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The Extended Transportation-Imagery Model: A Meta-Analysis of the Antecedents and Consequences of Consumers' Narrative Transportation

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Stories, and their ability to transport their audience, constitute a central part of human life and consumption experience. Integrating previous literature derived from fields as diverse as anthropology, marketing, psychology, communication, consumer, and literary studies, this article offers a review of two decades' worth of research on narrative transportation, the phenomenon in which consumers mentally enter a world that a story evokes. Despite the relevance of narrative transportation for storytelling and narrative persuasion, extant contributions seem to lack systematization. The authors conceive the extended transportation-imagery model (ETIM), which provides not only a comprehensive model that includes the antecedents and consequences of narrative transportation but also a multidisciplinary framework in which cognitive psychology and consumer culture theory cross-fertilize this field of inquiry. The authors test the model using a quantitative meta-analysis of 132 effect sizes of narrative transportation from 76 published and unpublished articles and identify fruitful directions for further research.

The one who tells the story rules the world.

—Hopi proverb

It is difficult, if not impossible, to imagine a time in history or a stage of human life not permeated by stories (Boyd 2009; Moore 2012). Since the dawn of humankind, stories have accompanied social life and represented forms of cultural transmission, as early wall graffiti testifies (David and Wilson 2002; Smith 2007; Visconti et al. 2010). Similarly, but at an individual level, people are exposed to stories from the moment of birth. As Roland Barthes (1975, 237) vividly notes, "there is not, there has never been anywhere, any people without narrative; all classes, all human groups, have their stories…. Like life itself, it is there, international, transhistorical, transcultural." Relying on linguistic analysis, Barthes unpacks the overarching structure of stories. While acknowledging the cultural, geographical, and historical variety of story types, he detects a common structure, which distinguishes stories from a simple sequence of propositions. The hierarchical nesting of three different levels—functions, actions, and discourses—makes the processes of story creation (the storyteller's side) and story interpretation (the story-receiver's side) plausible, possible, and—why not?—even pleasurable.

Regarding consumption, several studies (Adaval, Isbell, and Wyer 2007; Adaval and Wyer 1998; Pennington and Hastie 1988) demonstrate that distinguishing a story from a series of sentences leads to the activation of affective, cognitive, and belief changes in story-receivers (i.e., consumers of the story) that can eventually affect their attitudes, intentions, and behaviors. In line with these studies, the term "consumer" in this research refers to anyone receiving a story.

Narrative transportation theory proposes that when consumers lose themselves in a story, their attitudes and intentions change to reflect that story (Green 2008). The mental state of narrative transportation can explain the persuasive effect of stories on consumers (Gerrig 1993),

who may experience narrative transportation when certain contextual and personal preconditions are met, as Green and Brock (2002) postulate for the transportation-imagery model. As we elaborate further subsequently, narrative transportation occurs whenever the consumer experiences a feeling of entering a world evoked by the narrative because of empathy for the story characters and imagination of the story plot. Given the implications of stories for the narrative persuasion of consumers, nothing is less innocent than a story.

The cultural, economic, and ethical relevance of stories for consumers' decision-making and consumption experiences (Shankar, Elliott, and Goulding 2001; Van Laer forthcoming) has attracted much scholarly attention. Since Green and Brock's (2000) quantitative narrative transportation research, a plethora of studies have investigated stories and how they transport and persuade consumers. Recent developments have further enhanced the importance of narrative transportation. The intentional placement of educational content in entertainment (Moyer-Gusé 2008), the widespread embrace of social media with stories at center stage (Van Laer and De Ruyter 2010), and the rise of hybrid genres, such as reality television shows (Hall 2009) and interactive video games (Baranowski et al. 2008), all indicate that narrative transportation constitutes a key issue that demands consumer research attention (Singhal and Rogers 2002).

