Creating and Maintaining Identification with Characters in Narrative Films:
The Impact of Protagonist Motivations and Key Story Moments on Real-Time Audience Identification and Liking

DISSERTATION

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By

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Abstract

Audience identification with a protagonist is perhaps the single most important determinant of audience engagement with a narrative. However, much is unknown about how or why some narratives are more effective than others at creating identification. The aim of the present research is to incorporate applied knowledge from the professional field of screenwriting and knowledge from research and theory in psychology and communication into an overarching framework for understanding audience identification. Particular emphasis is placed upon psychological theories of motivation, character liking, and screenwriting guidelines regarding character motivation and story structure, as predictors of dynamic fluctuations in audience identification.

Three films were randomly selected from a list of U.S. releases in recent years. Three professional screenwriters coded the films and identified key moments in the first 40 minutes of each film that were of particular importance in screenplay structure and for establishing character motivation and liking. $N = 308$ participants were randomly assigned to view the first 40 minutes of a film and provide real-time ratings of feelings of either liking or identification. Results indicated that certain key moments do indeed have a major impact on shaping identification and liking in real time.
Dedication

To Sarah, for your unwavering support, humor, and love
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Publications


**Fields of Study**

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Introduction

Audience identification with a protagonist is perhaps the single most important determinant of audience engagement with a narrative. However, much is unknown about how or why some narratives are more effective than others at creating identification. Furthermore, narratives have been found to have the power to inform and persuade audiences—a principle upon which Entertainment-Education and many pro-social campaigns depend—yet very little is currently known regarding the story factors that make some narratives successful while others are neither entertaining nor persuasive.

Therefore, the current research attempts to provide insight into both the story factors and the features of fictional characters that are predominantly responsible for creating and shaping identification. The process of narrative engagement is explored in light of existing work on audience identification (e.g., Cohen, 2001, 2006; Igartua, 2010), and with regards to the disposition theory of drama (Raney, 2004; Zillmann, 1991).

Communication research has proposed that audience internalization of a character's motivation plays a key role in identification (Cohen, 2006). In a very different community of knowledge, screenwriters of feature films have over time learned the importance of creating compelling motivations for characters, and have found some of the key principles for doing so. And for over a century, psychologists have studied
human motivations and have identified several types of motivations that seem to be universally part of the human condition (e.g., Alderfer, 1969).

Therefore, the current paper attempts to synthesize these three areas of knowledge in order to better understand how motivation and related processes play an important role in identification and transportation for narrative audiences. The main question that guides the current research can be put as follows: Can identification over time be explained and predicted by an analysis of the narrative’s content?
Chapter 1: Identification with Characters in Narratives

It is hard to imagine yourself being deeply engrossed in a narrative if you do not like any of the characters. Indeed, as viewers and readers of fictional media narratives, when we are caught up in a story, we often find ourselves rooting for the hero to succeed (Raney, 2004). This indicates that we must like the character to some extent, and care about him or her. However, research has found that we often go beyond just liking characters in a story as distinct “others”, and in fact we become the character for a while, feeling as though the events in the story are happening to us. “Identifying with a character means feeling an affinity toward the character that is so strong that we become absorbed in the text and come to an empathic understanding for the feelings the character experiences, and for his or her motives and goals” (Cohen, 2006, p. 184). In other words, we merge with the character, putting our separate selves aside temporarily (Cohen, 2006).

Identification is a generally pleasant and desirable state, and indicates that we are deeply engaged in a narrative. Identification is a key predictor of enjoyment (e.g., Janicke & Raney, 2012), and identification with characters – and with the main character in particular – is strongly related to transportation into a narrative (Moyer-Guse & Nabi, 2010; Tal-Or & Cohen, 2010). In fact, identification itself is a form of absorption into a
narrative: “In identifying, a viewer or reader becomes absorbed in the text” (Tal-Or & Cohen, 2010, p. 404).

Zillmann (1994) asserts that in order for narrative entertainment to be successful, the creators of the narrative must ensure that audiences form a connection with one or more characters. “The analysis of empathic reactivity to drama leaves no doubt about the maxim that respondents must be made to care about characters, either in a positive or negative way” (emphasis in original, Zillmann, 1994, p. 48).

Components of identification

Scholarly research has suggested that several components may exist within the overarching concept of identification. Cohen (2001) conducted a thorough review of the concept of identification and proposed that identification contains four dimensions: 1) affective empathy, 2) cognitive perspective-taking (a.k.a. cognitive empathy), 3) sharing the character's motivations or goals, and 4) absorption. However, the absorption component is virtually identical to transportation. Research seeking to differentiate between identification and transportation has dropped the absorption dimension of identification (Tal-Or & Cohen, 2010). Out of the remaining three components, internalization of the character's goals seems to be conceptually very strongly related to cognitive empathy and affective empathy, since thinking about the character's goals implies cognitive empathy, and desiring the goal implies an emotional component (i.e., affective empathy).

Igartua (2010) and Igartua and Barrios (2012) developed a similar conceptualization of identification as consisting of cognitive empathy, affective empathy,
and a sensation of becoming or merging with a character. Perhaps the third factor—a sense of merging with the character—can be thought of as a combination of Cohen’s third and fourth factors (shared goals and absorption), which together connote a sense of moving away from oneself and into the character.

**Theoretical Foundations**

Identification is a theoretical concept that dates back more than half a century (Cohen, 2001; Maccoby & Wilson, 1957), though a substantial amount of research and theorizing about identification with media characters in particular has taken place in the past 15 years (e.g., Cohen, 2001, 2006; de Graaf, Hoeken, Sanders, & Beentjes, 2012; Igartua, 2010; Janicke & Raney, 2012; Moyer-Gusé, 2008; Slater & Rouner, 2002).

Research inspired by Transportation theory (Green & Brock, 2000, 2004) has found that the experience of being fully absorbed in a narrative can lead to changes in attitudes, beliefs, and behaviors (e.g., Green & Brock, 2000; Murphy, Frank, Moran, & Patnoe-Woodley, 2011). The Extended Elaboration Likelihood Model (E-ELM) (Slater & Rouner, 2002) provides an explanation of the persuasive effects of narratives by proposing that the process of becoming deeply absorbed in a narrative inhibits critical scrutiny and counterarguing against the content of the message. The E-ELM proposes that identification is one of the key mechanisms underlying the persuasive effects of narratives:

We expect a persuasive impact of [a] narrative, to the extent of the recipient's sympathetic response to the character's own development and experiences, may lead to at least temporary acceptance of values and believes that
represent a shift from the individual's existing beliefs. (Slater & Rouner, 2002, p. 177).

Moyer-Gusé’s (2008) Entertainment Overcoming Resistance Model (or EORM) describes several ways in which identification is an important factor in narrative persuasion. Identification can reduce selective avoidance of persuasive messages, and can also reduce counterarguing. In contexts such as health messages, identification can increase perceived vulnerability, but can also change outcome expectancies (Moyer-Gusé, 2008).

Many of the above principles are put to use in Entertainment-Education, which is: The process of purposely designing and implementing a media message to both entertain and educate, in order to increase audience members’ knowledge about an educational issue, create favorable attitudes, shift social norms, and shape overt behavior. (Singhal, Cody, Rogers, & Sabido, 2004)

Most Entertainment-Education interventions are based on Social Cognitive Theory (Bandura, 1986), which focuses on how modeling the behavior of another can lead to lasting attitude and behavior change. Modeling is closely tied to identification, and so it is clear that identification is fundamental to a great deal of research on media persuasion.

Though other mechanisms such as transportation and parasocial interaction play a role in narrative persuasion, this paper takes the stance that identification is the single most important process underlying the influence of narratives. There are several reasons why identification is uniquely important:
First, identification involves taking the perspective of someone else, and therefore perhaps seeing a new viewpoint on an issue. This can lead to changes in the audience member's subsequent attitudes and behaviors (Cohen, 2006; Igartua, 2010; Igartua & Barrios, 2012; Kaufman & Libby, 2012). For example, identification can lead to greater acceptance of stigmatized groups (Chung & Slater, 2013; Kaufman & Libby, 2012).

Second, while transportation refers to general absorption in a drama, identification involves a merging of the self with a character, which is arguably a type of deeper immersion beyond just general absorption into the story. While absorption might primarily consist of cognitive engagement with the narrative (imagining the narrative world), identification makes the narrative more personal, potentially increasing the likelihood of emotional engagement along with cognitive engagement.

Third, the involvement of the self through identification should increase the personal relevance of the narrative message, which should make the viewing experience stronger and more memorable. Increased relevance may also serve as motivation for post-viewing elaboration and message retention, in accordance with the Elaboration Likelihood Model (Petty & Cacioppo, 1986).

Lastly, identification may provide viewers with behavior to model so that they know how to act differently (as per Bandura's Social Cognitive Theory, 1986). From the perspective of the Elaboration Likelihood Model (Petty & Cacioppo, 1986), identification may therefore increase the viewer’s ability to change their behavior, along with providing motivation to do so.
Empirical research has found support for the proposition that identification is the
key mechanism of narrative persuasion. Research by de Graaf et al. (2012) found that
identification is a causal mechanism in narrative persuasion. A meta-analysis conducted
by Tuvachinsky (2011) found that "empathy/perspective-taking" (the essential
components of identification) and transportation had significantly stronger persuasive
effects than either parasocial relationships or simple exposure. Finally, Janicke and
Raney (2012) conducted an experiment with an episode of two different television shows,
and in both cases found that identification had the strongest effects on narrative
persuasion – significantly stronger than transportation.

While there is much evidence demonstrating the importance of identification, the
components of a narrative that lead to identification (and to transportation, for that
matter) are poorly understood.

The need for a greater understanding of narrative messages

In order to have a fuller understanding of how and why identification and
transportation take place, investigation into the components of narrative messages is
essential. A review by Cohen (2006) found that a substantial amount of research has
been conducted on the effects of identification, but that there is a "dearth of research into
the motives and processes of identification" (p. 192).

Gerrig (1993) states that research into narrative processing is sorely hampered by
"how little is known about the "dimensions" of narrative experience" (p. 175). Gerrig
calls for an aesthetic theory of narrative that can explain how and why narratives produce
various effects in their audiences: "What is lacking (and I do not consider this a minor
omission) is a specification of stimulus properties that are necessary for readers to be automatically captured by a narrative" (Gerrig, 1993, pp. 175-176).

More than two decades later, Gerrig's call for an aesthetic theory of narrative has not been satisfactorily unanswered. One hindrance may be the nebulous nature of narratives – it is hard to even specify what does and what does not "count" as a narrative. Another obstacle is the difficulty of extracting from the dynamic complexity of narratives any manageable components that can be identified, isolated, and manipulated. The current work aims to begin to address these two challenges by drawing respectively from research in English Narratology and applied guidebooks of screenwriting, which will be discussed in Chapter 3.

**Identification as an inherently dynamic process.**

Some research on identification has focused on the consequences of identification or predictors of identification, but less is known about the proximal causes of identification or the dynamic ebbs and flows of identification over the course of a narrative. With regards to the causes of identification, the E-ELM (Slater & Rouner, 2002) theorizes that absorption and homophily are factors influencing identification; these propositions have been supported by later research (e.g., Cohen, 2006; Cohen & Perse, 2003). However, the components of the narrative itself that either create or fail to create identification are still mostly unknown.

Many communication scholars agree that identification is a dynamic process. Cohen (2001) notes that identification should be expected to shift dynamically throughout the course of a media text: "Identification is fleeting and varies in intensity
(Wilson, 1993), a sensation felt intermittently during exposure to a media message" (Cohen, 2001, p. 250). Identification is not experienced at 100% throughout the duration of a narrative, and in fact, the moments when identification is not taking place, or when it is being formed, are of substantial importance to understanding the overall process.

Zillmann (1994) provides support for the dynamic nature of identification by asserting that audiences certainly do not experience the entirety of narratives as if they were the hero. For example, the phenomenon of dramatic suspense fundamentally depends upon a difference between the perspective of the protagonist and the perspective of the audience. Branigan (1992) defines dramatic suspense as the tension created when the audience knows important information that the protagonist does not yet know (p. 75). As an example, Zillman (1994) describes a hypothetical scene involving a “Wild-west hero…who calmly and collectedly rides into an ambush, with shotguns aimed at him from all rooftops” (p. 36). The audience, knowing about the ambush while the hero does not, would likely feel anxiety about the safety of the hero, rather than sharing the hero’s sense of calm and security. The audience’s emotional response in situations like this could best be characterized as “concern for the welfare of heroes, responding to them as if they were personal friends” (Zillmann, 1994, p. 37), as opposed to identification, which would involve sharing the thoughts and emotions of the hero.

**The importance of message factors in creating identification.**

A greater understanding of the dynamic process of identification will depend upon a knowledge of how message factors create identification. While identification takes place in the mind of the viewer, it is created by an interaction between the narrative
message and the viewer’s mental processes. It can therefore be argued that the content of the message itself is at least equally as important to the process of identification as the viewer’s mental reception and interpretation of the message. Indeed, it is worthwhile to consider the enormous variability in the success of feature films, using the metric of box office earnings. For a film such as *Avatar* to earn over a billion dollars at the worldwide box office, we can surmise that the film was enjoyed by almost everyone who saw it, regardless of their age, gender, race, or various psychological differences. On the other end of the spectrum, some films are miserable box office flops and apparently do not appeal to anyone, again regardless of age, gender, race, or psychology. Therefore, the content of a narrative film is of course responsible for an enormous amount of the variance in audience enjoyment (and identification, and box office success) across films.

The content and quality of narrative messages are also crucial in determining the success or failure of health campaigns and similar pro-social interventions that deal with life-changing issues, and where the message’s success can have substantial consequences. Therefore, understanding the process of identification is of great importance. But identification itself is a combination of several sub-processes, such as cognitive empathy, affective empathy, and shared motivation (Cohen, 2006; Igartua, 2010). It is worthwhile to study the ways in which each sub-process is shaped by the content of narratives, but the present research will focus on audience internalization of a character’s motivations. Research has found that that audiences create mental models in order to comprehend and engage with stories (Busselle & Bilandzic, 2008). Audiences make mental models not just of the story itself, but also make models of the characters (particularly the main
characters), and one of the main priorities of audiences is to understand and keep track of characters’ goals (Busselle & Bilandzic, 2008; Magliano, Taylor, & Kim, 2005; Zwaan, 1999). Character motivations therefore play a large part in the audience processing of narratives.

As will be discussed in chapter 2, research in psychology has found that motivations are central to the human experience, and that some types of motivations are universally present in all people. And as will be discussed in chapter 3, motivation is an essential part of the core around which narrative stories are designed.
Chapter 2: Are There Universal Human Motivations?

"Man is a perpetually wanting animal." (Maslow, 1943, p. 370).

As already discussed, research in communication has found that shared motivation plays a key role in audience identification with protagonists (Cohen 2001, 2006). However, the notion of a “shared” motivation implies that the audience must be able to recognize and understand a character’s motivation. It seems very likely, therefore, that audiences will identify strongly with a character if they have felt the character’s motivation in their own lives. Furthermore, the more central a role a particular motivation plays in an audience member’s life, the more likely it is that the audience member will quickly recognize, understand, and empathize when that motivation is displayed on screen (as will be hypothesized more specifically below).

However, are there motivations that are common to all humans, and therefore recognizable to all audience members? Are some motivations fundamental to all humans while other motivations are present only in a specific cultural context or in specific types of personalities?

An enormous amount of research and theorizing about motivation has taken place in the field of psychology, dating back more than a century (Gollwitzer, Delius, &
Oettingen, 2000; James, 1892; McClelland, 1985; Wahba & Bridwell, 1976). Therefore, a review of some of the most influential psychological theories on motivation is provided, with an eye toward distinguishing universal human emotions and extracting a useful typology of motivations to apply to research on identification in narrative persuasion.

**Conceptual clarification.**

First, some clarification of the concepts and terminology related to motivation is warranted. Ferguson (2000) defines motivation as "a dynamic internal process that energizes and directs actions and action tendencies" (p. 6). McClelland (1985) provides a similar definition, stating that a motive is "a recurrent concern for a goal state based on a natural incentive—a concern that energizes, orients, and selects behavior" (p. 590). The terms "needs" and "motivations" are used interchangeably in much of the research on motivation (e.g., Maslow, 1943), and so the terms will be treated as synonymous in the current paper.

Goals are distinct from motivations and needs, as a goal is a specific desired end state that can energize a motive (McClelland, 1985). Also, the means of getting to the goal are not part of the motive (McClelland, 1985). This distinction is important for narratives, since the audience typically roots for the hero to succeed at reaching a final goal (and the audience shares the hero’s motivation), but the means of how the hero actually achieves the goal are usually surprising to the audience (an utterly predictable story would be quite boring).

Now that some of the terminology has been clarified, several key theories of motivation will be reviewed, starting with Maslow's (1943) seminal hierarchy of needs.
Maslow's hierarchy of needs

Abraham Maslow's (1943, 1987) theory of motivation proposed that most or all human beings possess a common hierarchy of needs. Maslow ordered his hierarchy with the most basic needs (those directly affecting survival) at the bottom of the hierarchy and more abstract needs at the top. When a person's basic needs are fulfilled, then the needs of the level above will take priority. Starting from the bottom of the hierarchy, the proposed order of needs is: physiological needs (e.g., hunger, thirst, body temperature), safety needs (e.g., security, stability, freedom from fear), belongingness needs (i.e., to give and receive love and affection), esteem needs (e.g., strength, competence, independence, dignity), and self-actualization needs (i.e., "to become everything that one is capable of becoming", Maslow, 1943, p.382). Each level is regarded as "pre-potent" to the level above it, meaning that the most basic level of ungratified needs will dominate a person's motivation until they are gratified, at which point the next level of needs will dominate. For example, if a person lacks self-esteem but is also starving for food, then he or she will not be motivated by the need for self-esteem until sufficient food has been found.

Maslow later adjusted the hierarchy several times to expand and re-order the highest levels of needs: aesthetic needs (e.g., the desire for beauty) and cognitive needs (i.e. the desire to know and understand)(Maslow, 1987), self-actualization, and self-transcendence (helping others to self-actualize)(Koltko-Rivera, 2006; Maslow, 1969).

Maslow's hierarchy of needs has received widespread public awareness (McClelland, 1985; Neher, 1991), perhaps due to its straightforward and intuitive
propositions (Beck, 2004). It has been extensively used in areas such as business
management (e.g., Huizinga, 1970) and marketing (e.g., Soper, Milford, & Rosethal,
1995). A substantial amount of work has been produced over the years by scholars with
regards to testing Maslow's theory (Baumeister & Leary, 1995; Huizinga, 1970; Wahba
& Bridwell, 1976), expanding it (Koltko-Rivera, 2006; Oishi, Diener, Lucas, & Suh,
1999), and revising it (Mathes, 1981).

