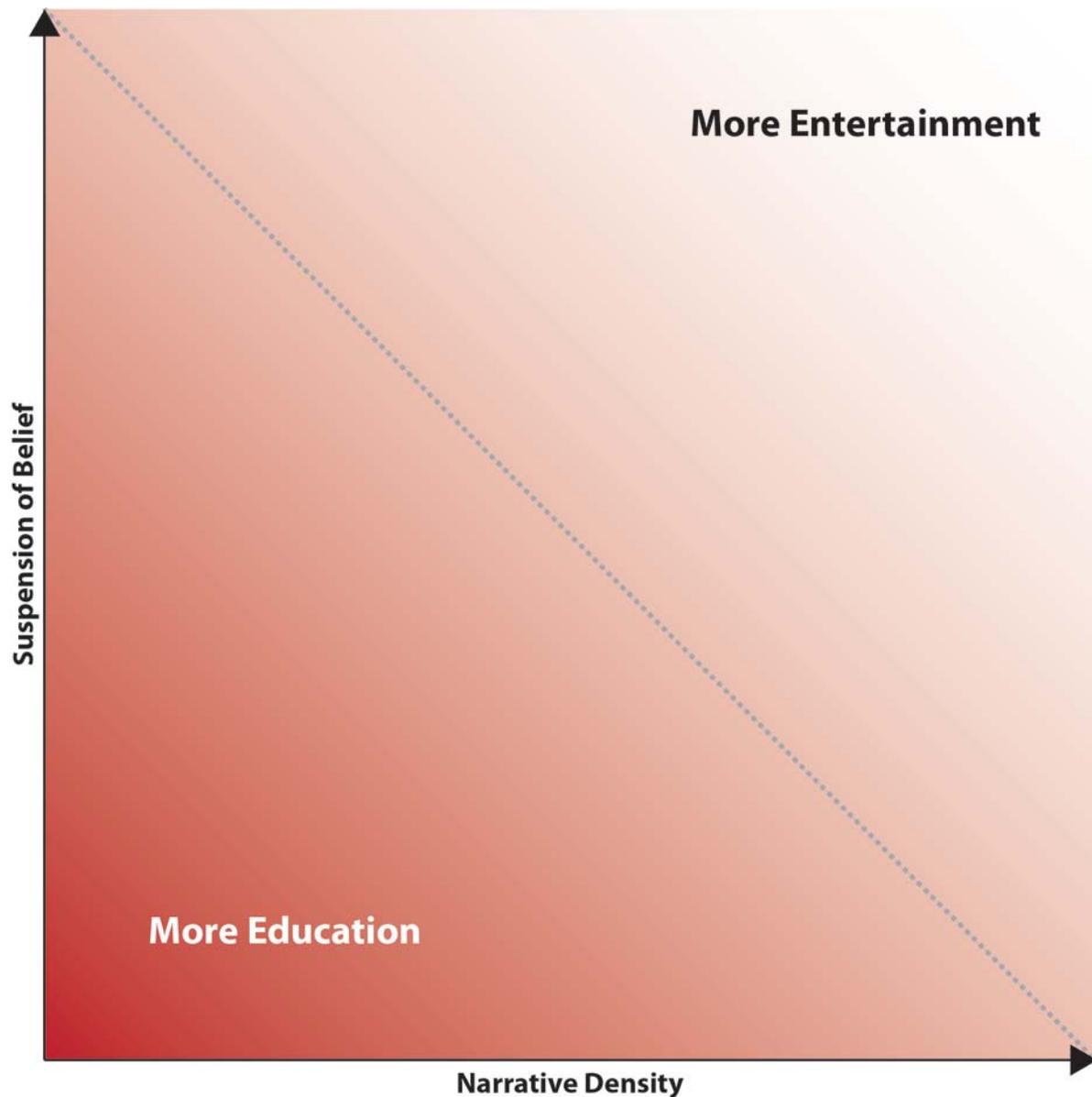
With the applications described so far in this chapter, the remaining issue is how to make decisions based on these concerns. The various aspects of the content of edutainment materials can be critically analyzed and viewed relative to one another.