However, Maslow's hierarchy has also been extensively criticized (e.g., Neher,
with "little supporting evidence" (Beck, 2004, p. 30). Many of the criticisms of Maslow's
hierarchy of needs tend to fall into two main categories: 1) criticisms of the ordering of
the hierarchy, and 2) disagreement over the categories of motivations that Maslow
suggests (e.g., Alderfer, 1969). The first type of criticisms has noted that the specific
structure of the hierarchy is difficult or impossible to test empirically, especially with
regards to higher level needs (e.g., Wahba & Bridwell, 1976). For example, are cognitive
needs necessarily more basic than aesthetic needs? It is hard to conceive of a way to test
conclusively that one is more pre-potent than the other. Maslow himself indicated that in
everyday life, needs at numerous levels of the hierarchy can exist simultaneously, and
that needs are rarely 100% satisfied, but rather are satisfied at varying percentages. If
this is the case, then the strict order of the hierarchy may be hard to defend. Many
research findings have suggested various re-orderings of the hierarchy (e.g., Mathes,
1981; Wofford, 1971) as the hierarchy seems to vary substantially depending on
individual and contextual differences (Wahba & Bridwell, 1976). Maslow himself noted
that various exceptions to the hierarchy exist (Maslow 1943;1987) and he tended in his later writings (e.g., Maslow, 1987) to de-emphasize arranging needs in a strict hierarchy – particularly with regards to the higher-order needs. However, the idea of a hierarchy of needs does not necessarily have to be completely abandoned. Several studies have found evidence for simpler hierarchies: Mathes (1981) found evidence consistent with a three-level hierarchy of needs, while McClelland (1985) found support for an even simpler hierarchy, with physiological needs as the first level, and all other needs existing at the second level.

On a related note, the other key line of criticism of Maslow's hierarchy involves disagreements over how many categories of motivations there are, and what motivations should fall into each category. Motivations are a vague construct that be unconscious or conscious, can be instinctive, learned, or self-determined, and can refer to anything ranging from physiological processes in the body such as the regulation of fluid levels and the intake of glucose (Ferguson, 2000) to mental and cultural constructs as abstract as the Protestant work ethic (Ambrose & Kulik, 1999).1 Wahba and Bridwell (1976) reviewed ten studies that had conducted factor analyses in order to determine how needs should be categorized. The results varied wildly. Some studies found that needs fell into only two main groupings: deficiency needs (needs driven by a lack of food, lack of safety, etc.) and growth needs (needs such as autonomy and self-actualization). A third

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1 Though it has been noted that every type of motivation can ultimately be linked to a physiological basis (insert cite).
category was sometimes necessary: self-actualization emerged as an independent factor in some studies, but not in others (Wahba & Bridwell, 1976).

The numerous criticism listed above, along with other factors (cf. Neher, 1991; Beck, 2004) have led modern-day psychological research to, for the most part, move away from Maslow's theory: "Maslow is seldom cited in the research literature on motivation, which means that his theory, to a significant extent, lies outside the mainstream of testing and critical evaluation that is the lifeblood of any vital theory." (Neher, 1991, p. 90). However, Maslow's hierarchy of needs is still well-known to the general public, and Maslow's ideas were seminal in creating a conceptual framework for organizing motivations into meaningful categories. Building directly or indirectly on Maslow's work, a large number of theories of motivations have been proposed by researchers in subsequent years.

**Finding a workable model of needs**

While the field of psychology at present does not seem to have a standard model of motivation widely in use, several programs of research have led to models that have a great deal in common. As will now be reviewed, much of the theorizing about needs can be boiled down into either a two-tiered or three-tiered hierarchy.

McClelland (1961; 1985) proposed what is in effect a two-tiered hierarchy, emphasizing that beyond basic physiological needs (tier one) are three categories of human motivations – achievement, power, and affiliation – which belong together at the same level (tier two), and which are almost universally present in human beings (McClelland, 1985). A large body of empirical evidence has supported McClelland's
categorizations (see McClelland, 1961, 1985). Much of the research on employee motivation in the field of business management either explicitly or implicitly shares McClelland's view that basic physiological needs are qualitatively different from all other need types, and assumes that for most employees in modern society, such basic physiological needs are generally satisfied and are not the primary motivations guiding behavior (see Barbuto, 2006, for one review). It seems intuitively sensible that basic physiological needs relating to survival are of a different ilk than the needs such as achievement, affiliation, or esteem that tend to be our daily motivators in modern life.

A similar organizational scheme for motivations is proposed by Ryan and Deci (2000), who argue for the importance of three main motivations: competence, autonomy, and relatedness. It should be noted that Ryan and Deci (2000) focus on motivations in school and in the workplace, and they assume that more basic physiological motivations such as hunger and thirst have been satisfied.

In a perspective that is compatible with the views of McClelland (1985) and Ryan and Deci (2000), Gollwitzer, Delius, and Oettingen (2000) note that two different traditions of psychological research have studied motivation: the biopsychological approach and the sociopsychological approach. The dichotomy of biopsychological and sociopsychological needs is roughly equivalent to the distinction between physiological needs and higher needs. Ryan and Deci (2000) come from the sociopsychological perspective, and do not incorporate physiological needs into their model.

In contrast to the two-level approaches just discussed, several researchers have put forth models that group motivations into a hierarchy with three tiers. This
perspective dates as far back as William James (1892, as cited in Huitt, 2007), who proposed the existence of three categories of material needs (physiological & safety), social needs (belongingness), and spiritual needs (Huitt, 2007; James, 1892). Both Mathes (1981) and Alderfer (1969) suggested that Maslow's original hierarchy of five needs be reduced to three, as they found the needs of security and esteem to be superfluous both conceptually and empirically. The remaining three needs — physiological, belongingness, and self-actualization — subsumed the categories of security and esteem. Mathes (1981) argued that security needs relate either to physical security/safety or emotional security. The former can reasonably be considered to be part of the physiological need category, and the latter are effectively belongingness needs (Mathes, 1981). Similarly, esteem needs overlap with belongingness needs (i.e., esteem in the eyes of others) and self-actualization needs (i.e., esteem in one's own eyes), thereby making redundant a separate category of esteem needs (Mathes, 1981).

Alderfer (1969, 1972) proposed a similar threefold theory of needs with his Existence, Relatedness, Growth Theory (ERG Theory). Existence needs "include all the various forms of material and physiological desires" (Alderfer, 1969, p. 145), such as food, water, and safety. Relatedness needs "include all the needs which involve relationships with significant other people" (Alderfer, 1969, p. 146), and growth needs entail "all the needs which involve a person making creative or productive effects on himself and the environment" (p. 146). All three categories of needs are assumed to be concurrently active in all human beings: "All people are alike in that they possess some degree of each need, but they differ in the strength of their needs" (Alderfer, 1972, p.
Alderfer foregoes Maslow's strict hierarchy of prepotency, but does arrange the needs in a looser hierarchy of his own based upon their concreteness, with existence needs as the most concrete needs, followed by relatedness in the middle, and ending with growth needs as the most abstract (Alderfer, 1972). Individuals are likely to be more uncertain about their more abstract needs: less clear about exactly what they need and less certain about how to satisfy those needs (Alderfer, 1969).

Alderfer's ERG Theory (1969, 1972) bears enough similarity to many of the other theories discussed above to make it an appropriate representative of the basic perspective underlying most two-tiered and three-tiered hierarchies of needs. ERG Theory’s three categories of needs—existence, relatedness, and growth—arranged along one primary dimension of concrete vs. abstract needs, can perhaps be a useful framework for categorizing the types of needs that are present in films. ERG Theory will therefore be used as the primary framework or heuristic for referring to categories of motivations in this paper.

A protagonist in a film often has multiple motivations, just as humans do in real life. As a starting point, all motivations can be hypothesized to increase audience identification:

**H1:** Establishment in a narrative of a protagonist’s existence needs (H1a), relatedness needs (H1b), and/or growth needs (H1c) will each lead to an increase in audience identification.

Many two-tiered and three-tiered hierarchies of needs consistently determine existential/physiological needs to be the most fundamental and pre-potent category. In a
manual on screenwriting, Snyder (2005) discusses "primal needs" as the crucial motivator for protagonists in films. (This will be discussed in detail in the next chapter).

Importantly, Synder’s (2005) proposition is congruent to psychological research highlighting physiological/existence needs as the most powerful human motivator. Since the screenwriting literature does not go into enough detail to suggest any hierarchy for arranging needs, the organizational schemes from psychology that were just reviewed may shed further insight into what types of needs can be considered to be more or less primal for the purposes of filmmaking.

While existence needs are commonly thought of as the most basic needs, growth needs inhabit the opposite end of the spectrum. Maslow's self-actualization, aesthetic and transcendence needs can arguably be considered to be the most abstract needs, in parallel with Alderfer's growth needs. Therefore, individuals may have the most difficulty noticing and correctly identifying these types of needs in others (and in themselves). Thus, the following hypotheses is proposed:

**H2: If multiple categories of needs are established for a protagonist in a film, existence needs will lead to the largest increase in identification, followed by relatedness needs, with growth needs leading to the smallest increase in identification.**

The specific ways that motivations are manifested in narratives are discussed next, in an exploration of the nature of narratives.
Chapter 3: The Workings of Narrative

The Nature of Narratives

There is no single widely agreed-upon definition of narrative. Conceptualizations of narratives range from the extremely broad (which include, for example, paintings as narratives) to much more narrow definitions (Abbott, 2008), most likely because differing concepts of narrative each have their usefulness among various areas of inquiry. A definition from a prominent scholar of Narratology—Herman (2009)—was selected for use in this paper, based on its face validity, clarity, and appropriateness for the scope of the present research.

Herman (2009) defines narratives as possessing the following four qualities:

1. **Situatedness**: A narrative is a representation that is situated in (and must be interpreted in) a specific discourse context or occasion for telling. In other words, a narrative is a form of communication which is shaped by the context in which it is created, by the goals of the communicator, and by the medium through which it is communicated.

2. **Event-sequencing**: The audience is cued "To draw inferences about a structured time-course of particularized events" (Herman, 2009, p. 14). Therefore, a story necessarily involves a sequence of events that are linked together by cause & effect.
3. **Worldmaking & World Disruption**: A story world is created, which includes the everyday life of the story’s protagonist. Some aspect of the hero’s life is then disrupted or experiences disequilibrium. This disruption can also be thought of as a conflict, and in narrative films and television shows, the conflict is central to driving the story forward (Vogler, 1998).

4. **What it’s Like**: The discourse conveys a sense of the experience of living through the disruption. In other words, a narrative is different from the dry factual account of an event that might be found, for example, in an encyclopedia. “Narrative roots itself in the lived, felt experience of human or human-like agents interacting in an ongoing way with their cohorts and surrounding environment.” (Herman, 2009, p. 21). In practical terms, this means that a narrative involves one or more protagonists or “heroes”.

   These four aspects of narrative hold true for screenplays, and provide a helpful framework for understanding stories both in literature and in film. The above definition also provides evidence for the claim that motivation is a central feature of stories. A narrative involves a conflict (“world disruption”) in the world of a protagonist (“what it’s like”), and the protagonist’s subsequent endeavors to attempt to resolve the conflict (a series of causes-and-effects, i.e., “event sequencing”). As will be discussed in a moment, motivation is not only a central component of academic research on identification, and a central component of the definition of narratives, but it is also one of the main points of emphasis in the construction of a screenplay.

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2 As a side note, the term “hero” is used frequently in screenwriting literature to refer to the main character of a narrative (e.g., Campbell, 1972; Vogler, 1998). While “hero” connotes a person of high moral quality and virtue in everyday life, the “hero” in screenwriting terms refers to any sort of main character, even if he or she is a criminal or scoundrel.
The dynamic process of identification

The conceptualization of narratives as chains of events that are tightly linked by causality supports the notion that audience processing of narratives is a fundamentally dynamic process that develops over time.

The fundamental elements of cause and effect play a major part in audiences’ mental models of stories. For example, van den Broek & Lorch (1993) found evidence that instead of audiences representing a written story as a linear chain of text components, they represent narratives in causal networks where items can have multiple links. In other words, there is not a direct representation of the sequence in which information was conveyed, but rather a representation of the underlying story. The audience will take scenes that are out of sequence and work to arrange them in a mental framework in which cause and effect make sense. In other words, viewers seem to need to understand stories as a logical progression of events that takes place over time, and their mental model of the story’s structure is also updated as time passes and they learn new information. Audience identification with a protagonist is likely to follow a similar pattern of development over time.

However, it does not seem that the dynamic nature of identification has yet been tested empirically. Therefore, a set of hypotheses relating to the dynamic nature of identification are proposed. First is the most basic hypothesis, which simply tests the basic principle that identification is dynamic:

**H3: When an audience views a film, identification with the protagonist changes over time.**
The questions of how and why identification changes over time are of primary interest for the current research. Therefore, the goal is to create a dynamic model that specifies the factors that shape identification. Previous research has shown that human responses to media stimuli are typically shaped over time by both exogenous and endogenous factors (Wang, Lang, & Busemeyer, 2011; Wang, Solloway, Tchernev, & Barker, 2012; Wang & Tchernev, 2012). The main exogenous factor of interest is the content of the media message, while the endogenous component refers to the way that human mental and emotional systems (such as the motivational systems) are influenced by their own previous states. In other words, an audience member’s level of identification at a certain time point is partially determined by his or her previous level(s) of identification. This conceptualization of identification can be formalized as follows:

**H4: An audience member's identification with the protagonist at any time is influenced by the story content at that time (H4a), and by the audience member’s previous levels of identification (H4b).**

The above hypothesis provides a general conceptual framework for exploring identification as a dynamic process. However, the goal of the current paper is to dig deeper and look at specific factors within the narrative and within the individual that are expected to shape identification over time. The following section therefore delves into the building blocks of screenplays; after that, the role of individual differences will be discussed.
Screenwriting Literature

There is a large body of knowledge in the applied practice and theory of screenwriting, which has to this point has remained relatively untapped by social scientists. As Hollywood has produced hundreds of feature films each year, screenwriters have, over time, accumulated knowledge of their craft based upon both theoretical considerations and practical experience—in other words, using techniques that led to either success or failure. Manuals on screenwriting are widely-used resources for both screenwriters and studio executives (Suderman, 2013). While there are hundreds of books available on the topic of screenwriting, a handful of highly influential tomes have acquired almost canonical status (Kaplan, 2011; Suderman, 2013). As will be discussed, much of the content of books on screenwriting focuses on two fundamental components of narrative films: a structure for narrative storytelling, and a protagonist whom the audience can identify with. Both components are directly relevant to communication research on transportation and identification. Therefore, this paper proposes that screenwriting principles can provide valuable insights for communication research into the characters and the structure of narrative texts.

Comparison of identification in communication research and screenwriting literature.

"Events in a screenplay are specifically designed to bring out the truth about the characters so that we, the reader and audience, can transcend our

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3 As of 1/21/2014, there were 2,619 books listed on www.Amazon.com in the department: "Books > Humor & Entertainment > Movies > Screenwriting". At least several hundred were "how-to" books on screenwriting.
ordinary lives and achieve a connection, or bond, between 'them and us'. We see ourselves in them and enjoy a moment, perhaps, of recognition and understanding. (Field, 2005, p. 44)."

The way that identification is conceptualized and discussed in screenwriting literature has striking similarities to how it is defined in communication research. In both realms, identification involves sharing the emotions, thoughts, and goals of a character. For example, compare communication researcher Jonathan Cohen's definition of identification as "a mechanism through which audience members experience reception and interpretation of the text from inside, as if events were happening to them," (Cohen, 2001, p. 245), to screenwriting expert Christopher Vogler's thoughts on the topic: "Stories invite us to invest part of our personal identity in the Hero for the duration of the experience. In a sense we become the Hero for a while. We project ourselves into the Hero's psyche, and see the world through her eyes." (Vogler, 1998, p. 36). According to McKee (1997), "We empathize for very personal, if not egocentric, reasons. When we identify with a protagonist and his desires in life, we are in fact rooting for our own desires in life." (p. 141-142). Snyder (2005) discusses the hero as a stand-in for the audience, and states that screenwriters have: "the job of creating heroes that will lure an audience into our world." (p. 48).

The top books on screenwriting emphasize that audience identification with a hero is essential for the story's success (e.g., Field, 2005; McKee, 1997; Vogler, 1998). "The audience's involvement is held by the emotional glue of empathy. If the writer fails to fuse a bond between filmgoer and protagonist, we [the audience] sit outside and feel
nothing." (McKee, 1997, p. 141). As is apparent in the above quote, perhaps one of the largest differences between how screenwriters and communication researchers discuss identification is that screenwriters, for the most part, conceptualize identification as being caused by a one-way transmission that originates in the film (specifically, in the screenplay) and then affects and resonates with the audience. Since screenwriting manuals are inherently focused on the design and quality of the message/text, individual differences between audience members—especially psychological differences—are not a major point of emphasis (aside from the occasional discussion of broad demographics in relation to which genres appeal more to men or women, children, teenagers or adults, etc.). On the other hand, a substantial amount of research in communication and psychology focuses on audience factors that may impact identification (e.g., Cohen, 2006; Cohen & Perse, 2003; Eyal & Rubin, 2003; Maccoby & Wilson, 1957; Slater, Rouner, & Long, 2006), but, for narrative entertainment messages in particular, relatively little is known about the specific narrative elements that are most important in shaping identification.

The following sections constitute an attempt to begin to synthesize some of the primarily message-centered knowledge in screenwriting manuals and the receiver-centered insights provided by psychology and communication research. Social scientific research can benefit from a greater understanding of how narrative messages work, and communication research as a field is uniquely well-positioned to explore both the key elements of narrative messages and how those elements interact with audience psychology.
Therefore, in the following sections, this paper discusses important message elements of screenwriting, the role of motivation as central to both the screenwriter and the audience, and some of the individual differences that may be particularly relevant to audience identification.

**Distilling information from screenwriting texts**

The scope of the current research focuses on narrative feature films, and the term “screenplay” is used to mean screenplays for feature films (as opposed to scripts for television shows, also sometimes referred to as "teleplays"). Since a screenplay serves as the fundamental blueprint for a finished feature film, the present work focuses on the role of the screenwriter and the screenplay in shaping a film and, by doing so, impacting an audience. (Though it is acknowledged that hundreds of individuals and other factors may influence the final product of a feature film -- e.g., the director, actors, producers, studio executives, etc.). When audience responses to movies are discussed, the focus will be on audience responses to the movie’s elements that were guided by the script (holding constant the effects of the director, actors, camera work, etc).

Several different methods were used to identify the most relevant and influential sources of information on screenwriting. First, the author contacted several professional screenwriters and asked them 1) whether they had used any screenwriting manuals as they learned the craft, 2) which resources they had used, and 3) which resources they perceived to be the most widely used and respected in the field. The responses consistently centered around a handful of books that were perceived to be seminal works on the topic.
Concurrently, a search was conducted for all of the books in the category of "screenwriting" on Amazon.com (www.amazon.com, 2013), and a list was compiled of the top five best-selling books on the subject. All of the books recommended by the informal poll of screenwriters were included in the top 5 list from Amazon.\textsuperscript{4}

Additionally, a number of newspaper articles (e.g., Kaplan, 2011; Suderman, 2013), academic journal articles (e.g., Cattrysse, 2010), and books about screenwriting (e.g., Snyder, 2005) were examined, to discover whether any highly influential screenwriting books had been left off the list. The five books and authors referred to above were repeatedly referenced as highly influential in the field of screenwriting, and while other works were also occasionally referenced, none of the other works was mentioned consistently enough (in this author’s judgment) to merit inclusion in the list of top books.

Therefore, a final list of five screenwriting books (shown in Table 1) was used as a reference for the current research. The contents of all five books were compared in a search for commonalities with regards to the structure of film plots and to identification with the main character.

**Bounding the discussion**

While narratives can be found in many forms across many media, the current work focuses on narrative feature films as a first step. Compared to TV series, for example, which may use many episodes to provide information to the audience about the

\textsuperscript{4} The Amazon search for top screenwriting books: http://www.amazon.com/Best-Sellers-Books-Screenwriting/zgbs/books/4500/ref=zb_snav_b_3_4484
characters and the storyworld, feature films are more universally interpretable because a new film (non-sequel) always has to create and introduce its story world and its characters. Therefore, excluding sequels, films more consistently follow a certain pattern of storytelling, and exist as self-contained narratives. Furthermore, on a practical level, the amount of prior knowledge of possible experimental participants regarding a TV show can vary widely, changing how they comprehend the story, whereas in films (especially if they are not adaptations), there is no such thing as prior knowledge, so everyone starts with more of a clean slate.

A fundamental assumption underlying this paper is that almost all feature films in the United States tend to follow consistent principles of story design. McKee (1997) proposes that all films can be categorized based on the extent to which they follow one of three paradigms: classical design, minimalism, or anti-structure. "Classical design means a story built around an active protagonist who struggles against primarily external forces of antagonism to pursue his or her desire, through continuous time, within a consistent and causally connected fictional reality, to a closed ending of absolute, irreversible change" (McKee, 1997, p. 45).

In comparison, films in the "minimalism" category contain most of the elements of classical design mentioned above, but with some elements changed or removed. In contrast to the first two categories, the category of anti-structure is a radical departure from classical design. Films using anti-structure (which generally are films considered to be experimental or avant-garde) reverse the principles of classical design and would not be considered "narrative" in the sense used by Herman (2009). As with artists in any
medium, anti-structure filmmakers endeavor to "break the rules" and defy not only storytelling conventions but more fundamental conceptualizations of reality. However, anti-structure films are exceedingly rare, and almost never receive a theatrical release in the United States, even in "art house" theaters (McKee, 1997; Snyder, 2005).

Classical design is pervasive in filmmaking in general, and especially within American films produced by any major studio or distributor (Snyder, 2005). The overwhelming majority of films that receive a national theatrical release in the United States and abroad adhere closely to the principles of classical design (or "Archplot"). "The Archplot is the meat, potatoes, pasta, rice, and couscous of world cinema. For the past one hundred years it has informed the vast majority of films that have found an international audience" (McKee, 1997, p. 46).

Therefore, in this paper, all discussions of screenplays and storytelling are intended to refer to films that are not sequels and that make use of classical design (McKee, 1997).

**Creating identification in screenwriting.**

Fundamental to classical design is a hero who has a goal which will drive forward the story of the film. However, the hero can have multiple goals, and screenwriting texts discuss these goals with varying terminology and conceptual precision. Furthermore, the terms "goal", "need", and "motivation" are used interchangeably in screenwriting texts, and so the terms will be considered synonymous for the moment. Four major types of goals are reviewed below, with summaries of how they are used and defined in screenwriting texts (with the caveat that the types of goals overlap conceptually).
Together, these screenwriting goals will be referred to as “the hero’s goals”, in order to distinguish goals derived from screenwriting from motivations derived from psychology. (See Table 2) Connections will also be drawn between the types of goals from screenwriting literature and types of motivations from ERG Theory. (See Table 3) After the goals are described, the various goals will be compared and contrasted, in an attempt to obtain greater conceptual clarity and organization. The expected impact of these various goals on audience identification will then be discussed.

*The hero's external goal and conscious internal goal.*

Some authors make a point of dividing the hero's goal into two concepts. First, the hero needs to have "an outside goal that the audience will care about" (Trottier, 1998, p. 86), and second, the hero has "a powerful, personal motivation for achieving the goal" (p. 86). The first is the hero’s external goal, and can also be described as the hero's "Conscious desire" (McKee). The external goal is the explicit and specific goal of the movie's plot. Defeating a villain, obtaining a precious object, or finding the perfect romantic partner are examples of external goals. A typical synopsis of a film will focus on the external goal (for example, Luke Skywalker's goal is to rescue Princess Leia and defeat Darth Vader).

In light of the Existence, Relatedness, and Growth needs from ERG Theory (Alderfer, 1972), it seems that external goals are virtually always based on either Existence needs or Relatedness needs. Growth needs are, after all, inherently internal. Any story in which the hero’s physical survival or health is in jeopardy is based on Existence needs. Certain genres seem to align with certain needs. For example,
Existence needs underlie action films and adventure films, as well as horror films and disaster films.

An external need in a film can also be a Relatedness need; a clear example of this is in romantic movies, wherein a character is motivated by a desire for closeness with another person.

The second goal mentioned above is an internal goal—the moral or personal motivation that is driving the hero to complete his or her mission. This conscious internal goal (as distinct from unconscious goals, which are discussed next) does not involve a physical achievement, but rather involves an emotional journey. From the ERG Theory perspective, internal conscious goals are based on Relatedness and/or Growth needs. Returning to the example of Star Wars, Luke Skywalker's conscious internal goal is perhaps his restlessness and desire to travel, along with a desire to learn more about himself and his family's history. In the first Rocky film, Rocky Balboa's external goal is to win a fight against Apollo Creed; however, Rocky's internal goal is to find self-respect—to prove to himself that he has what it takes to be a competitive boxer. Films in which a hero's external goal is to win a competition or to solve a crime may also be driven by the hero's internal motivation to gain self-respect, or to form a human connection, or to make sense out of the chaos of life— to name a few possibilities.

In contrast to the conscious internal goal, the hero may also have an unconscious internal need, as discussed next.
The hero's unconscious need.

To further complicate matters, some screenwriting texts also discuss that the hero should have an *unconscious* goal or need, which is emotional in nature (e.g., Trottier, 1998). The term “unconscious need” will be used in this paper rather than “unconscious goal”, because people are consciously aware of their goals (McClelland, 1985). The unconscious need is almost certainly a Relatedness or Growth need. From a biological evolutionary perspective, human survival depends on being keenly aware of most Existence needs (safety from danger, hunger, thirst, etc.), and acting on them quickly when they arise. Relatedness and Growth needs are more abstract than Existence needs, and so it seems reasonable that a protagonist would be unaware of them.

In his or her quest to satisfy an external goal or conscious internal goal, the hero may also be responding to an unconscious need. In most stories, the hero’s journey usually ends with them growing as a person, gaining new insight into themselves, and fulfilling their unconscious need. Trottier (1998) provides a couple of examples of unconscious needs: 1.) In the movie *Twins*, Danny Devito's character's external goal is to get $5 million, but his unconscious need is the love of a family. In the end, Devito gives up the money in order to save the life of his brother, and he winds up happier for having done so. 2.) In *Romancing the Stone*, Kathleen Turner's character has the external goal of saving her sister, who has been kidnapped. However, her unconscious goal is a need for romance. In the course of her journey, she ends up falling in love.
Overcoming a flaw / The character arc.

Lastly, the books on screenwriting agree that the hero should have a character flaw. At the beginning of the film, the flaw is what prevents the hero from fulfilling some need. (Which need? This will be discussed in a moment). Overcoming the flaw can also be thought of as its own need. Some commonly found character flaws are selfishness, pride, and greed (Trottier, 1998). The hero may or may not be aware of their flaw at the beginning of the story, but most likely, even if they are aware of it, they are not initially willing to do anything to fix it. The hero undergoes a "character arc" over the course of the film, in which they learn a lesson and grow as a person, thereby correcting the flaw and becoming happier with their lives.

"Overcoming the flaw" is most clearly related to Growth needs, as it is fundamentally about the process of personal growth. However, out of the four types of protagonist motivations just discussed, overcoming the flaw is probably the weakest motivation, or perhaps is not even a motivation at all in some cases. Generally, the hero does not want to grow or change for most of the film—it isn’t until the story’s climax\(^5\) that the hero confronts their own flaw and realizes that changing themselves is the only way to reach their external goal (or internal conscious goal). Therefore, while overcoming the flaw generally results in an improvement in the protagonist’s life, perhaps it is not itself a motivation that drives the protagonist forward through the story.

\(^5\) This will be discussed further in the upcoming section on screenplay structure.
Clarifying and comparing the four needs/goals

The four needs and goals just mentioned (an external goal, internal goal, unconscious need, and fixing a flaw) are not all listed and defined clearly in any of the screenwriting books that were used as references. No book listed all four concepts, but each concept was mentioned (and was a point of emphasis in) at least two books. Therefore, some reasoning may help to clarify conceptual relationships, but the information provided in the books may not be sufficient on its own to generate a clear and definitive way of organizing the four concepts.

A few propositions can be inferred, however. First, the unconscious need seems to be definitely distinct from the hero's external goal. It is hard to think of a scenario where a hero's external goal – for example, committing a heist or defeating a villain – is itself something that the hero is unaware of. Second, it seems more likely that the hero could be unaware of an internal need – for example, a need for greater self-confidence, or a need for a deeper romantic connection with a partner – meaning that the internal goal and unconscious need may overlap. In the midst of a film, the audience may be aware of the character's unconscious need that is driving the story, while the character has not figured it out yet. However, my third proposition is that the hero can sometimes have a separate internal goal and unconscious need. For example, in Star Wars, Luke Skywalker has a conscious internal goal of learning about his birth parents (Luke's interest is piqued when Obi Wan Kenobi tells him "I knew your father"). But arguably, Luke also has an unconscious need: to grow as a person and learn what he is capable of doing.

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6 In which case, the term "goal", implying a conscious desire, would not be appropriate to use.
Fourth, sometimes the hero's external goal and internal goal are inextricably linked (e.g., a revenge story where the external goal is also the internal motivation).

With regards to a hero's character flaw, one way to relate it to the other three concepts is to conceive of the character flaw as an obstacle preventing him/her from fulfilling one of his/her needs. Several screenwriting books imply that the character flaw is usually something that the character is not aware of (at least at the beginning of the story). Therefore, perhaps we can conclude that the hero's unconscious need is often to overcome the character flaw, which in turn is preventing the hero from achieving either the external or internal goal. Since none of the books discusses all four concepts as necessary and distinct components of a screenplay, it seems most likely that films will combine and distinguish these four types of goals in a variety of different ways. In spite of the murkiness that shrouds the way these four types of goals fit together, it is hopefully possible to at least recognize and distinguish the four types of goals when they appear onscreen.

**Implications for identification.**

Cohen’s (2001) four components of identification are cognitive empathy, affective empathy, sharing the character’s goals, and absorption. For the audience to share the character’s goals, the hero must possess some or all of the goals listed above, and the writer must ensure that the goals are clear and understandable to the audience. Trottier (1998) says the following about the character’s motivation: “The more personal, the better. In fact, the more personal it is, the more the audience will identify and sympathize with the character. It’s the emotional touchstone between your audience and
The hero’s goals should induce identification when the goals are relatable and resonate with audience members’ own experiences. The previous chapter on motivation focused on identifying universal human motivations in order to find motivations that are most likely to be relatable for audiences. Existence, Relatedness, and Growth needs are likely to be relatable for virtually all audience members because they are almost certain universal needs. Other typologies of motivations include motivations that are most likely not universal. For example, some of Maslow’s (1967) higher order needs, such as aesthetic needs and transcendence, are probably not relevant to large portions of the population, as Maslow himself noted (Maslow, 1967). Another example of motivations that are probably not universal can be found in some of the theories that focus on utilitarian, situation-specific motives in work settings (e.g., Barbuto, 2006; Hollenback, 1979).

As discussed above, the types of motivations that protagonists in films are driven by tend to fall into the relatively universal categories of Existence, Relatedness, and Growth needs. This trend is not an accident; screenwriting manuals urge writers to provide their characters with universal, meaningful goals (Snyder, 2005) that the audience will care about (Trottier, 1998), though none of the screenwriting books go so far as to list a typology of motivations. If a character has a motivation that audience members have felt in their own lives, audiences should have an easier time identifying with the character. By this logic, the establishment of any of the types of character motivations discussed above should tend to increase audience identification.

Therefore, the following hypotheses are proposed:
H5a: Establishment of the protagonist's external goal will lead to increased audience identification with the protagonist.

H5b: Establishment of the protagonist's conscious internal goal will lead to increased audience identification with the protagonist.

H5c: Establishment of the protagonist's unconscious need will lead to increased audience identification with the protagonist.

H5d: Establishment of the protagonist’s effort to overcome a character flaw will lead to increased audience identification with the protagonist.

While the protagonist’s eventual goal of overcoming a character flaw is predicted to increase identification, how will the initial demonstration/establishment of the flaw impact audiences? On the one hand, a protagonist’s character flaw might somewhat repel audiences, if for example the protagonist is shown early in the film to be greedy or self-centered, etc. But on the other hand, a protagonist’s flaw arguably could be evidence that they are simply human, and so possibly might make the character more relatable to those of us in the audience who, of course, are all flawed in some ways.

RQ1: Will establishment of the protagonist's character flaw lead to an increase or decrease in audience identification with the protagonist?

A key source of information that may clarify when and how various goals are established in a script is the common structure of story elements, which will be discussed next.
The Structure of Stories in Feature Films

A touchstone used by many of the screenwriting books is the work of Joseph Campbell, who wrote about the common elements of myths and stories that hold true across cultures and time periods (Campbell 1949/1972; 1988). Campbell (1988) argues that revered stories from most or all human cultures center around an archetypal hero's journey. A single structure (Campbell, 1988) underlies countless stories from various cultures, which are always about the journey of a hero who has certain universal qualities (as emphasized in the title of *The Hero with a Thousand Faces*, Campbell, 1949/1972).

Campbell's general observations regarding myths have been refined and expanded upon by the well-respected books listed above in order to provide specific and relevant insights for the field of screenwriting.

**Three act structure.**

Films are structured to have three acts, in other words: a beginning, middle, and end. In Act 1, the protagonist and his/her normal world are introduced to the audience. However, the hero's normal life is disrupted in some way during Act 1, and the hero is forced to choose how to deal with the disruption. The first "act break" (the transition from Act 1 to Act 2) is the moment when the hero leaves behind his/her ordinary world and enters into the new storyworld of an adventure or mission. Herman's (2009) discussion of world-making and world disruption in narratives is equivalent to the main story elements in Act 1 of a screenplay.

Act 2 is typically the longest act, and involves the bulk of the hero's adventure. However, the story remains unresolved until Act 3. The second act break (the transition
from Act 2 to Act 3) is also called "the crisis" (Trottier, 1998), and raises the stakes of the story as a final confrontation draws near. Act 3 contains the climax of the story and finally a resolution to the conflict in the story.

Snyder (2005) provides a more detailed list of the key moments in a screenplay, along with the corresponding time when each moment typically occurs. Please note that the widely-used rule of thumb is that one page of a screenplay translates into roughly one minute of screen time. In Snyder's (2005) model, the timing is based on a typical movie that is approximately 110 minutes long, for which the screenplay should be approximately 110 pages long:

**Act One**
1. Set-up of the hero's normal world. (First 10 minutes of the film, first 10 script pages).
2. Catalyst a.k.a. world-disruption (Minute 12). (Note that Field, 2005, calls this moment the "inciting incident" and Vogler, 1998, calls it the "call to adventure").
3. Debate (Min 12-25). The hero figures out how to respond to the catalyst/inciting incident.
4. First Act Break (Min 25). The hero crosses the threshold into a new world.

**Act Two**
6. Midpoint (Min 55).
7. Bad Guys Close In (Min 55-75).
8. All is Lost (Min 75). Things look grim for our hero.

9. Dark Night of the Soul (Min 75-85). The hero faces the possibility of failure and/or death. The stakes are raised.

10. Second Act Break (Min 85). The hero perseveres through a crisis and prepares for a final confrontation with the antagonist.

**Act Three**

11. Finale (Min 85-110). The climax of the film and the final resolution.

While this story structure provides guideposts for the overall development of a film's story, and while all of these key moments of story structure are worthy of further exploration, the focus of the current paper will be on the moments contained in Act 1, because Act 1 is where the screenwriting books suggest that the screenplay does most of the "work" of creating audience identification with the hero.

**Exceptions to the typical story structure.**

Not all films exactly fit the structures mentioned. There are countless variations on the principles of story structure, and for every rule discussed, instances can be found that are exceptions to that rule. However, the goal at present is not to argue that the guiding principles of screenwriting are always followed impeccably in every movie (they most certainly are not), but rather to identify general principles and trends that are present far, far more often than not, and that shape how movies are created and experienced.

Also, an important distinction needs to be made now regarding structure vs. formula. While Hollywood movies are often rightly criticized for being too formulaic,
that does not mean that structure is inherently negative. All of the screenwriting books would agree that structure is based on time-honored principles of good storytelling, whereas formulaic stories are cases where a writer has copied too much pre-existing material, and are not the fault of the structure. The underlying structure is a tool that helps a great, original idea be shaped into the best possible story. Thus, it is not a hindrance to originality, but in a sense, it can help originality.

**Key scenes for identification**

The following section will discuss key moments that occur early in films which are predicted to impact identification. These moments are: a “Save the Cat” scene, the set-up and introduction of the hero’s world, the first appearance of the hero, the Inciting Incident, and the first act break.

**The “save the cat” scene: Making the protagonist likable.**

The likability of a hero undoubtedly is related to audience identification, but exactly how the two are related is somewhat murky. Different screenwriting books have differing views of how important a likable hero is to identification and absorption.