The literature (see chapter two) generally talks about edutainment in one dimension. It is a mix between education and entertainment. Edutainment can be thought of as existing on a continuum. At one end is education (purely attempting to teach information to a learner such as a whitepaper) and at the other is entertainment (purely trying to engage or titillate an audience members such as an action movie). This single-variable representation can be viewed like this:



**Figure 14. The traditional one dimensional edutainment continuum**

Edutainment falls somewhere between these two as it draws strategies and tactics from each depending on the goals and strategies of its producers. It is probably impossible to say exactly what ratio of each will produce the best instance of edutainment. Like all other communication, edutainment is a contextual activity. Continuums like the one above might be useful to educators and learners. Teachers or edutainment producers could use it to create lesson plans and producers can aim their material at certain audiences by selecting rhetorical strategies from appropriate ends of the spectrum. But, this particular tool doesn't do much to help determine the underlying variables that go into creating edutainment. To this end, I propose an alternate device (figure 15) for visualizing the salient elements in a narrative model of edutainment. It is still a simple visualization for approximating the balance of education and entertainment but with added utility.



**Figure 15. Two dimensional edutainment visualization**

This version accounts for two variables, common to education and entertainment, and guides teachers and learners in interpreting the various degrees to which education and entertainment influence a given piece of edutainment. The first variable is suspension of belief, the second is narrative density. Suspension of belief refers to the degree to which the creators of edutainment

rely on this rhetorical device to create engaging narratives. This is not easily measured in a quantitative sense, but instead must be analyzed by a critical eye. Narrative density might be easier to determine digitally as narratives and sub-narratives can be counted and weighed against one another, for example as satellites vs. kernels per the Scene Function Model.

My approach here does not use cardinal numbers but a producer of edutainment or learner consuming it can assess whether there is more or less suspension and higher or lower narrative density. For example, if an edutainment television program (show A), such as the SAE examined in this study, has high narrative density and high levels of suspension of disbelief then I would posit it relies more heavily on entertainment and will produce less education for the learner. Conversely, if another show (B) appears to have low density and employ less suspension of belief it might indicate the program is more literal and oriented towards covering fewer disparate topics. If shows A and B are the same length it might indicate that show B covers fewer topics in greater literal detail while show A covers a greater breadth of information and uses less literal and more dramatic tactics. Show B isn't automatically more successful as an educational source but this two variable version of the education/entertainment scale seems to provide a more accurate and useful insight into edutainment materials.

#### **7.4 Other Media**

This two variable approach is useful beyond television. As edutainment production intersects the practicalities of Hollywood or other producers, it is likely that the constraints of other media will eventually be imposed on edutainment. For instance, television and the Internet have become increasingly intertwined as the online video is a disruptive force in the entertainment landscape.

If an edutainment producer decides to adapt a television program for online consumption (either on mobile devices or via interactive platforms) they will likely have to alter either the content or its presentation. In balancing the various competing interests of edutainment, the two variable model I describe is an invaluable tool in determining which components to emphasize, invest resources in, and target for specific audiences.

Producers of edutainment can determine ahead of time what their goals are in producing a given artifact. If they are looking to present an academically rigorous topic to a highly motivated group of learners then they might lean more towards the education end of the spectrum and therefore employ less narrative density and less suspension of belief. If the producers seek to present shallower material to a larger or more diverse audience that will be less motivated (or at least the audience is composed of learners motivated to varying degrees) more suspension of belief could be helpful in drawing them in, and narrative density might be useful to either include more topics (a buckshot approach that hopes some aspects will be interesting to the more diverse audience) or to enhance the dramatic effect by adding additional narrative elements such as back story, context, conflict, etc. These decisions might be driven by media and audience constraints such as age, media access, and media literacy. The two variable approach gives producers a framework in which to make better-informed decisions in planning, developing, and executing edutainment across many media forms. Further, edutainment can be dynamic and adaptive reorganizing itself in real time based on the abilities and interests of audience members. A practical and seemingly useful way of constructing dynamic frameworks would be to integrate the two variable model into whatever narrative and decision making schema producers employ. However, a dynamic approach will exacerbate a problem already at hand in even the most traditional edutainment strategies and media that employ narrative approaches.

In order for adult learners to improve their narrative literacy they must be able to address narratives they encounter in the course of their education. This tool can be useful to that end. With this general approach, learners can weigh whether they think a given education approach (either the classroom experience or casual learning opportunity) is academically rigorous, credible, and useful. While not every adult learners can sit and weigh the merits of each tactic in a given educational strategy, this provides a simple way to process two of the most salient narrative components as outlined in this study: suspension of disbelief and narrative density. In this way, teachers and learners, in formal and casual settings, have a way of addressing edutainment strategies and weighing their usefulness in a given situation.

## **7.5 Conclusion**

The theories I outline in the previous chapter and apply in this chapter should be constructive on the issue. But I still fear for the casual learner outside the classroom. Narrative literacy will become even more important as classroom instructors rely more heavily on mediated instruments like television and the Internet, online learning expands and grows in popularity, and more people take extending their education upon themselves by engaging edutainment in the most pervasive medium: television.