Snyder (2005) believes that audience liking of a protagonist is a necessary precursor of identification and transportation: "Liking the person we go on a journey with is the single most important element in drawing us into the story" (Snyder, 2005, p. xv). Snyder encourages screenwriters to make sure that very early on in the film, the hero demonstrates traits that make him or her likable. "I call it the "Save the Cat" scene… It's the scene where we meet the hero and the hero does something – like saving a cat – that defines who he is and makes us, the audience, like him." (Snyder, 2005, p. xv). For
example, in *Die Hard*, Bruce Willis' character spends the opening sequence lugging around a giant-sized teddy bear (a gift for his daughter) in a cramped airplane and then through a hectic airport terminal.

Kindness is one trait that a likable hero might exhibit early on (for example, by saving a cat stuck in a tree), but other traits that are less obviously charming can also lead to likability. For example, audiences may like a hero who demonstrates assertiveness in standing up to an unfairly mean-spirited boss. Furthermore, even protagonists who are antiheroes (such as criminals) usually still demonstrate likable traits, especially in the early moments of a film. "In the opening sequence of *The Wild Bunch*, William Holden offers his arm to an elderly lady and helps her cross the street just before he and his gang rob the bank as a Temperance Parade gets underway." (Field, 2005, p. 61).

Based on Snyder’s (2005) conceptualization, a “Save the Cat” scene should have the effect of increasing audience liking of the protagonist.

**H6: Audience liking of a character will be greater directly after a "Save the Cat" scene than before that scene.**

It is less certain whether a “Save the Cat” scene will impact *identification*, but if it does, then it would most likely lead to a positive change in identification:

**H7: Audience identification with a character will be greater directly after a "Save the Cat" scene than before that scene.**

However, not every screenwriting book agrees with Snyder's (2005) view that liking is necessary for identification. McKee (1997) believes that audiences usually like a hero and identify with him/her, but it is possible for audiences to identify with a hero
who is unsympathetic. McKee (1997) emphasizes the conceptual distinction between sympathy (liking) and empathy (identification), asserting that a hero's positive traits increase only sympathy. In a protagonist, we as audience members may recognize aspects of ourselves that we are not particularly fond of, in which case we may identify with the hero but not like him or her. On the other hand, we may like a character but fail to identify with them: "Likability is no guarantee of audience involvement; it's merely an aspect of characterization." (McKee, 1997, p. 142).

**Disposition theory**

While the screenwriting books may disagree on how liking relates to identification, communication research – specifically, the disposition theory of drama (Raney, 2004; Zillmann, 1994) – provides further insight. “The disposition theory of drama posits that enjoyment of media content is a function of the viewer’s affective disposition toward characters and the outcomes experienced by those characters in the unfolding narrative” (Raney, 2004, p. 350). Audience enjoyment of the narrative increases if a character that the audience likes has a happy ending, and when a character they dislike experiences a negative outcome (Raney, 2004). Support for disposition theory has been found across a variety of genres, from crime dramas (Raney, 2002; Raney & Bryant, 2002) to professional wrestling (Lachlan et al., 2009), and was also found in a longitudinal, multi-sample study that examined reactions to a daytime soap opera over the course of ten weeks (Weber, Tamborini, Lee, & Stipp, 2008). The combination of affective dispositions toward characters and the resulting fates of those
characters were found to predict both enjoyment in a sample of regular viewers, and to predict Nielsen television ratings for the program (Weber et al., 2008).

While the research that was just reviewed focused primarily on enjoyment as the outcome being predicted, disposition theory also has implications for identification. First of all, if an audience is happy when a character (most likely the hero) that they have a favorable disposition toward is victorious (Raney, 2004), then it stands to reason that the audience is feeling empathy for the hero by sharing the hero’s feelings of joy. Empathy, a central component of identification, is more explicitly linked to character liking by Zillmann (1994), who states that “affective dispositions toward persons or their personas virtually control empathy” (p. 44). Zillmann (1994) therefore sides with Snyder (2005) over McKee (1997), taking the position that dispositional feelings override empathy, so that empathy (and therefore identification) is not possible unless the audience likes the character.

Zillman (1994) proposes that character liking paves the way for empathy and identification to occur, but it is not clear whether liking by itself will lead to increased identification. This raises important questions about the relationship between liking and identification. Does each concept influence the other? Can one concept can be thought of as causally prior to the other? An exploratory research question is proposed regarding this topic:

RQ2: What is the relationship between liking and identification in real time?

Regardless of the details of the relationship between liking and identification, it seems that liking of a main character may have important
implications for both identification and enjoyment. Therefore, the earlier hypotheses and research questions regarding identification will also be posed for liking of the protagonist:

**H9:** Establishment in a narrative of a protagonist’s existence needs (H9a), relatedness needs (H9b), and/or growth needs (H9c) will each lead to an increase in audience liking of the protagonist.

**H10:** If multiple categories of needs are established for a protagonist in a film, existence needs will lead to the largest increase in liking, followed by relatedness needs, with growth needs leading to the smallest increase in liking.

**H11:** When an audience views a film, liking of the protagonist changes over time.

**H12:** An audience member's liking of the protagonist at any time is influenced by the story content at that time (H12a), and by the audience member’s previous levels of liking (H2b).

**H13a:** Establishment of the protagonist's external goal will lead to increased audience liking of the protagonist.

**H13b:** Establishment of the protagonist's conscious internal goal will lead to increased audience liking of the protagonist.

**H13c:** Establishment of the protagonist's unconscious need will lead to increased audience liking of the protagonist.

**H13d:** Establishment of the protagonist’s effort to overcome a character flaw will lead to increased audience liking of the protagonist.
RQ3: Will establishment of the protagonist's character flaw lead to an increase or decrease in audience liking of the protagonist?

If "Save the Cat" moments are effective, perhaps it is because they are demonstrations that a hero shares the audience's values. Upon seeing that a hero shares their values, audience members may quickly come to like the hero. The role of values will be discussed in further detail in the section on individual differences.

The screenwriting literature does not indicate a specific point in the narrative when the “Save the Cat” scene should occur, though presumably it should occur relatively early in the story in order to facilitate audience identification with the protagonist as early as possible. However, in contrast to the “Save the Cat” scene, screenwriting manuals provide greater information about when other key story moments should occur. These story moments which are predicted to be most relevant for identification are discussed next.

*Set-up and introduction of the hero's world.*

During approximately the first 12 minutes of a film, while the audience is first introduced to the hero and learns about the regular world of the hero, various aspects of homophily may become apparent to the audience. The audience may notice similarities between the hero's life and their own with regards to demographics, attitudes, values, etc. Identification will not be at its highest level yet, because the hero's external motivation most likely has not yet been established. However, the hero's internal motivation (and unconscious need) may be established during the set-up, which then should positively impact identification.
First appearance of the hero.

The first appearance of the hero is a specific point in time during the "set-up" phase during which the audience's liking of the hero may first be established. Physically attractive people tend to be well-liked by others (Horai, Naccari, & Fatoullah, 1974; Walter, Aronson, Abrahams, & Rottman, 1966), and since most movie stars are physically attractive, the audience may immediately like them when they appear on screen.

H14: The first appearance of the hero will produce an increase in liking.

As with the “Save the cat” scene, an impact on identification is more tentative, but if there is an impact, the direction of change would presumably be positive.

H15: The first appearance of the hero will produce an increase in identification.

The inciting incident (a.k.a. “the catalyst”).

The inciting incident (Field, 2005; McKee, 1997) is the first major event of the main story, and is the primary cause for all of the events that follow. The inciting incident is mentioned in every major book on screenwriting, though it is also referred to by other names, such as the "call to adventure" (Campbell, 1972; Vogler, 1998), the "big event" (Trottier, 1998), or the "catalyst" (Snyder, 2005). However, all of the screenwriting books agree on the basic definition of the inciting incident, and on its overall importance.

The Inciting Incident first throws the protagonist's life out of balance, then arouses in him the desire to restore that balance. Out of this need—often quickly,
occasionally with deliberation—the protagonist next conceives of an Object of Desire: something physical or situational or attitudinal that he feels he lacks or needs to put the ship of life on an even keel. Lastly, the Inciting Incident propels the protagonist into an active pursuit of this object or goal. (McKee, 1997, p. 192).

During the setup phase at the beginning of Act 1, the hero's normal life is established. Then the inciting incident takes place and disrupts the hero's life in some way. The inciting incident can take many forms, such as the arrival of a tornado (*The Wizard of Oz*), a crime committed by the villain (e.g., *The Fugitive*), or a first encounter with a future romantic partner (*The Wedding Singer*). The incident can take place in an instant, or can develop over several scenes. The inciting incident always takes place in Act 1, though recommendations from screenwriting books about exactly when it occurs range from the extremely flexible (any time in the first act according to Field, 2005) to the extremely specific (it should happen precisely on page 12 of a screenplay, according to Snyder, 2005).

The inciting incident may be a positive or a negative event, but it is emotionally charged and provokes an emotional reaction in the hero. As mentioned above by McKee (1997), the inciting incident leads to the establishment of the "Object of Desire", which is synonymous with the hero's external goal. The inciting incident establishes what is at stake in the story, and the external goal will define the hero's journey, whether that goal is righting a wrong, pursuing a romantic interest, or searching for a precious object. The inciting incident is usually an event that *happens to* the protagonist, rather than an event
actively brought about by the protagonist. This fact may have important implications for audience identification. The inciting incident may often catch both the hero and the audience off guard. Furthermore, its emotional impact may be felt in a similar way by both the hero and the audience.

Throughout the subsequent story, the hero is an active character who pursues a goal. Sharing a hero's motivation or goal is a central component of identification (Cohen, 2001), so it stands to reason that the inciting incident – the event that establishes the hero's external goal – is of particular importance in creating identification. If, for example, the inciting incident involves the hero's family being killed by the bad guys (e.g., The Punisher), we as the audience may share in the hero's horror at seeing his family murdered, and we may therefore internalize the hero's subsequent motivation to exact revenge upon the enemy.

The inciting incident sets in motion the main storyline of the film, and directly leads to the establishment of the protagonist's external goal. However, the two things may not always occur simultaneously. The external goal may sometimes be immediately clear during the inciting incident, whereas in other stories the inciting incident may set in motion a sequence of events that develop over several scenes and result in the external goal being established somewhat later. Therefore, in addition to H5 regarding the hero's external goal, the following hypothesis is proposed regarding the inciting incident, in recognition of the fact that they may not occur simultaneously:

**H16: The inciting incident will lead to an increase in audience identification with the protagonist.**
A parallel hypothesis is proposed for liking, since liking is expected to be highly correlated with identification:

**H17: The inciting incident will lead to an increase in audience liking of the protagonist.**

Screenwriting literature suggests that the inciting incident should be constructed to evoke deep-seated needs or emotions that are common to all human beings. "The motivation for the hero to succeed must be a basic one," says Snyder (2005, p. 54), "It's because primal urges get our attention. Survival, hunger, sex, protection of loved ones, fear of death grab us." However, Snyder (2005) notes that not all films involve "primal needs", but he suggests that more screenwriters should make an effort to do so, as "primal needs" should lead to particularly compelling stories. "Primal needs" are reminiscent of existence needs as described in the psychological literature on motivation. (See Table 3). Since Existence needs are more concrete than other needs (Alderfer, 1969) and perhaps more prepotent than other needs (Maslow, 1943), they may capture the audience's attention more readily than other types of needs. Therefore, the emphasis on primal needs in screenwriting (Snyder, 2005) lends additional support to hypothesis 2, which proposed that existence needs would have larger effects than other needs.

*The first act break.*

The final key story moment to be discussed is the first act break. In the transition from Act 1 to Act 2, the hero enters a new world. Entering the new world can either occur literally, such as if the hero travels to a new land, or it can occur figuratively, meaning that the hero is perhaps geographically in the same place, but his or her situation
has substantially changed in some way. For example, in the feature film *Die Hard*, Bruce Willis' character remains inside an office building for almost the entire duration of the movie. However, at the end of Act 1, his situation changes dramatically, as the office party he was attending is taken over by terrorists.

The first act break should have an impact on audience identification, especially because screenwriting books agree that the change from the hero's normal world to the new world should be drastic. In other words, a more dramatic change is more... dramatic. The situation in Act Two is new to both the hero and the audience, which suggests that the audience may have cognitions and emotions (e.g., awe, fear, or uncertainty) that are similar to those of the hero, thereby increasing identification and possibly liking as well.

**H18: The first act break will lead to increased audience identification with the protagonist.**

**H19: The first act break will lead to increased audience liking of the protagonist.**

The four screenplay moments just discussed (a “save the cat scene”, the first appearance of the hero, the inciting incident, and the first act break) will be collectively referred to as the “key story moments” for identification for the remainder of this paper. (The “set-up” sequence at the beginning of Act One can be 12 minutes long or longer, so it will not be considered one of the story moments). While all four of the key story moments may be important for
identification, it would be helpful to know which moments have the largest effects on identification. A parallel question is proposed for liking.

**RQ4:** What is the effect size of each of the key screenplay moments on identification?

**RQ5:** What is the effect size of each of the key screenplay moments on liking?

A similar line of inquiry can be advanced regarding which of the hero’s goals identified above are most important for identification and for liking. (The “hero’s goals” refer to the four goals specified in the previous section: an external goal, an internal conscious goal, an unconscious need, and overcoming a flaw).

**RQ6:** What is the effect size of each of the hero’s goals on identification?

**RQ7:** What is the effect size of each of the hero’s goals on liking?

Most of the earlier hypotheses focused on differences over time in mean levels of identification. However, in an effort to gain additional descriptive information regarding identification, predictions can also be made about changes in the variance across audience members’ levels of identification. Changes in variance can certainly have substantive meaning: less variance can be interpreted as an indicator that audience members are having very similar experiences at that moment in time. From the screenwriter’s perspective, a scene that is intended to increase audience identification can be considered a success if both mean levels of identification are high and the variance is low. This can be seen as an indication that the scene was so compelling that it overcame individual differences and random distractions, and made virtually every viewer feel
increased identification. In contrast, a scene that is not very successful at creating identification will likely result in low mean levels of identification and higher variance in identification. The higher variance could reasonably be considered to be an indicator that the scene itself was not particularly compelling, and so audience levels of identification were more heavily influenced by individual idiosyncrasies, random distractions, or other “noise”.

**H20:** The variance in audience identification will be lower during scenes that establish a hero’s goals (H20a) and during key screenplay moments (H20b), than the variance in audience identification during the rest of the film.

A parallel effect is predicted to occur for liking:

**H21:** The variance in audience liking will be lower during scenes that establish a hero’s goals (H21a) and during key screenplay moments (H21b), than the variance in audience liking during the rest of the film.

Along the same lines of reasoning, variance in audience identification and liking are predicted to be lower during scenes establishing the ERG psychological motivations described in chapter two.

**H22:** The variance in audience identification will be lower during moments that establish an existence, relatedness, or growth need than the variance during the rest of the film.

**H23:** The variance in audience liking will be lower during moments that establish an existence, relatedness, or growth need than the variance during the rest of the film.
While certain story moments may in a sense “override” individual differences temporarily, the psychological and demographic differences between audience members certainly play an important role in determining audience identification. Some key individual differences are discussed below.

**Individual Differences**

**Motivations.**

As has been discussed, motivations are a fundamental component of the human experience, and some types of motivations seem to be universally present in human beings. However, due to the enormous variety across different people’s life experiences and socioeconomic circumstances, it stands to reason that the motivations which happen to be the most relevant driving forces in Person A’s life are different than the motivations that are most important for Person B. Alderfer (1972) did indeed find large individual differences regarding the strength of various motivations, as did much of the other motivation research reviewed in Chapter 2. Therefore, a straightforward but important prediction is motivational matching; in other words, audiences will experience the greatest identification when the hero’s motivation they see on screen matches the strongest motivation in their own lives.

**H24: When Existence needs are established in a film, their effects on audience identification (H24a) and audience liking (H24b) will be strongest among audience members for whom Existence needs are the most important.**

**H25: When Relatedness needs are established in a film, their effects on audience identification (H25a) and audience liking (H25b) will be strongest**
among audience members for whom Relatedness needs are the most important.

**H26:** When Growth needs are established in a film, their effects on audience identification (H26a) and audience liking (H26b) will be strongest among audience members for whom Growth needs are the most important.

One possible flaw in the above propositions is that Existence, Relatedness, and Growth needs are extremely broad categories, and so a specific protagonist motivation could be in the same category as an important motivation to the audience member, but the two motives might still be too different for matching to occur. For example, if a protagonist is motivated by the Relatedness need to repair her relationship with her estranged father, this motivation may not matter much to an audience member driven primarily by the Relatedness need of finding romantic love. Therefore, beyond the ERG categories, the following additional hypothesis is proposed:

**H27:** If similar specific motivations are important to both the audience member and the protagonist, then the audience will have greater identification with (H27a) and liking of (H27b) the protagonist.

A different, finely-grained examination of the “motivation matching” hypotheses is possible by considering matching values, which are closely tied to motivations.

**Values**

Values are “desirable goals, varying in importance, that serve as guiding principles in people’s lives” (Schwartz & Sagiv, 1995, p. 93). The concepts of values and motivations have a great deal in common. The “desirable goals” that the above...
definition refers to are generally broad societal goals, while motivations may have more to do with a specific person or a specific situation. But as goals that are desirable, values are inherently linked to conscious motivations.

In fact, Schwartz (1994) created a typology of ten categories of values based upon motivations as an organizing factor: “Specific values were sampled from among values thought to express the motivational goal that defines that value type” (Schwartz, 1994, p. 25). The values were organized under three universal motivations that Schwartz (1994) deemed to be fundamental to human existence: “Biological needs, requisites of coordinated social interaction, and demands of group functioning” (Schwartz & Sagiv, 1995, p. 94).

Schwartz’s (1994) universal motivations are strikingly similar to the categories in ERG Theory (Alderfer, 1972). Biological needs from Schwartz are equivalent to Existence needs, while both social interaction and group functioning motivations can be thought of as Relatedness needs. (A conceptual difference is that Schwartz emphasizes the contributions of social motivations to the social fitness of a group, whereas Alderfer interprets social needs from the perspective of the individual. However, these different levels of conceptualization do not conflict. In fact, Schwartz connects the levels by pointing out that values which function well for a social group become integrated into the group’s culture, and are thereby taught to each individual raised in that culture.) Schwartz’s three universal motivations do not include a category that is equivalent to Growth needs; however, Schwartz (1994) in fact mentions an additional type of values—spirituality values (e.g., finding meaning in life, attaining inner harmony)—which are
conceptually very close to Growth needs. Interestingly, Schwartz does not include spirituality values in his final typology because it is unclear whether they are truly universal values. The same questions apply to Growth needs (and the highest levels of Maslow’s hierarchy).

Trottier (1998) advises screenwriters that characters need to demonstrate strong values in order to be likable. We can infer from Trottier (1998) that the character values and the viewer values need to match to at least some extent in order to create liking (or identification). This idea is proposed as a hypothesis:

**H28: Identification with (H28a) and liking of (H28b) a protagonist will be strongest among audience members who share the protagonist’s values.**

**Homophily**

Homophily is a general term that refers to all facets of an individual's potential perceived similarity to another (McCroskey, Richmond, & Daly, 1975). The concept of homophily was operationalized by McCroskey et al. (1975), who developed a scale (the Perceived Homophily Measure) that contained four dimensions: *attitude, background, appearance, and morality*. It has been proposed that homophily increases identification (Slater & Rouner, 2002). Therefore, this effect is hypothesized for the current research:

**H29: Greater total homophily will predict greater identification with (H29a), and liking of (H29b), the protagonist.**

Homophily is a very broad concept, and the specific aspects of homophily range from physical size to moral values, from socio-economic background to sexual attitudes (McCroskey et al., 1975). Intuitively, physical size, demographic background, economic
success, moral values, etc., would seem to be quite different aspects of a person's nature, and research has demonstrated that, indeed, these separate characteristics have different impacts on identification and related outcomes (e.g., Cohen, 2006). For example, similarity between the audience and a character with regards to attitudes seems to be a stronger predictor of identification than demographic similarity (Cohen, 2006). In fact, the items in the attitude dimension of the homophily scale are conceptually similar to identification (e.g., “Thinks like me”, “Behaves like me”, and is “Like me”; McCroskey et al., 1975).

The morality dimension of homophily is very similar to the concept of values discussed above. Therefore, similarity in morality is hypothesized to increase liking in particular.

**H30:** Among the four dimensions of homophily, the attitude dimension will most strongly predict identification with the protagonist.

**H31:** Among the four dimensions of homophily, the morality dimension will most strongly predict liking of the protagonist.

**Empathy**

Empathy is a fundamental component of identification (Cohen, 2001), and so feeling empathy is a sign that identification is taking place. However, empathy can be looked at not only as a temporary state, but also as a stable personality trait (Davis, 1980; 1983). Trait empathy should most likely predict greater identification:
H32: Audience members high in trait empathy will experience greater overall levels of identification with the protagonist than audience members lower in trait empathy.

Now that all of the hypotheses and research questions have been proposed, the following section will discuss the Method.
Chapter 4: Method

**Stimulus Selection and Coding**

In order to address the research questions regarding whether key story moments can be reliably identified, an analysis was performed on a random selection of several films produced by Hollywood studios in the past 10 years. This process served as a pre-test of these films as potential experimental stimuli, and the identification of key story moments allowed for those moments to be treated as the independent variables in the following study, to examine their effects on audience identification and liking.

As will be described below, several independent coders analyzed three randomly selected films in an effort to identify key story moments based upon the information discussed above from Snyder (2005) and other screenwriting sources. The coders discussed and assessed the face validity and conceptual accuracy of the codebook, and revised it until a final coding scheme was agreed upon.

**Sampling frame.**

The sampling frame was limited to films released in the last 10 years, because older films may seem dated to young viewers and may thereby be a distraction (for example, the quality of special effects has improved rapidly in recent years). Furthermore, the sampling frame was limited to films that were produced by one of the
major U.S. studios, and which were given a theatrical release. Two genres were excluded from the analysis: historical films depicting true stories (including biographies), and comedies. In this author's opinion, historical films/biographies (e.g., Nixon, The Monuments Men, Ali) are the genre that is least likely to adhere to typical screenplay structure, since real events unfortunately do not usually follow a satisfying three act structure. With regards to comedies, while the principles of story structure can be applied with equal relevance to comedies as well as dramas (Snyder, 2005), comedies are less likely to put much emphasis on the dramatic structure of their storyline. Therefore, the current analysis included only fictional dramas, though the genre of "dramas" is conceptualized broadly as containing all of the types of movies that are not primarily comedies (e.g., thrillers, action, westerns, horror, etc.).

Lastly, since the goal was to examine the successful process of creating identification, films that received predominantly negative reviews and/or were box office “flops” were excluded from the sampling frame. The website Rotten Tomatoes (www.rottentomatoes.com) aggregates reviews from a large number of movie critics and provides an overall percentage of how many reviews for a film are positive. Films that received a score of 50% or greater were included in the current study. For box office success, the top fifty films each year with the highest domestic gross were used, except that the top ten were excluded due to the very high likelihood that participants would have already seen those films.
**Selection and coding**

A total of 3 films were randomly selected from the sampling frame. Three was deemed to be an appropriate number of films because it is a large enough sample to reduce the amount of bias in the overall results due to the idiosyncrasies of any one particular film. However, using more than 3 films would quickly become impractical because it would place unreasonable demands on the time and energy of the expert coders (discussed below) and would substantially increase the complexity of data collection and analysis.

The random selection process resulted in the following three films being used in the present study:

- *Rio* (2011)
- *Rise of the Planet of the Apes* (2011, referred to from now on as “Apes”)

Table 4 provides details of the three films and the protagonist in each.

Three “expert coders” independently viewed each of the films; subsequently, any discrepancies in their coding were discussed and resolved. The coders (this paper’s author and two of his colleagues) have all written screenplays for feature films and have worked or are currently still working in Hollywood as full-time writers of television shows and feature films. All three writers are members of the Writers Guild of America (WGA), which is the main professional union representing screenwriters, and which has jurisdiction over writing that is done for all of the major U.S. film studios and television networks, along with many cable television networks and other production entities.
Writers are not eligible to join the guild unless they are a working professional with “writing employment and/or sales within the Guild’s jurisdiction and with a signatory company (a company that has signed the Guild’s collective bargaining agreement)” (Writers Guild of America, 2009, p. 16). The three expert coders are all very familiar with the underlying structure of screenplays.

The coders identified each of the following key moments: the first appearance of the hero, the inciting incident, a “Save the Cat” scene, establishment of the hero's conscious internal goal, establishment of the hero's external goal, establishment of a character flaw, establishment of an unconscious need, and the first act break. The coders also identified moments when existence, relatedness, or growth needs were established. Initial coding was done separately by each coder, and then discrepancies were discussed and recoded if necessary until consensus was reached. Consensus was successfully achieved for all coding.

Main Study

The purpose of the experiment was to test how participant levels of identification and liking of the protagonist change in real time based on the story elements identified in the pre-test. The interactions of individual differences with story elements were also explored.

Participants. \( N = 308 \) undergraduate students from Communication classes participated in the study in return for course credit. Of those 308, 97 viewed Rio, 102 viewed Apes, and 109 viewed The Italian Job.
Procedure. Participants completed two phases of data collection. Phase 1 was an online survey conducted using Qualtrics software. Individual difference variables and prior exposure to the stimuli were measured in Phase 1 (details are below). In Phase 2, each participant was randomly assigned to view one of the films from Phase 1 that they had not seen before. The details of prior exposure are in the next section below.

While participants viewed the film they had been assigned to, they provided continuous response measures (CRMs) through MediaLab software. Before the film began, the experimenters explained the study procedures and each participant was provided with a thorough definition and explanation of the specific measure that they would be responding to during the program. Participants practiced providing responses on a brief unrelated video and had the opportunity to ask questions before the main feature began.

They viewed a film from the beginning through the first act break, after which the film stopped. The duration of the film clips that were shown were roughly equivalent in length (approx. 35 minutes). The remainder of the films were not shown because they were not expected to be as relevant to the establishment of identification with the protagonist. Furthermore, using only 35 minutes of each film reduced concerns about potential participant fatigue and the technical limitations of the MediaLab software (i.e., the likelihood of crashing).

Finally, participants were asked to complete a post-viewing questionnaire, and then were thanked and excused.
**Prior exposure.**

If a participant had previously seen all three films, they were randomly assigned to view any one of the films. Overall, 4 of the participants who viewed the *Italian Job* for this study had seen it before, 10 of the participants who viewed *Apes* had seen it before, and 3 who viewed *Rio* had seen it before. In sum, 17 participants out of the total 308 viewed a film they had seen before. An inspection of the mean levels of overall enjoyment, liking of the protagonist, and identification with the protagonist found that the responses of participants with prior exposure were highly similar to the responses of the remaining participants. Therefore, participants with prior exposure were included in subsequent data analyses.

**Measures.**

**Individual differences.**

*Trait empathy* was measured using the Interpersonal Reactivity Index (IRI) (Mark H. Davis, 1980; Mark H. Davis, 1983), which uses four subscales to tap into different aspects of the global concept of empathy: perspective-taking, empathic concern, personal distress, and fantasy. The perspective-taking subscale measures “spontaneous attempts to adopt the perspectives of other people and see things from their point of view” (Mark H. Davis, 1980, p. 2). Empathic concern refers to “respondents’ feelings of warmth, compassion, and concern for others,” (p. 2), while the personal distress subscale “measures the personal feelings of anxiety and discomfort that result from observing another’s negative experience” (p. 2). Finally, the fantasy subscale of the IRI directly refers to identification, but as an individual difference trait. Davis (1980) states that the
fantasy subscale measures “the tendency to identify with characters in movies, novels, plays and other fictional situations” (p. 2). The overall scale had acceptable reliability, (Cronbach’s $\alpha = .84$).

The Schwartz Value Survey (Schwartz, 1994, 2009; Schwartz & Sagiv, 1995) was used to gain an understanding of which values individuals view as the most important guiding principles in their lives. Participants rated the importance of each value (57 items) from -1 to 7.

Prior exposure. Participants were asked whether they had previously seen each of the three films. Along with “yes” and “no”, the response options included “I’ve seen part of it”, and “I’m not sure”. Responses in the latter two categories were treated the same way as a “yes” response in the calculation of assignment to conditions, in order to minimize the number of repeat viewings.

Independent variables.

The independent variables were the key story moments that were identified by coding during the pre-test.

Dependent variables.

Continuous response measures. Each participant was randomly assigned to provide a continuous response on a single measure for the duration of the video. Responses were recorded using the continuous response function in MediaLab software. Each measure asked a single question regarding the participant’s real-time response to the video. The question was visible on the bottom of the screen throughout the duration of the video, along with a slider that could be moved left and right at will, anchored by the
end points of 0 (“Not at all”) and 100 (“Very much”). Each participant was randomly assigned to respond to one of the following measures:

1. Identification (“At this moment, how much are you identifying with ____?”)
2. Liking of the Protagonist (“At this moment, how much do you like ____?”)

[The main character’s name was inserted in the blank.]

MediaLab reports the level of the participant’s slider for each second for the duration of the video.

**Post-viewing measures.**

*Identification.* Scales for measuring audience identification with a character in a narrative have been developed both by Cohen (2001), and by Igartua (2010). Items from each scale were selected for use in the present study, and were chosen based on applicability to the present context, with redundant items left out. Participants completed 5 items from Cohen’s (2001) scale (e.g., “While viewing, I could really get inside [character X]’s head”, “I understood the events in the movie the way [character X] understood them”; Cronbach’s α = .82). Participants also completed 7 items from Igartua’s (2010) scale (e.g., “I thought I was like [character X] or very similar to him/her”, “I understood [character X]’s feelings and emotions”; Cronbach’s α = .82). All 12 items were combined into a single index which was subsequently used for hypothesis testing (identification index α = .88). This post-viewing identification index is also referred to in subsequent analyses as “overall identification”, in order to distinguish it from the continuous response ratings of identification.
**Overall Liking.** Participants were asked to rate how much they liked the protagonist of the film they had just watched, on a response scale from 0 (“Not at all”) and 100 (“Very much”).

**Transportation.** Nine items were adapted from Green and Brock’s (2000) narrative transportation scale (Cronbach’s α = .73).

**Homophily.** Participants completed the 16-item homophily scale created by McCroskey, Richmond, and Daly (1975), which measures source-receiver similarity (Cronbach’s α = .78).

**Needs/Motivations.** In order to discover which types of needs or motivations are most personally relevant to participants, a questionnaire was created based upon ERG theory (Alderfer, 1969, 1972; Schneider & Alderfer, 1972). The questionnaire asked participants to rank 10 motivations (e.g., survival, avoiding injury, desire for romantic love, desire to help others, etc.), in order of relevance to their daily lives. A second questionnaire asked participants to rank how important the same 10 motivations were to the protagonist in the film they just viewed. To reduce potential question order effects, participants were randomly assigned to complete either the questionnaire about their own motivations or the questionnaire about character motivations first.
Chapter 5: Analysis and Results

Due to the large number of hypotheses (Hs) and research questions (RQs) being examined, and the fact that several different types of analyses were conducted, an effort has been made to present the analyses and results as clearly as possible. Therefore, this chapter has been organized by grouping together hypotheses and research questions that ask similar types of questions and that therefore can be analyzed using the same method. Three main groups of Hs and RQs are presented (with corresponding method of analysis):

1. Predictions and questions regarding the impact of a certain scene (a.k.a. “key moment”) on real-time identification and/or liking. Repeated measures ANOVAs are used to examine these questions.

2. Predictions and questions regarding the dynamic relationship between identification and liking. The previous set of questions pertained to a single moment or scene, whereas the current set of questions pertain to the dynamic measures over the course of the entire film segments that were shown. These questions will be examined using vector autoregression modeling.
3. HSs and RQs involving static measures of variables (i.e., variables that were measured at one time, either in phase 1 or after viewing the film in phase 2), along with miscellaneous other HSs and RQs. A variety of analyses are utilized for these questions.

Section 1: The Impact of Key Moments in Real Time

Since the key moments in films were identified based on different frameworks (psychological motivations, the hero’s goals, and screenplay structure), the terminology used will be consistent with Table 2, in an effort to improve clarity. “Key moments” will be used as the general term to refer to any scene or moment that is predicted to affect identification or liking, and key moments include the establishment of a psychological motivation, the establishment of a goal for the hero, and the moments that are part of screenplay structure, as listed in Table 2. The length of most of the key moments was equal to one scene (with a “scene” being defined as continuous action happening in a single location). However, instead of referring to “key scenes”, the more general term “key moments” is used here to refer to each of the important time periods the coders identified within each film, because while the majority of the key moments were the length of a scene, some key moments spanned two or more very short scenes and other key moments were only a single section of a long scene. The length of key moments varied from 5 seconds to approximately 2 minutes.

For each movie, the exact timing of every key moment was logged in seconds. The following steps were done twice (once for participants who provided real-time identification data, and once for participants who provided real-time liking data): three variables, representing the levels of participants’ ratings before, during, and after the key
moment, were computed. Each participant’s before and after levels were computed by calculating their mean rating for the 30 seconds directly prior to the beginning of the key moment, and for the 30 seconds immediately following the end of the key moment, respectively. The “during” values for each key moment were calculated based on the mean rating over the duration of that specific moment.

For each key moment, a repeated measures ANOVA was conducted with movie and sex as between-subject factors, and the before, during, and after levels of identification (or liking) as a within-subject factor. Previous research has found that sex significantly impacts audience identification (Slater & Rouner, 2002), and therefore sex was included in all of the repeated measures models.

**Psychological motivations**

Hypothesis 1 predicted that a protagonist’s existence needs (H1a), relatedness needs (H1b), and growth needs (H1c) would increase audience identification with the character. The coders determined that existence needs were present as a protagonist motivation in the first act of Rio and The Italian Job, but not in Rise of the Planet of the Apes; therefore, data was limited to the former two films for existence needs analysis \((n = 110)\). Results indicate that establishment of existence needs did indeed significantly impact identification, \(F(2,105) = 4.43, p < .05, \text{ partial } \eta^2 = .08\). There was also a main effect of sex, \(F(1,106) = 5.05, p < .05, \text{ partial } \eta^2 = .05\). Interactions between 1) movie and time, 2) sex and time, 3) movie and sex, and 4) movie, sex, and time were not significant. Inspection of the means for identification before, during, and after the establishment of existence needs found that existence needs actually led to an overall
decrease in identification over time, as can be seen in Table 5. Therefore, H1a was not supported.

For Hypothesis 1b, an analysis was conducted on all three films, because relatedness needs were present in all three. A repeated measures ANOVA found no main effect for relatedness needs, $F(2,159) = 0.83, p = .436$, but inspection of the means plots suggested that interaction effects in opposite directions might be suppressing the main effect. There was a significant interaction between movie and sex, $F(2,160) = 4.85, p = .009$, partial $\eta^2 = .057$, along with a significant interaction between establishment of the relatedness needs, movie, and sex, $F(4,316) = 2.48, p = .044$, partial $\eta^2 = .030$. For Italian Job, establishment of relatedness needs led to a small increase in identification for both men and women. For Apes, relatedness needs led to an increase in identification for women, but not for men. Most interestingly, for Rio, relatedness needs led to changes in identification for both men and women, but in opposite directions. Male identification increased, while female identification decreased. One likely explanation for this effect is that the relatedness scene in Rio introduces a female love interest for the male protagonist. While male viewers had increased identification with the protagonist, for female viewers, the scene may have made the protagonist’s male gender more salient, thereby decreasing their identification (Slater & Rouner, 2002). Therefore, hypothesis 1b was only partially supported.

Hypothesis 1c predicted that growth needs would increase audience identification. Growth needs were present only in Rio and Apes. The repeated measures analysis across those two films found that growth needs did indeed lead to greater
audience identification $F(2,100) = 4.31, p = .016$, partial $\eta^2 = .079$. There were no significant interaction effects.

In summary, Hypothesis 1a regarding existence needs was not supported, hypothesis 1b regarding relatedness needs was supported for male viewers only, and hypothesis 1c regarding growth needs was supported.

Hypothesis 2 predicted that existence needs would lead to a larger increase in identification than either relatedness or growth needs. Since existence needs did not have a significant effect, hypothesis 2 was not supported.

The impact of psychological motivations on liking was also examined. Hypothesis 9 predicted that the establishment of existence needs (H9a), relatedness needs (H9b) and growth needs (H9c) would each increase audience liking. The impact of existence needs on liking did not reach statistical significance at the .05 level. A small decrease in liking occurred that was marginally significant $F(2, 91) = 3.03, p = .053$, partial $\eta^2 = .062$. No interactions with the existence needs were present.

The establishment of relatedness needs did lead to increased liking, $F(2,135) = 12.04, p < .0005$, partial $\eta^2 = .151$ across all three films, lending support to hypothesis 9b. Lastly, the establishment of growth needs did not have a significant relationship to liking ($F(2,89) = 0.10, p = .904$), and no interactions with growth needs were significant, and so hypothesis 9c was not supported.

It was not possible to conduct a thorough test of hypothesis 10 regarding the relative effect size of each of the ERG needs on liking, since all three needs were not
present in all three films. However, when the needs were present, the lack of significant effects for existence and growth needs suggests that hypothesis 10 was incorrect.