Without the informed instructor who has knowledge in the subject area and with the pedagogical skills usefully employ edutainment sources, individual learners will need to critically assess their sources of information. Just as traditional literacy (reading and writing), technological literacy, news literacy, and media literacy are becoming more important so too is a notion of narrative literacy that can be used to read edutainment texts and see through the complex web of genres,

rhetorical strategies, pedagogical tools, economic factors, and personal constraints placed on a learner in classrooms or casual learning opportunities and accessible through a narrative framework.

## 8. CONCLUSION

### 8.1 Changing Views

I began this study with an optimistic view. Perhaps too optimistic. I enjoy watching edutainment programs, especially the kinds of material that comprise SAE as I have explored in this narrative analysis. As I explored them I began to question my own assumptions about what it means to “edutain” someone and what other adult learners, besides myself, might take away from these programs. And finally, I wondered what teachers could learn about using edutainment in the form of television programs. In this concluding chapter I recap the process I used to conduct the study, highlight my findings, reiterate the two narrative theories of edutainment I put forth, and finally conclude with directions I and other researchers can take this information in future research.

#### 8.1.1 Significance

Edutainment is a significant form of communication. In Lauren Zalaznick’s (2010) Ted Talk, *The Conscience of Television*, she explains that peoples’ social world is tied, at least in part, to the television they watch. It might be the case that the quality of education provided on television will inform the stance we take towards education in society. Good edutainment might mean a society and worldview that values quality education in other parts of life. And, bad edutainment might influence education toward the titillating and entertaining at the expense of learning.

The policy issue of how to value education is beyond the scope of this study, though my view is to embrace and disseminate education as widely and accessibly as possible. Policymakers, whose decisions have real impact on the lives of many need useful information in determining

how to support education and what methods to employ. The simplistic models of the past and present do not provide a fruitful framework for assessing the potential advantages and drawbacks of edutainment as a systematic approach. Instead, a narrative approach with an eye towards the predictions and theoretical constructs I outline in this study will provide far better insight into how edutainment can be harnessed and employed.

Further, the creators of educational material need information about various strategies and tactics. As the educational process is highly rhetorical in nature (Selber, 2004; Heller, 1999) and the discourse of science is as well (Zerbe, 2007) it makes sense to address pedagogical issues from a rhetorical viewpoint. In this study I have done just this. In the previous chapter I explain the differences between formal and casual learning. Adult learners engage each of these in different ways and with different goals. It is important to create learning opportunities, as well as education policy, with an understanding that classrooms are still an important way adults learn but they are by no means the only way.

My goal was to understand the strategies of edutainment by investigating its rhetorical tactics. To do this I identified a specific subset of edutainment I term adult-oriented scientific edutainment (SAE). Carving out this niche was no accident; science-oriented materials are popular on channels like the Discovery channel and its various partners and offshoots that cater to casual learners. As the programming represents millions of dollars in terms of production and advertising dollars<sup>1</sup>, it is valuable to understand the tactics these particular programs invest in and employ. Further, edutainment relies on a collection of genres to inform its strategies.

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<sup>1</sup> Just one provider of edutainment programming, Discovery Communications, is a publicly traded company on NASDAQ and according to their 3<sup>rd</sup> quarter 2011 corporate publication, just one of their channels, The Learning Channel, is in over 100 million American homes as of 2011. And they claim a global audience of nearly 1.5 billion subscribers worldwide. The company is valued at over \$150 million based on stock prices in December 2011.

Edutainment draws from drama, documentary, and reality television. In this way they are sometimes used to enhance one another, and in other instances they conflate causing confusion within and among the selection of edutainment programming.

### **8.1.2 Summary**

I carried out a narrative analysis of SAE because I was interested in how the programs employ the rhetorical approach of narratives, or telling stories. I selected four television programs spanning about 40 years: *Wild Kingdom*, *Connections*, *Modern Marvels*, and *Mythbusters*. Each show represents different periods in time, different geographical audiences, and covers a broad range of science topics through a wide array of rhetorical strategies. During my narrative analysis I made several observations about how SAE programs edutain including adherence to narrative fidelity, the use of narration and hosts, appeals to transparency, high levels of narrative density, and purposeful introduction of fictions to support truths. I borrowed from the Scene Function Model as a way to approach narratives and sub-narratives.

Based on these observations I proposed two narrative theories of edutainment. The first is one based in the idea of suspension of belief whereby untruths are used to provide truths (lies are used to teach):

Whereas entertainers rely on suspension of disbelief to have audience members use facts to adopt fictions, edutainers rely on suspension of belief to use fictions to have audience members adopt facts.