The Hero’s Goals from Screenwriting Literature

The effects of the hero’s goals are summarized in Table 6. First, a repeated measures ANOVA was used to test hypothesis 5a, which stated that establishment of a protagonist’s external goal would lead to increased identification. Hypothesis 5a was supported, as the external goal led to an increase in viewer identification across all three films, $F(2,159) = 8.18, p < .0005$, partial $\eta^2 = .09$. There were no significant interaction effects.

Hypothesis 5b predicted that establishment of the hero’s conscious internal goal would also increase identification. This was supported: $F(2,159) = 5.88, p < .01$, partial $\eta^2 = .07$. The effect of the conscious internal goal was consistent across films (no significant interaction of movie and time, $F(4,316) = 0.84, p > .10$) and across sexes (no significant interaction of sex and time, $F(2,159) = 0.48, p > .10$).

Another concept from screenwriting literature is the protagonist’s unconscious need, which was predicted to increase identification (Hypothesis 5c). The coders agreed that an unconscious need was not clearly established in Rio, but unconscious needs were established in Italian Job and Apes, so analysis was conducted on audience responses to the latter two films ($N = 117$). Results indicated a significant effect of the unconscious need on identification, $F(2,112) = 3.09, p < .05$, partial $\eta^2 = .05$; however, the effect was in the opposite of the predicted direction, with the unconscious need leading to lower identification. There was also a significant interaction between the unconscious need and
movie \( F(2,112) = 3.55, p < .05, \text{partial } \eta^2 = .06 \). Examination of the marginal means indicates that the negative effect on identification was driven specifically by the film *Apes*, whereas for *Italian Job*, levels of audience identification remained relatively flat before, during, and after the key moment (see Figure 2).

Hypothesis 5d and Research Question 1 had to do with the protagonist’s character flaw: whether establishment of the flaw would increase or decrease audience identification (RQ1) and whether an attempt by the protagonist to overcome the flaw would increase identification (H5d). The *Italian Job* did not establish a character flaw for the protagonist, so analysis was conducted on *Rio* and *Apes*. Establishment of the flaw had a main effect \( F(2,100) = 4.92, p < .01, \text{partial } \eta^2 = .09 \), leading to a decrease in audience identification. No interactions were significant.

With regards to the protagonist attempting to overcome the character flaw, unfortunately *Rio* was the only film in which such a scene existed, so comparisons across films are not possible. An analysis run on *Rio* revealed no statistically significant results, \( F(2,46) = 1.47, p = .24 \). Therefore, no support was found for Hypothesis 5d.

The effects of the hero’s goals on audience liking were also examined (pertaining to hypotheses 13a through 13d). Establishment of the hero’s external goal had a main effect that was marginally significant \( F(2,135) = 2.51, p = .085, \text{partial } \eta^2 = .036 \), but there was also a significant interaction between movie and time, \( F(4,268) = 4.83, p = .001, \text{partial } \eta^2 = .067 \). The between-subjects factor of movie \( F(2,136) = 19.11, p <

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7 More precisely, there was not an “attempting to overcome the flaw” scene within the first 40 minutes of *Italian Job* or *Apes*, which was the time frame examined in this study.
.0005, partial $\eta^2 = .219$) and the movie-by-sex interaction ($F (2,136) = 5.07, p = 0.008$, partial $\eta^2 = .069$) were also significant. Examination of the interactions suggested that the external goal led to a large increase in liking among both men and women during Apes, and an increase in liking during Italian Job for men, but a decrease for women. The external goal did not have a noticeable impact on liking during Rio.

Establishment of the hero’s conscious internal need had a significant positive impact on liking, $F (2,135) = 11.76, p < .0005$, partial $\eta^2 = .148$, supporting hypothesis 13b. The hero’s unconscious need also had a significant impact on liking of the protagonist ($F (2,89) = 5.49, p = .006$, partial $\eta^2 = .11$); however, the effect was a decrease in liking. An examination of the significant time x movie interaction indicated that the decrease in liking was driven by a large drop-off for Apes, whereas the responses during Italian Job remained flat. Since the unconscious need was only present in two films, and its effects varied substantially between those two particular films, it is not possible to draw any general conclusions about the effect of the unconscious need on liking, but the existing evidence does not support hypothesis 13c.

In answer to research question 3, the establishment of the hero’s character flaw was associated with a decline in audience liking, $F (2,89) = 6.72, p = .002$, partial $\eta^2 = .131$. An attempt to overcome the flaw (hypothesis 13d) did not have a significant effect on liking, $F (2,45) = 0.23, p = .795$. Conclusions regarding the character flaw are hampered by the fact that a flaw was only present in two of the films used, and an attempt to overcome the flaw was only present in one film.
Screenplay structure

The following results pertain to predictions made about the impact of key moments in the structure of screenplays on identification and/or liking. A summary of the results can be found in Table 7.

Save the cat scene

Hypothesis 6 predicted that a “Save the cat” scene (STC) would increase audience liking of the protagonist. Strong support was found for hypothesis 6 across all three films, $F(2,135) = 33.12, p < .0005$, with a partial $\eta^2 = .09$

Hypothesis 7 predicted that a Save the Cat scene (STC) would increase audience identification. A repeated measures ANOVA indicated that STC had a significant effect on identification: $F(2,159) = 8.01, p < .0005$, partial $\eta^2 = .09$, and no interactions were significant. Hypothesis 7 was therefore supported.

First appearance of the protagonist

Hypothesis 14 predicted that the first appearance of the hero would lead to an increase in liking. This hypothesis was supported, $F(2,135) = 20.83, p < .005$, partial $\eta^2 = .24$. However, much more than for any other key moment, the data for the first appearance of the protagonist violated many of the underlying assumptions of repeated measures ANOVAs, including assumptions of normality, homogeneity of variances, and sphericity. Visual inspection of the data indicated that because the first appearance of the protagonist was the earliest key moment to occur in each film, the majority of participants had not yet moved their rating slider at all until the key moment began. Therefore, the between-subject variance increased dramatically from the before
measurement (62.98) to during (209.46), and after (332.16). The before data were also skewed to the left (skewness = -3.75), and had very high kurtosis (26.14)\(^8\).

Therefore, a non-parametric test (Friedman’s Test; Friedman, 1937) was used to supplement the other statistical tests. Results of the test indicate that there is a significant difference in liking between the time spans pre, during, and post the first appearance of the protagonist, \(\chi^2 (2) = 65.88, p < .0005\).

Hypothesis 15 predicted that the first appearance of the hero would increase identification. The first appearance of the protagonist did significantly increase identification, \(F (2,159) = 7.19, p < .005\), partial \(\eta^2 = .08\). Hypotheses 14 and 15 were therefore both supported.

**Inciting incident**

Hypothesis 16 predicted that the inciting incident would lead to an increase in audience identification. There was not an overall effect for the inciting incident on identification, \(F (2,159) = 0.48, p > .10\), though there was a significant effect for the time x movie interaction, \(F (2,159) = 2.96, p < .05\), partial \(\eta^2 = .04\). The plotted means for each film indicate that there were wildly different responses to the inciting incident between the three films, with a negative trend for *Rio*, a relatively flat response for *The Italian Job*, and a positive trend for *Rise of the Planet of the Apes*. Therefore, hypothesis 16 was not supported.

\(^8\) As one might expect, during and after the first appearance, the data approached a more normal distribution (skew during = .12, kurtosis during = 2.59; skew after = -.22, kurtosis after = 1.82), though even the after data significantly differed from a normal distribution (Shapiro-Wilk test of normality \(p < .0005\)).
On the other hand, the inciting incident did have a significant, positive impact on liking, $F(2,135) = 11.39, p < .0005$, partial $\eta^2 = .144$, providing support for hypothesis 17.

**First act break**

Hypothesis 18 predicted that the first act break would increase audience identification. H18 was supported. The first act break had a significant effect on viewer identification with the protagonist, $F(2,159) = 3.50, p < .05$, partial $\eta^2 = .04$, leading to increased identification.

To examine hypothesis 19, the effect of the first act break on liking was also analyzed. The first act break had a significant, positive impact on liking, $F(2,135) = 4.25, p = .016$, partial $\eta^2 = .059$. Therefore, H18 and H19 were both supported.

**Overall comparison of effect sizes**

Research questions 4 and 5 asked what the effect size was of each screenplay moment on identification (RQ4) and liking (RQ5). In the same vein, RQ6 and RQ7 inquired about the effect size of the hero’s goals on identification and liking, respectively. The effect sizes of all of the key moments can be found in Table 8.

**Overall impact of story content**

Broader questions were also posed regarding the overall effects of story content on identification and liking. Hypothesis 4a predicted that an audience member's *identification* with the protagonist at any time is influenced by the story content at that time, and hypothesis 12a predicted that an audience member's *liking* of the protagonist at any time is influenced by the story content at that time. An overall examination of the
effects of the key story moments (depicted in Tables 5 through 8) shows that in fact, only some of the key moments led to changes in identification and liking. Therefore hypotheses 4a and 12a were only partially supported.

Section 2: Vector Autoregression (VAR) Modeling.

This study proposes that audience identification with the protagonist and audience liking of the protagonist mutually influence each other over the course of a narrative. VAR modeling can be a useful tool for exploring these types of relationships over time. In particular, VAR modeling allows us to examine causal connections between these interactive variables with minimal prior assumptions regarding the direction of the causation between two variables (Liu, Lindquist, & Vedlitz, 2011). The causality examined here is Granger causality, which is based on the notion that causality exists if prior states of one variable uniquely contribute to the prediction of the current state of another variable. For example, we might look at the information that can be used to predict audience identification with a protagonist at time $t$, such as the previous levels of audience identification at $t - 1$, $t - 2$, and so forth (these would be autoregressive terms). We would then examine whether we are better at predicting identification if we also include the previous states of another variable (in this case, liking), as compared to using the information at our disposal except for liking. If including previous states of liking in the prediction of identification improves the accuracy of the prediction, then liking can be said to Granger-cause identification.
It is important to also emphasize that the current state of one variable is hypothesized (H4b & H12b) to be influenced by its own prior states. Specifically, a viewer’s liking of the protagonist at a given time is expected to be related to his or her previous liking of the protagonist. The same is predicted to be true for identification. The time-dependent or self-generating aspect of a viewer’s mental state can be formalized by the inclusion of autoregressive terms (i.e., lagged terms) within a dynamic model (e.g., Wang, Lang, & Busemeyer, 2011; Wang, Solloway, Tchernev, & Barker, 2012).

The VAR models that were created for this study analyzed the median ratings of identification and liking, using 5 second increments as the unit of time.

Using the var process in the software STATA (version 13.1), a two-equation VAR model was fit for the variables identification and liking. In the VAR model, each of variable is represented by an equation based on its own lagged values (i.e., autoregressive terms) and the lagged values of the other variable. For example, the equation to predict liking at time moment $t$ is the following:

$$ Licking_t = \mu_{\text{liking}} + \sum_{n=1}^{p} \tau_n Licking_{t-n} + \sum_{1}^{p} \phi_n Identification_{t-n} + \epsilon_t $$

In the above equation, $\mu_{\text{liking}}$ represents an intercept for liking, $\tau_n$ and $\phi_n$ represent coefficients for liking and identification, respectively, at each lag from 1 to $p$, and $\epsilon_t$ represents error at time $t$.

To identify the appropriate number of lags ($p$) in the VAR model, 12 VAR models were estimated for each film (with $p$ varying from 1 to 12) and were compared on several model selection statistics including the likelihood-ratio test, Akaike’s information
criterion, Schwarz’s Bayesian information criterion, and others. For both *Italian Job* and *Apes*, a model with $p = 4$ lags was selected as the best fit, while a model with 2 lags was selected for *Rio*. The final models for all three films satisfied the Eigenvalue stability test (the stationarity test for multivariate autoregressive processes) and the Lagrange-multiplier test (the test of residual autocorrelation).

The resulting models are depicted in Tables 9, 10, & 11. It is impossible to substantively interpret as a whole the numerical values of all of the lag coefficients in each model just by looking at the numbers; however, some specific points are worth mentioning. Hypothesis 4b predicted that an audience member’s identification at a given moment would be influenced by their previous levels of identification, and hypothesis 12b made the parallel prediction that liking would be influenced by previous liking. Both of these hypotheses were supported. In the VAR models for all three films, identification was significantly predicted by previous identification at lag 1 and lag 2, and liking was significantly predicted by liking at lag 1 and lag 2.

Research question 2 asked “what is the relationship between liking and identification in real time?”. Tests of Granger causality were conducted on the final VAR models using the STATA procedure *vargranger*. For both *Italian Job* and *Rio*, liking was found to Granger-cause identification (in both cases, $p < .0005$), but there was not a statistically significant relationship in the opposite direction (i.e., identification did not Granger-cause liking; $p = .377$ for *Italian Job*, and $p = .368$ for *Rio*). However, for *Apes*, the reverse pattern was found: identification Granger-caused liking ($p < .0005$), but liking did not Granger-cause identification ($p = .214$). Unfortunately, these conflicting
results make it difficult to draw any general conclusions regarding whether one process (liking or identification) typically precedes and possibly causes the other.

Section 3: Miscellaneous

Hypothesis 3 stated the very basic (but important) proposition that as an audience views a film, identification with the protagonist changes over time. Hypothesis 11 stated the parallel proposition that audience liking changes over time.

Most of the analyses that are conducted in this chapter are in fact de facto tests of the hypotheses that identification and liking change over time. Indeed, the changes in audience identification (and liking) over time are numerous and significant. Figures 4, 5, and 6 provide an illustration of how identification and liking developed over time for each film.

Personal relevance of motivations.

Hypotheses 24-26 predicted that the establishment of each psychological motivation (existence, relatedness, or growth needs) would have the largest effect on audience members for whom that motivation was most relevant. The three broad categories of ERG were broken down into a total of ten different specific motivations (e.g., hunger, physical safety, romantic love, etc.), which participants ranked in order of personal relevance. Each participant’s average ranking of existence items was computed, along with his or her average ranking of relatedness items and growth items. Participants were split into three evenly-sized groups: those for whom existence needs were of high relevance, medium relevance, and low relevance.
No support was found for hypothesis 24: the personal relevance of existence motivations did not significantly shape the impact of the establishment of the existence need on identification, $F(4, 210) = 1.22, p = .303$. Personal relevance also did not influence the impact of existence motivations on liking, $F(4, 182) = 1.33, p = .260$.

The personal relevance of relatedness motivations did not significantly shape the impact of the establishment of the relatedness need on identification, $(F(4, 322) = 1.75, p = .138)$ or on liking $(F(4, 274) = .236, p = .918)$. Therefore, hypothesis 25 was not supported.

The personal relevance of growth motivations did significantly shape the impact of the establishment of the growth need on identification, $F(4, 200) = 2.85, p = .025$, partial $\eta^2 = .054$. As can be seen from Figure 3, the establishment of growth needs increased identification among viewers for whom growth needs were of high or medium relevance, but not among viewers for whom growth needs were of low relevance. It is also worth noting that the level of identification was quite different between the three groups before growth needs were established, which may have muted some of the effects. Personal relevance did not influence the relationship between the growth need and liking (which was not a substantial relationship to begin with), $F(4, 178) = 0.28, p = .892$. Hypothesis 26a was supported, but hypothesis 26b was not.

Hypothesis 27 predicted that if similar specific motivations are important to both the audience member and the protagonist, then the audience member would have greater identification with (H27a) and liking of (H27b) the protagonist. Based on the participant rankings of the importance/relevance of 10 motivations to them and the importance of
those same 10 motivations to the protagonist, a composite score for shared motivations was calculated. Across the three films, shared motivations had a significant positive effect on identification with the protagonist ($b = .20, p = .019, R^2 = .018$). However, shared motivations were not a significant predictor of liking of the protagonist ($b = -.156, p = .589, R^2 = .001$).

**Values**

Hypothesis 28 predicted that identification (H28a) and liking (H28b) would be strongest among audience members who placed higher personal importance on values depicted by the character. Using the 57-item Schwartz Value Survey (SVS; Schwartz, 1994; Schwartz et al., 2001; Schwartz & Sagiv, 1995), value importance for participants was measured in phase 1 (i.e., before they viewed the movie) to prevent the possibility that viewing the film might bias their responses.

Separately, as part of the coding process for each film, the coders selected several values from the SVS that they believed were most important that film’s protagonist. Values for which the coders reached a consensus were placed on a final list of values for that protagonist (list lengths ranged from 5 to 8 values, out of the 57 possibilities). For each protagonist’s list of values, participants’ ratings of those specific values were averaged into a mean rating. That mean rating represents how important to participants were values that were shared by the protagonist in the film that they watched.

Linear regressions were conducted for each film to determine whether shared values predicted identification. Linear regressions were also conducted for each film to determine whether shared values predicted liking. As can be seen in Table 12, the results
were not consistent across films. Shared values were a positive and statistically significant predictor of both liking and identification for *Rio*; however, values did not predict liking or identification for *Italian Job*, nor did values predict identification for *Apes*. There was a significant negative relationship between shared values and liking of the protagonist in *Apes*. Therefore, hypothesis 28 was not supported.

**Homophily**

Hypothesis 29 proposed that overall homophily would predict greater identification with (H29a), and liking of (H29b), the protagonist. A linear regression found that homophily was a significant positive predictor of overall identification, $\beta = .53, p < .0005, R^2 = .26$. Similarly, a linear regression found that homophily positively predicted liking, $\beta = .20, p = .001, R^2 = .04$. Therefore, H22a and H22b were supported.

Hypothesis 30 predicted that among the dimensions of homophily, the attitude dimension would most strongly predict overall identification. A multiple regression was run, with all four dimensions as predictors of identification. A comparison of the standardized beta weights demonstrated that the attitude dimension had the largest value ($\beta = .56$), followed by morals ($\beta = .16$), background ($\beta = .05$), and appearance ($\beta = -.01$). Only the coefficients for attitude and morals were statistically different from zero ($p < .0005, p = .01$, respectively). Hypothesis 30 was therefore supported.

A similar analysis was conducted for hypothesis 31, which predicted that the morality dimension of homophily would most strongly predict liking of the protagonist. A multiple regression with the four dimensions of homophily used as predictors of overall liking found that both the attitude and morality dimensions of homophily were
statistically significant positive predictors of liking, whereas the background and appearance subscales were not significantly related to liking. The standardized beta weights for attitude and morality were almost identical, though the attitude beta weight ($\beta = .21, p = .001$) was just slightly larger than the morality beta weight ($\beta = .20, p = .002$). Therefore, hypothesis 31 was almost – but not quite – supported.

**Empathy**

Hypothesis 32 predicted that audience members higher in trait empathy would experience higher overall levels of identification than audience members lower in trait empathy. A linear regression was conducted with participants’ scores on the Interpersonal Reactivity Index as the independent variable and the 12-item identification index (post-viewing) as the dependent variable. $H32$ was supported: higher trait empathy predicted higher overall identification with the protagonist, $\beta = .29, p = .001, R^2 = .04$.

**Changes in variance**

It was hypothesized that key story moments would affect most viewers similarly, thereby reducing the between-subjects variance in real-time identification and liking data during those key moments, in compared to the remainder of the film. Hypothesis 20a predicted such an effect on variance in identification during scenes establishing the hero’s goals, while hypothesis 20b predicted the same result during key screenplay moments. Hypotheses 21a and 21b predicted that the variance in audience liking would be lower during scenes that established a hero’s goals (H21a) and during key screenplay moments (H21b), than the variance in audience liking during the rest of the film. Moments when
ERG needs were established were also predicted to have lower audience variance in identification (H22) and liking (H23) than the rest of the film.

For participants who provided continuous response data on identification—since their rating was recorded every second during viewing—the ratings at any given second provide a cross-sectional glimpse of all participants’ identification with the protagonist at that second. (The same is true for the response data on liking). For each response measure (identification or liking), and for each key moment in each film, the variance between participants’ ratings was calculated on a second-by-second basis. Then the between-subject variance was averaged over the duration of each key moment.

Variance for the key moments was initially calculated separately for each film, because the timing of key moments varied between films. Even key moments from screenplay structure do not occur rigidly at precisely the same time in each film. For example, 240 seconds from the beginning of Apes (in other words, 4 minutes into the film), the protagonist’s growth need is being established, whereas at 240 seconds into Italian Job, the protagonist appears onscreen for the first time. Meanwhile, the 240 second mark in Rio does not happen to be part of any key moments.

Variance for each type of key moment was then compiled across the three films by treating each film as an “observation” of the key moment.

To serve as a comparison for the key moments, for each film, five 30-second segments were randomly selected from the portions of the film that were not key moments. The average variance in viewer ratings was calculated for each of the 5 comparison segments. Those variances for different films were also compiled into a
series of observations of the variance during “non-key moments” (for lack of a better term). For each of the three types of key moments, variance during those moments was compared to variance during “non-key moments” using an independent samples t-test. The results are reported in Table 13.

None of the comparisons were statistically significant, which is due in part to the low number of scenes available for comparison. However, the pattern of means is informative. The variance in liking was lower during each type of key moment than during non-key moments, supporting hypotheses 21a, 21b, and 23. The variance in identification was lower only during key moments from screenplay structure, as compared to non-key moments. Variance in identification was higher during establishment of the hero’s goals and ERG needs. Therefore, hypothesis 20b was supported, but hypotheses 20a and 22 were not supported.
Chapter 6: Discussion

The overall goal of the present research was to examine the impact of narrative story components on audience identification with a protagonist and liking for that protagonist. Theoretical “key moments” that were expected to be of particular importance in shaping audience identification and liking were conceptualized, drawing from literature on psychological motivations, narrative storytelling, and screenplay structure. Many—but not all—of the hypothesized key moments did indeed have an impact on audience liking and/or identification. The dynamic relationship between identification and liking was also explored, but the results did not provide a conclusive answer to the “chicken and the egg” question of which concept precedes (and perhaps causes) the other.

There are many possible explanations for the inconclusive results regarding the dynamic relationship between liking and identification. It is quite possible that a different type of dynamic modeling might provide better insights than the vector autoregressive (VAR) modeling did. It is also possible that VAR is an appropriate technique, but the models were mis-specified, perhaps due to the wrong choice of units of time to examine or due to other reasons. A third possibility is that perhaps asking
whether identification causes liking or vice versa is the wrong question to be asking in the first place.

Even though we call the two concepts by different words, the actual mental processes of identification and liking are almost certainly not discrete processes with clean distinctions. Instead, they are perhaps facets of a single richer mental process (or the interaction of dozens of processes) that we do not yet fully understand, in which case cause and effect may not even be an appropriate lens through which to examine the situation. Research on the mental models that audiences create during a narrative suggests that audiences are constantly updating a complex mental model that includes the narrative world, the current story situation, and the characters in the story (e.g., Busselle & Bilandzic, 2008). The development of liking and identification may be portions of an overall process of narrative comprehension. As the audience member builds a mental model of the narrative in general (and of the protagonist in particular), what we refer to as “liking” and “identification” may be merely facets of the larger, ongoing process of understanding.

On a related note, recent research has indicated that a quantum cognition perspective may be a more accurate way of modeling human psychology (or at least some aspects of it) than traditional approaches (Busemeyer & Wang, in press; Busemeyer, Wang, & Shiffrin, 2015; Wang, Solloway, Shiffrin, & Busemeyer, 2014). Quantum “entanglement” can be used to describe processes that are so highly inter-connected that a change in one instantaneously changes the other. This is compatible with the view that identification and liking may be facets of a larger process of understanding, in which case
questions of which one causes the other are making an assumption of causation that may not be warranted.

**The Coding of Key Moments in Films**

At the beginning of this research, there was no guarantee that the three coders would be able to reliably code the key moments that are laid out in this paper, especially when working on three randomly-selected films. It is therefore noteworthy that the three coders were able to first individually locate, and then agree upon (with only minimal discussion) all of the hypothesized key moments. No key moments were dropped from analysis due to lack of coder agreement. The success of this coding bodes well for any potential future research aimed at further exploring the key moments of narratives.

Analyses of the effects of several key moments were hampered by the fact that some moments were not present in all three films. Unfortunately, that is to be expected, given the partly exploratory nature of this research. This study proposed three different potential frameworks for understanding and identifying key moments that might be present in feature films, but certainly no assumption was made that all moments would be present in all films. The psychological ERG motivations were originally developed in a domain very different from narrative storytelling, and so it was an open question whether any or all of those motivations would appear in the selected films. (The general prevalence of those three types of motivations in films is still an open question, and was outside the scope of the current research).

The key moments derived from screenplay structure and the key moments based on the hero’s goals were “safer bets” in a way, since they are concepts that are widely
used among screenwriters. However, they are far from universally accepted by
screenwriters or universally applied in all screenplays. As was mentioned in Chapter 3,
the process of distilling key moments from various screenwriting texts is not entirely
straightforward, because even the most widely-used books in the field vary substantially
from each other in their use of terminology and in their basic conceptualizations of how
stories are put together. Therefore, much work could be fruitfully be done in the future to
examine alternative ideas of screenplay structure, as well as different perspectives that in
many cases do not consider structure to be a primary concern in creating meaningful
films.

The philosophy underlying the present research is that the creation of compelling
narratives, and their interpretation by audiences, are nuanced and highly personal
processes. It is virtually inconceivable that social scientists could ever discover a
mathematical formula for creating “the perfect movie”, or for precisely predicting
audience responses. However, the goal of the current research was to establish whether
some patterns do occur across films, and if so, whether some resulting trends in audience
responses can be observed, and in that sense, this research seems to have been for the
most part successful.

The Effects of Key Story Moments

It is interesting to note that the key moments studied in this project tended to have
larger effects on liking than on identification. Cohen (1988) suggests that an $\eta^2$ value of
approximately .059 serve as a benchmark for a medium-sized effect and .138 serve as a
benchmark for a large effect (Cohen, 1988, pp. 283-288). Five key moments had an
effect size larger than .13 (the conscious internal goal, the character flaw, first appearance of the protagonist, inciting incident, and relatedness needs); in all five cases, the effect was on liking, not identification.

Future research will need to further investigate whether liking is more responsive to key story moments, and if so, why. Only speculation can be offered at this time. One seemingly plausible reason is that identification may be influenced by a smaller number of factors within the narrative than liking, or perhaps that identification may be something that simply responds more slowly, like an ocean liner trying to change course.

**Implications for Message Design**

For storytellers, the creation of narratives that are successful at engaging audiences is a primary goal. However, the creation of engaging narratives (i.e., narratives that lead to high levels of transportation, identification, liking, etc.) is also a matter of great importance for the designers of health campaigns, environmental campaigns, and other pro-social instantiations of narrative persuasion. Since the current study did not experimentally manipulate key moments in a systematic manner, it cannot provide conclusive answers to questions regarding where and how key moments should be integrated into a story in order to achieve high levels of engagement. However, the current research does provide some clues that are worthy of further investigation, particularly in light of other recent research into the content of narratives.

**Emotional shifts**

Nabi and Green (2015) assert that research is needed into the emotional shifts that take place within a narrative, which may be of much importance for narrative persuasion.
(a position with which this author wholeheartedly agrees). Stories with a large emotional shift, such as from a negative emotional situation at the beginning to a very happy emotional situation at the end (as opposed to a story with one emotional tone throughout), are expected to create greater transportation, have a larger impact on attitudes and beliefs, and promote social sharing and discussion (Nabi & Green, 2015). The effects of key moments on liking and identification that were found in the present study can certainly be interpreted as emotional shifts, and therefore, it can be expected that key moments play an important role in shaping audience transportation, persuasion, and social sharing.

It is helpful to distinguish between two different types of audience responses: responses to the character and responses to the plot/story. The present study found that, over the course of the first 35 minutes, liking and identification increased overall for all three films. I believe that emotional shifts in the plot are very important for transportation and other outcomes, but that emotions regarding the protagonist should remain relatively steady at a positive value (as opposed to large swings from positive to negative and back) in order to maximize audience engagement. High levels of liking and identification should lay the groundwork for audiences to fully experience highs and lows as the character undergoes trials and tribulations.

The key moments discussed in this paper can be viewed as a first step in linking the emotional shift theory (Nabi & Green, 2015) to the nuts and bolts of narrative construction. The screenwriting literature supports Nabi and Green’s (2015) contention that emotional shifts tend to make for more engaging stories (e.g., McKee, 1997). In fact,
McKee (1997) proposes that many shifts in emotion, instead of just one shift, are an essential component of well-written screenplays.

The discussion of emotional shifts also suggests that the magnitude of key moments may be very important for audience engagement and for persuasive outcomes. “Magnitude” (or “the strength of a key moment”) could be defined and measured in several different ways. One option would be to look at the duration of the key moment, with longer moments perhaps acting like a larger “dose”, which would be expected to have greater effects on audiences. Another option would be to rate the strength of key moments in terms of the intensity of the emotions contained in the moment. A third option would be to examine how overt or subtle the key moment is (for example, a key moment establishing an unconscious need may be harder for audiences to recognize than the establishment of an external goal, therefore leading to smaller effects). Future research is certainly needed to investigate how best to conceptualize and measure the magnitude of key moments.

**Causal locations**

Another recent line of research has found that causal locations within narratives are of special importance for persuasive effects (Dahlstrom, 2010, 2012, 2013). When information incorporated into a causal location in a narrative (i.e., at an important point in the cause-and-effect structure underlying every narrative), it is more readily accepted and is better remembered by audiences than when the same information is presented in a non-causal location. Out of the three frameworks that were explored in the present analysis of key moments in narratives, the framework of screenplay structure is of particular
relevance to research on causal locations. In particular, the inciting incident and the first act break are most likely the two most important causal locations in an entire screenplay, because they are responsible for establishing the film’s main plot. Therefore, it can be hypothesized that persuasive information will be most effective if it is incorporated into the inciting incident and/or the first act break.

The present research also extends beyond causal locations and examines key moments with regards to character development and motivation. Further research could explore and compare the persuasive effects of information presented in structural screenplay (plot) moments and character development/motivation moments. Furthermore, a scene in a film may often serve both as a key causal moment in the plot and as a key moment for character motivation, in which case that scene may be of extra importance for persuasive outcomes.

**Limitations**

Like any research, the present study design involved numerous decisions that were made with regards to methodology and data analysis. Of course, every methodology has its own benefits and drawbacks.

One limitation was the between-subjects nature of the experimental design. Each participant provided continuous response data regarding either identification or liking, but not both. In an ideal world, it would be great to be able to study both simultaneously within the same person. Doing so would provide us with a much clearer and more precise way to understand how identification and liking relate to each other, but that methodology does not currently exist, or if it does exist, it is not known to this researcher.
The present methodology is only able to tell us in essence whether Person A’s identification is predicted by Person B’s liking, which relegates all of the differences between Person A and Person B to the category of “noise”. This “noise” in fact includes the entirety of Person A’s understanding and experience of the narrative, in contrast to Person B’s understanding and experience of the narrative. Many tantalizing questions exist about those subjective experiences, which the present research is ill-equipped to answer.

Nevertheless, this study is one of the first projects to examine audience experiences of identification and liking in real-time, and to combine that data with more traditional static pre- and post-viewing questionnaires. Perhaps the largest benefit of the current methodology is its ability to delve into the impact of specific moments within a narrative on audiences, thereby providing some (rudimentary) information about the parts of a story that may have a particularly large impact.

However, it is important to note as a caveat when discussing the “effects” of a key moment, such as the establishment of the protagonist’s conscious internal goal, that the segment of the film that contained such a key moment led to statistically significant effects, but we don’t know for certain whether it was the establishment of the internal goal or something else about that scene that caused the effects (or it could be an interaction between the internal goal and other aspects of the scene). The findings of effects across the three different films for those key moments help to reduce the likelihood that the effects were caused by something entirely unrelated to the story.
moment in question, but we still do not know for certain that audience responses to each scene were caused only by the establishment of the internal goal.

Another limitation is that all three of the films that were randomly selected for this study happened to feature a male protagonist. Therefore, the present study is unable to say with any certainty if a similar pattern of results would have emerged from stories featuring female protagonists. Some indications of sex differences in viewer responses were found in the present study (particularly for identification), but it would be interesting to explore how those differences might interact with differences in the protagonist’s sex.

**Future directions**

The current research looked at the impact of several key moments, but cannot make any claims about the prevalence of such key moments among the broader population of American films. The three films used in the present study certainly do not provide a full representation of the wide range of contemporary, mainstream American cinema (in fact, it would be impossible for any three films to do so). Therefore, numerous genres of films and styles of filmmaking were not represented in the current study at all. In an ideal world, this study would have been conducted using many additional films, but even then, a tradeoff would exist between the use of either strictly random sampling or the purposeful selection of a broad cross-section films that provided variation along a number of key attributes.

It would be interesting to explore whether certain key moments are found only in some genres and not in others. Probably a substantial difference exists between large-
budget mainstream Hollywood films and low budget “indie” films, in that the mainstream films should adhere more closely to the traditional story structure or “Classical Design”, as described by McKee (1997), and should therefore contain key moments more consistently. Low budget, independent films may not adhere to traditional screenplay structure for several reasons. For one, independent filmmakers may have less formal training in screenwriting and less experience than the writers who are typically employed by Hollywood studios. Furthermore, many view Hollywood films as overly formulaic and predictable, and so some independent filmmakers intentionally create films that are not based upon traditional story structure. Thirdly, since Hollywood studios are run by large corporations with primarily financial motives, a concerted effort is made by studio executives to avoid risky investments in favor of known quantities. Such “known quantities” include (of course) actors, producers and directors with track records of box office success, along with screenplays that are clearly structured and fall in line with classical design (Snyder, 2005; Mamet, 2008). Indeed, we might expect that the more money a studio invests in a film, the more likely it is that the film will be highly structured.

It is interesting to consider if and how the results of the present study might vary across more specific genre categories, such as action, comedy, horror, etc. As was noted in the Method section with regards to the sampling frame, historical/biographical films and comedies are expected to be the two genres for which the current research is the least applicable. To clarify, the current research focuses on the potential impact on audiences of protagonist motivations and screenplay structure. For a screenwriter who is attempting
to write a biographical or historically-accurate film, historical research will tend to provide them with information mostly about what a protagonist did, instead of why. While of course memoirs and letters (when those materials are available) can provide insights into a protagonist’s motivations, they may omit important gaps in time, and they also will almost certainly fall short of providing all of the complex information that can be provided by the numerous goals laid out in this paper. In other words, historical research may likely fail to provide information about a person’s unconscious needs, conscious internal goals, growth needs, etc. Therefore, historical films that rigidly adhere only to confirmed facts may be much more devoid of information about a character’s motivations than films that take a substantial amount of dramatic license. Furthermore, since real life events often do not have a satisfying three-act structure, historical/biographical films may contain fewer key moments of screenplay structure than fictional films that are constructed with that structure in mind.

With regards to comedies, it is an open question how well motivations and structural elements might predict audience responses. Comedies vary enormously with regards to how well-developed the characters are and how much of a dramatic structure is integrated into the film, with complete farces and “spoof” films on one end of the spectrum (e.g., Blazing Saddles, Airplane!, Meet the Spartans, etc.), and relatively weighty, dramatic comedies on the other (e.g., As Good as it Gets, Annie Hall, etc.). It would seem likely that the more well-developed the characters in a comedy are (with clearer personalities and motivations), the more easily audiences will like and identify with them. Similarly, the more that a structured story told in a comedy (in contrast to
films that are primarily just a collection of jokes thrown together), the more likely it may be that audiences will be affected by the key moments of screenplay structure.

Genre differences also likely quite substantial with regards to the types of motivations that are present and the types that are given the most emphasis. For example, action movies are inherently focused on existence needs (and external rather than internal goals)... as are horror films and suspense thrillers. Additional levels of character motivation may also be present, but those genres of films almost certainly emphasize existence needs above all else (and therefore, the establishment of those needs should be of particular importance). In contrast, dramas (though the genre ranges widely) may primarily emphasize higher order needs such as relatedness and growth needs (and may perhaps feature more heavily the less tangible motivations such as unconscious needs and character flaws). At present, however, the current ideas are mere speculation. It is important that further research be conducted into relative prevalence and importance of different types of motivations and structural elements across different genres.

Many extensions of the current line of research are also possible, to examine, for example, whether similar key moments are present in other forms of narratives such as television programs, novels, comic books, etc., and whether moments in other forms of narratives have consistent effects on audiences. In summary, the current research is only the tip of the iceberg with regards to examining specific aspects of story content and their effects on audiences.
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Appendix A: Tables & Figures

Table 1

List of the top five books on the topic of Screenwriting from www.Amazon.com\(^9\), sorted by "New and Popular".