The second contends that edutainment employs the rhetorical tactics of drama to increase audiences' interest in the material:

Edutainment programming relies on rhetorical elements designed to introduce drama in the educational material, especially numerous narratives and characters to create compelling stories. Further, over time, edutainment becomes increasingly dramatic employing narrative devices to induce tension, emotion, and surprise while additionally relying on production styles that replicate the approaches of Hollywood.

These two theories work in tandem and led me to make two predictions:

1. Edutainment will continue to rely on increased dramatic elements and increased narrative density for some time.
2. The rhetorical strategies of edutainers will continue to converge on those of entertainers in Hollywood and will continue down this path until entertainment and edutainment mirror one another past the point of individuation.

After explaining and justifying those narrative theories of edutainment I went on to explore the impact these and other aspects of edutainment have on formal and casual learning opportunities for adult learners with an eye for the generic concerns of edutainment on television. There are implications for the people who produce edutainment across many media, teachers who employ edutainment products as strategies in their own lesson plans, and for learners who engage SAE and many other forms of edutainment throughout their personal and professional lives.

## **8.2 Application to Education and Further Research**

My work here provides useful theories that try to predict the direction edutainment has taken in the past and will take in the future. But prediction with certainty is not a strength of rhetorical criticism. To this end, I would be very interested in conducting the next phase of research in this area. I can see two studies that build directly on my work.

### **8.2.1 Study 1**

The first would be a content analysis. But this time I would include examples of edutainment across a broad swath of subject area. Having analyzed science-based materials aimed at adults, in this second study I would compare shows aimed at adults and children. The goal would be to test predictions I have made in this study about edutainment more generally and to analyze other rhetorical components besides narrative structure from a quantitative angle. It would be useful in analyzing all types of edutainment the degree to which types of music, linguistic styles, and other rhetorical choices are used. Ultimately, it would be useful to develop a scale for measuring the amount and strength of dramatic elements in edutainment. This could be used to test the predictions I make in this study. Further, it would be an opportunity to more empirically test the two-dimension device for balancing the salient elements in a narrative model of edutainment I propose in the previous chapter.

### **8.2.2 Study 2**

A second study would be a traditional experiment. Its goal would be to test how well edutainment works as an educational tool. The dominant portion of the edutainment literature draws on about 30 years of television used to promote social policies. Telenovelas in Latin America and similar programs in Eastern Europe and the Middle East have, to varying degrees,

been used to promote social health issues. However, while those television programs have sought to induce a specific choice or action on the part of audience members (quit smoking, wear condoms, etc.) SAE programs seek to teach knowledge that is not necessarily immediately actionable. This second study would have to depart from the typical use of social learning theories and instead take a new approach to measure whether and how people learn from edutainment. There is much utility in being able to measure whether edutainment is more or less successful than other methods of education. Results would also help to better understand if and how to prepare learners to question or challenge the edutainment they encounter because, as I have discussed earlier, there are potential drawbacks or even dangers to the narrative strategies identified in this study.

### **8.2.3 Study 3**

A third study would take a more critical approach and seek to compare how narrative density and suspension of belief, as outlined in this study, are used in formal settings (classroom lesson plans and textbooks) and multi-modal casual learning environments (television, Internet, etc.). Using the tool outlined in the previous chapter and mentioned in Study 1 above, it would be a useful way of determining the extent to which edutainment strategies compare across environments and whether strategies are being used in comparable ways. I imagine it would be of great use for teachers of children and adults alike to know how rhetorical strategies compare to those used by casual education supporters. This information would make it much easier for an instructor to evaluate his or her own rhetorical and pedagogical strategies. Once teachers know how their methods compare to edutainment methods, they could more easily decide whether and which methods to re-appropriate from edutainment and how they would have to be modified to work in the classroom environment.

The results of these studies would be useful to policy makers and educators alike. The ubiquity of television (and now video on the Internet) combined with the financial constraints driving teachers and learners to online and distributed education environments demand more than ever researchers determine what educational strategies are successful in lieu of traditional classroom instruction.

### **8.3 Good or Bad**

Edutainment may well be part of the answer as more people seek education, associated costs rise, and institutions look to other sectors (especially the well established entertainment world) for help on distributing knowledge. But, it also offers up a bevy of potential side effects that demand constant attention and vigilant watch if the tools are to be used for social benefit. After analyzing the narrative approaches in the rhetoric of edutainers I am more confident than ever that the approach is powerful. This power could be used to help or harm learners. I proposed the importance of a narrative literacy on the part of learners to help them locate and evaluate sources of information as well as to understand the suspension of belief they are asked to engage in.

Knowing how edutainment works and how best to employ it is a crucial first step. In this study I have added to the conversation and look to continue in the future.

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