<table>
<thead>
<tr>
<th>Rank</th>
<th>Title</th>
<th>Author</th>
<th>Year</th>
<th>Rating (out of 5 stars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Save the cat! The last book on screenwriting you'll ever need</td>
<td>Blake Snyder</td>
<td>2005</td>
<td>4.5 stars (541 reviews)</td>
</tr>
<tr>
<td>2</td>
<td>Story: Substance, Structure, Style and the Principles of Screenwriting</td>
<td>Robert McKee</td>
<td>1997</td>
<td>4.5 stars (308 reviews)</td>
</tr>
<tr>
<td>3</td>
<td>Screenplay: The Foundations of Screenwriting</td>
<td>Syd Field</td>
<td>2005 (revised edition)</td>
<td>4.5 stars (95 reviews)</td>
</tr>
<tr>
<td>4</td>
<td>The Screenwriter's Bible: A Complete Guide to Writing, Formatting, and Selling your script</td>
<td>David Trottier</td>
<td>2010 (5(^{th}) edition)</td>
<td>4.5 stars (94 reviews)</td>
</tr>
<tr>
<td>5</td>
<td>The writer's journey: Mythic structure for writers</td>
<td>Christopher Vogler</td>
<td>2007 (3(^{rd}) edition)</td>
<td>4.5 stars (181 reviews)</td>
</tr>
</tbody>
</table>

Table 2.

*Summary of Key Moments in Films Examined in this Research*

<table>
<thead>
<tr>
<th>Key Moments</th>
<th>Psychological Motivations</th>
<th>Hero’s Goals</th>
<th>Screenplay Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><em>The establishment of:</em></td>
<td><em>The establishment of:</em></td>
<td><em>First Appearance of the Hero</em></td>
</tr>
<tr>
<td></td>
<td>• Existence Needs</td>
<td>• External Goal</td>
<td>• Inciting Incident</td>
</tr>
<tr>
<td></td>
<td>• Relatedness Needs</td>
<td>• Conscious Internal Goal</td>
<td>• First Act Break</td>
</tr>
<tr>
<td></td>
<td>• Growth Needs</td>
<td>• Unconscious Need</td>
<td>• Save the Cat scene</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Character Flaw/Attempt to Overcome Flaw</td>
<td></td>
</tr>
</tbody>
</table>
Table 3

Comparison of the Hero’s Goals in Screenwriting, ERG Needs, and Relevant Screenplay Moments, Organized by Level of Abstraction.

<table>
<thead>
<tr>
<th>Hero’s Goals</th>
<th>ERG Needs</th>
<th>Story Moment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Most Concrete</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>External Goal</td>
<td>Existence and/or Relatedness</td>
<td>Inciting Incident, First Act Break</td>
</tr>
<tr>
<td>Internal Conscious Goal</td>
<td>Relatedness and/or Growth</td>
<td>unclear – possibly during Set-up?</td>
</tr>
<tr>
<td>Unconscious Need</td>
<td>Relatedness and/or Growth</td>
<td>unclear – possibly during Save the Cat scene?</td>
</tr>
<tr>
<td><strong>Most Abstract</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overcoming the Flaw</td>
<td>Growth</td>
<td>unclear – possibly at the First Act Break?</td>
</tr>
</tbody>
</table>
Table 4:

*Details of the three films used in the present study.*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Format:</td>
<td>Live Action</td>
<td>Animated</td>
<td>Live Action</td>
</tr>
<tr>
<td>Genre(s):</td>
<td>Action, Crime, Thriller</td>
<td>Animation, Adventure, Comedy</td>
<td>Action, Drama, Sci-Fi</td>
</tr>
<tr>
<td>Protagonist:</td>
<td>Charlie (played by Mark Wahlberg)</td>
<td>Blu (voiced by Jesse Eisenberg)</td>
<td>Will (played by James Franco)</td>
</tr>
<tr>
<td>Written By:</td>
<td>Donna Powers &amp; Wayne Powers (based on the original screenplay by Troy Kennedy-Martin)</td>
<td>Screenplay by Don Rhymer and Joshua Sternin &amp; Jeffrey Ventimilia and Sam Harper.</td>
<td>Rick Jaffa &amp; Amanda Silver</td>
</tr>
<tr>
<td>Directed by:</td>
<td>F. Gary Gray</td>
<td>Carlos Saldanha</td>
<td>Rupert Wyatt</td>
</tr>
</tbody>
</table>

Note: All information retrieved from the Internet Movie Database (www.imdb.com).
Table 5

*Impact of the Establishment of Existence, Relatedness, and Growth Needs on Real-Time Identification and Liking*

<table>
<thead>
<tr>
<th></th>
<th>Identification</th>
<th>Liking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existence Needs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before</td>
<td>59.72 (25.90)</td>
<td>72.32 (20.04)</td>
</tr>
<tr>
<td>During</td>
<td>60.26 (26.77)</td>
<td>71.63 (20.17)</td>
</tr>
<tr>
<td>After</td>
<td>57.32 (27.83)</td>
<td>71.62 (19.94)</td>
</tr>
<tr>
<td>( F(2,105) = 4.43, p &lt; .05 )</td>
<td>( F(2,91) = 3.03, p = .053 )</td>
<td></td>
</tr>
<tr>
<td>Relatedness Needs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before</td>
<td>60.09 (25.28)</td>
<td>69.79 (19.70)</td>
</tr>
<tr>
<td>During</td>
<td>61.12 (24.58)</td>
<td>71.55 (18.69)</td>
</tr>
<tr>
<td>After</td>
<td>63.04 (25.78)</td>
<td>73.94 (19.13)</td>
</tr>
<tr>
<td>( F(2,159) = 0.83, p = .436 )</td>
<td>( F(2,135) = 12.04, p &lt; .001 )</td>
<td></td>
</tr>
<tr>
<td>Growth Needs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before</td>
<td>45.59 (23.51)</td>
<td>61.61 (21.04)</td>
</tr>
<tr>
<td>During</td>
<td>48.39 (23.72)</td>
<td>61.63 (22.71)</td>
</tr>
<tr>
<td>After</td>
<td>51.27 (24.42)</td>
<td>62.20 (23.37)</td>
</tr>
<tr>
<td>( F(2,100) = 4.31, p = .016 )</td>
<td>( F(2,89) = 0.10, p = .904 )</td>
<td></td>
</tr>
</tbody>
</table>
Table 6

*Impact of the Hero’s Goals on Real-Time Identification and Liking*

<table>
<thead>
<tr>
<th></th>
<th>Identification</th>
<th>Liking</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>External Goal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before</td>
<td>52.90 (26.07)</td>
<td>64.68 (23.19)</td>
</tr>
<tr>
<td>During</td>
<td>54.76 (25.06)</td>
<td>65.02 (23.47)</td>
</tr>
<tr>
<td>After</td>
<td>57.16 (25.72)</td>
<td>66.88 (21.44)</td>
</tr>
<tr>
<td>$F(2, 159) = 8.18$, $p &lt; .0005$</td>
<td>$F(2, 135) = 2.51$, $p = .085$</td>
<td></td>
</tr>
<tr>
<td><strong>Conscious Internal Goal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before</td>
<td>59.63 (24.79)</td>
<td>69.02 (20.53)</td>
</tr>
<tr>
<td>During</td>
<td>62.02 (23.28)</td>
<td>71.27 (19.35)</td>
</tr>
<tr>
<td>After</td>
<td>64.59 (23.47)</td>
<td>72.94 (18.83)</td>
</tr>
<tr>
<td>$F(2, 159) = 5.88$, $p &lt; .01$</td>
<td>$F(2, 135) = 11.76$, $p &lt; .0005$</td>
<td></td>
</tr>
<tr>
<td><strong>Unconscious Goal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before</td>
<td>61.55 (26.51)</td>
<td>73.15 (19.42)</td>
</tr>
<tr>
<td>During</td>
<td>57.26 (27.50)</td>
<td>70.52 (20.02)</td>
</tr>
<tr>
<td>After</td>
<td>56.59 (27.60)</td>
<td>68.90 (21.19)</td>
</tr>
<tr>
<td>$F(2, 112) = 3.09$, $p &lt; .05$</td>
<td>$F(2, 89) = 5.49$, $p = .006$</td>
<td></td>
</tr>
<tr>
<td><strong>Character Flaw</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before</td>
<td>62.49 (25.23)</td>
<td>76.75 (16.58)</td>
</tr>
<tr>
<td>During</td>
<td>56.22 (26.75)</td>
<td>74.08 (17.76)</td>
</tr>
<tr>
<td>After</td>
<td>54.51 (27.89)</td>
<td>72.07 (19.27)</td>
</tr>
<tr>
<td>$F(2, 100) = 4.92$, $p &lt; .01$</td>
<td>$F(2, 89) = 6.72$, $p = .002$</td>
<td></td>
</tr>
<tr>
<td><strong>Attempt to Overcome Flaw</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before</td>
<td>52.54 (26.62)</td>
<td>75.99 (16.54)</td>
</tr>
<tr>
<td>During</td>
<td>55.00 (24.14)</td>
<td>75.11 (18.00)</td>
</tr>
<tr>
<td>After</td>
<td>57.99 (24.55)</td>
<td>75.28 (17.84)</td>
</tr>
<tr>
<td>$F(2, 46) = 1.47$, $p = .24$.</td>
<td>$F(2, 45) = 0.23$, $p = .795$</td>
<td></td>
</tr>
</tbody>
</table>
Table 7

*Impact of Key Moments in Screenplay Structure on Real-Time Identification and Liking*

<table>
<thead>
<tr>
<th></th>
<th>Identification</th>
<th>Liking</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Appearance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>44.80 (15.30)</td>
<td>49.21 (7.94)</td>
</tr>
<tr>
<td>During</td>
<td>46.09 (16.94)</td>
<td>53.83 (14.47)</td>
</tr>
<tr>
<td>Post</td>
<td>49.40 (21.71)</td>
<td>57.40 (18.23)</td>
</tr>
<tr>
<td>$F(2,159) = 7.19, p &lt; .005$</td>
<td>$F(2,135) = 20.83, p &lt; .005$</td>
<td></td>
</tr>
</tbody>
</table>

| **Inciting Incident**    |                |              |
| Before                   | 58.88 (24.43)  | 66.44 (22.41)|
| During                   | 58.83 (24.24)  | 66.47 (20.78)|
| After                    | 58.47 (26.35)  | 69.20 (19.40)|
| $F(2,159) = 0.48, p > .10$ | $F(2,135) = 11.39, p < .0005$ |

| **First Act Break**      |                |              |
| Before                   | 59.37 (26.30)  | 70.31 (23.38)|
| During                   | 62.60 (24.53)  | 71.59 (21.64)|
| After                    | 64.03 (26.29)  | 72.24 (21.69)|
| $F(2,159) = 3.50, p < .05$ | $F(2,135) = 4.25, p = .016$ |

| **Save the Cat Scene**   |                |              |
| Before                   | 55.94 (22.27)  | 60.65 (19.23)|
| During                   | 54.44 (22.29)  | 63.47 (19.03)|
| After                    | 57.65 (22.97)  | 68.52 (19.09)|
| $F(2,159) = 8.01, p < .0005$ | $F(2,135) = 33.12, p < .0005$, |
Table 8

Effect Sizes of Key Story Moments (Partial Eta-Squared)

<table>
<thead>
<tr>
<th>Event</th>
<th>Identification</th>
<th>Liking</th>
</tr>
</thead>
<tbody>
<tr>
<td>External Goal</td>
<td>.09</td>
<td>n.s.</td>
</tr>
<tr>
<td>Conscious Internal Goal</td>
<td>.07</td>
<td>.148</td>
</tr>
<tr>
<td>Unconscious Need</td>
<td>.05 (Negative direction)</td>
<td>.11 (Negative direction)</td>
</tr>
<tr>
<td>Establishment of Flaw</td>
<td>.09 (Negative direction)</td>
<td>.131 (Negative direction)</td>
</tr>
<tr>
<td>Attempt to Overcome Flaw</td>
<td>n.s.</td>
<td>n.s.</td>
</tr>
<tr>
<td>First Appearance</td>
<td>.08</td>
<td>.24</td>
</tr>
<tr>
<td>Inciting Incident</td>
<td>n.s.</td>
<td>.144</td>
</tr>
<tr>
<td>First Act Break</td>
<td>.04</td>
<td>.059</td>
</tr>
<tr>
<td>Save the Cat Scene</td>
<td>.09</td>
<td>.09</td>
</tr>
<tr>
<td>Existence Need</td>
<td>.08</td>
<td>n.s.</td>
</tr>
<tr>
<td>Relatedness Need</td>
<td>n.s.</td>
<td>.151</td>
</tr>
<tr>
<td>Growth Need</td>
<td>.079</td>
<td>n.s.</td>
</tr>
</tbody>
</table>

Notes: “n.s.” indicates a non-significant effect.
The direction of all effects was positive over time, unless “Negative direction” is specified.
Table 9

*VAR Model for Identification and Liking during The Italian Job*

<table>
<thead>
<tr>
<th></th>
<th>Identification</th>
<th>Liking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>.01</td>
<td>.01</td>
</tr>
<tr>
<td>Identification (_t-1)</td>
<td>1.13**</td>
<td>.04</td>
</tr>
<tr>
<td>Identification (_t-2)</td>
<td>-.14*</td>
<td>.02</td>
</tr>
<tr>
<td>Identification (_t-3)</td>
<td>-.08</td>
<td>-.11</td>
</tr>
<tr>
<td>Identification (_t-4)</td>
<td>.04</td>
<td>.05</td>
</tr>
<tr>
<td>Liking (_t-1)</td>
<td>.09</td>
<td>1.16**</td>
</tr>
<tr>
<td>Liking (_t-2)</td>
<td>.15</td>
<td>-.25**</td>
</tr>
<tr>
<td>Liking (_t-3)</td>
<td>-.25**</td>
<td>-.05</td>
</tr>
<tr>
<td>Liking (_t-4)</td>
<td>.04</td>
<td>.13*</td>
</tr>
</tbody>
</table>

* *p < .05
** *p < .01
Table 10

*VAR Model for Identification and Liking during Rise of the Planet of the Apes*

<table>
<thead>
<tr>
<th></th>
<th>Identification</th>
<th>Liking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>.02*</td>
<td>-.01</td>
</tr>
<tr>
<td>Identification __1</td>
<td>1.15**</td>
<td>.07**</td>
</tr>
<tr>
<td>Identification __2</td>
<td>-.16*</td>
<td>.00</td>
</tr>
<tr>
<td>Identification __3</td>
<td>-.13</td>
<td>-.04</td>
</tr>
<tr>
<td>Identification __4</td>
<td>.11*</td>
<td>.00</td>
</tr>
<tr>
<td>Liking __1</td>
<td>.06</td>
<td>1.27**</td>
</tr>
<tr>
<td>Liking __2</td>
<td>-.01</td>
<td>-.43**</td>
</tr>
<tr>
<td>Liking __3</td>
<td>.14</td>
<td>.17*</td>
</tr>
<tr>
<td>Liking __4</td>
<td>-.19*</td>
<td>-.03</td>
</tr>
</tbody>
</table>

* * p < .05
** ** p < .01

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Table 11

VAR Model for Identification and Liking during Rio

<table>
<thead>
<tr>
<th></th>
<th>Identification</th>
<th>Liking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>.04**</td>
<td>.02*</td>
</tr>
<tr>
<td>Identification t-1</td>
<td>1.10**</td>
<td>-.04</td>
</tr>
<tr>
<td>Identification t-2</td>
<td>-.16**</td>
<td>.04</td>
</tr>
<tr>
<td>Liking t-1</td>
<td>.28**</td>
<td>1.36**</td>
</tr>
<tr>
<td>Liking t-2</td>
<td>-.26**</td>
<td>-.37**</td>
</tr>
</tbody>
</table>

* \( p < .05 \)
** \( p < .01 \)
Table 12

*Shared Values as Predictors of Liking and Identification*

<table>
<thead>
<tr>
<th></th>
<th>Rio</th>
<th>Apes</th>
<th>Italian Job</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liking</td>
<td>$b = 5.54^{**}$</td>
<td>$b = -4.18^*$</td>
<td>$b = 1.54$</td>
</tr>
<tr>
<td></td>
<td>$p = .002$</td>
<td>$p = .045$</td>
<td>$p = .35$</td>
</tr>
<tr>
<td></td>
<td>$R^2 = .10$</td>
<td>$R^2 = .03$</td>
<td>$R^2 &lt; .01$</td>
</tr>
<tr>
<td>Identification</td>
<td>$b = 0.16^{**}$</td>
<td>$b = 0.02$</td>
<td>$b = -0.35$</td>
</tr>
<tr>
<td></td>
<td>$p = .006$</td>
<td>$p = .69$</td>
<td>$p = .45$</td>
</tr>
<tr>
<td></td>
<td>$R^2 = .08$</td>
<td>$R^2 &lt; .01$</td>
<td>$R^2 &lt; .01$</td>
</tr>
</tbody>
</table>

* = significant at the $p < .05$ level.
** = significant at the $p < .01$ level.
Table 13

*Between-Subject Variance During Key Story Moments, as Compared to Between-Subject Variance During the Remainder of Each Film (i.e. Non-Key Moments)*

<table>
<thead>
<tr>
<th></th>
<th>Key Moment Variance</th>
<th>Non-Key Moment Variance</th>
<th>Statistical Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M(SD)*</td>
<td>M(SD)*</td>
<td></td>
</tr>
<tr>
<td><strong>Identification</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hero’s Goals</td>
<td>676.33 (141.29)</td>
<td>628.09 (124.48)</td>
<td>$t (20) = -0.90, p = .377$</td>
</tr>
<tr>
<td>Screenplay Structure</td>
<td>566.77 (156.72)</td>
<td>628.09 (124.48)</td>
<td>$t (21) = 1.10, p = .282$</td>
</tr>
<tr>
<td>ERG Needs</td>
<td>675.60 (89.64)</td>
<td>628.09 (124.48)</td>
<td>$t (16) = -1.02, p = .324$</td>
</tr>
<tr>
<td><strong>Liking</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hero’s Goals</td>
<td>380.83 (67.45)</td>
<td>384.58 (83.74)</td>
<td>$t (24) = .13, p = .900$</td>
</tr>
<tr>
<td>Screenplay Structure</td>
<td>338.23 (134.29)</td>
<td>384.58 (83.74)</td>
<td>$t (18) = 1.04, p = .311$</td>
</tr>
<tr>
<td>ERG Needs</td>
<td>365.96 (46.39)</td>
<td>384.58 (83.74)</td>
<td>$t (19) = .67, p = .512$</td>
</tr>
</tbody>
</table>

*Note: M represents mean variance across scenes; SD represents the standard deviation of variance across scenes.*
Figure 1: Effect of Unconscious Need on Identification
Figure 2: The Differential Impact of Establishment of Protagonist’s Growth Need on Identification, by Personal Relevance of Growth Motivations.
Figure 3. Mean Ratings of Identification and Liking over Time for *The Italian Job*
Figure 4. Mean Ratings of Identification and Liking over Time for *Rio*
Figure 6. Mean Ratings of Identification and Liking over Time for *Rise of the Planet of the Apes*