Despite notable strides, however, extant narrative transportation literature remains fragmented, in terms of both its conceptual breadth and its empirical findings, as several qualitative reviews highlight (Green, Brock, and Kaufman 2004a; Moyer-Gusé 2008; Nabi and Krcmar 2004; Slater 2002a). Research suffers from a lack of conceptual clarity about the use of key concepts of story versus narrative. To fill this gap, this article offers a systematic frame by means of a meta-analytic approach to distinguish various typologies of antecedents and consequences of narrative transportation. Thus, we answer the call for more integrated,

multidisciplinary consumer research (Alba 2012; McGill, Peracchio, and Luce 2011; Shavitt 2011) by establishing dialogue between interpretive and quantitative articles on stories, narratives, narrative transportation, narrative persuasion, and their critical integration. More specifically, we pursue three primary objectives: (1) to develop a model that integrates the antecedents and consequences of narrative transportation through a review of substantial contributions to the field, (2) to empirically assess the model with a quantitative meta-analysis of extant research, and (3) to uncover issues that deserve further research attention.

(RE-)DEFINING THE FIELD OF NARRATIVE TRANSPORTATION

Stories are built from key elements. Thus, our "story about stories" needs a preliminary clarification of its building blocks, here represented by the notions of story and narrative, and their implications in terms of narrative transportation and narrative persuasion, which constitute, respectively, the focus and relevance of our model. The stories a storyteller creates and the characteristics of the story-receiver constitute the two substantial antecedents of narrative transportation. In this section, we provide conceptual clarification of the terminology adopted in the field of narrative transportation. We begin from the simple observation that former works frequently use the concepts of story and narrative interchangeably, which makes their meaning all but convergent (Appel and Malečkar 2012; Chase 1995; Grayson 1997; Volkman and Parrott 2012). Shankar et al. (2001, 429) note that "narratives are stories." Similarly, Thompson (1997) refers to stories, narratives, and even texts in general as if they were synonyms. However, according to his hermeneutic analysis of consumer stories, a narrative is derived from a process of attribution of meaning to and interpretation of a story. Relying on this suggestion and the

consideration that stories always include at least a storyteller and a story-receiver, we argue that story and narrative are distinctive elements that articulate the separation between the storyteller and the story-receiver—and thus between the production and the consumption of stories.

Story as the Storyteller's Production

We restrict story to mean a storyteller's account of an event or a sequence of events leading to a transition from an initial state to a later state or outcome (Bennett and Royle 2004). In line with this definition, stories always imply some essential elements that the storyteller must include in his or her production: (1) the plot, which frames the temporal sequence of the events; (2) the characters playing a role in the plot; (3) the climax, which results from the modulation of the dramatic intensity along the plot; and (4) the outcome, or the end state of the plot commonly derived from the characters' resolution of a misfortunate event (Banerjee and Greene 2012a; Green and Brock 2000; Phillips and McQuarrie 2010; Stern 1994). Of these essential elements, scholars from various fields have particularly debated what constitutes a story plot. First, they contend that concatenated sentences are not necessarily stories (Barthes 1975; Shankar et al. 2001). The lack of a temporal sequence of events reverts such texts to mere analytical expression (Green and Brock 2000; Wang and Calder 2006). Second, they observe that a plot's structure is the result of a combination of narrative movement, or the chronological flow of the events indicating the direction of the story, and narrative framing, or the thematic and symbolic parallels among different events in the story (Thompson 1997).

Scholars in the field of storytelling and narrative transportation largely agree that telling stories is a valuable exercise for the storyteller on two levels. At the individual level, stories

constitute a powerful device to frame a storyteller's experience (Gergen and Gergen 1988;

Shankar et al. 2001; Thompson 1997) and therefore can influence his or her likelihood to repeat

the narrated experience and/or to advise others (Moore 2012). At the market level, advertising,

branding, communication, and consumer research all provide examples of how companies-as-

storytellers can benefit by telling stories to their current and prospective customers.

Narrative as the Story-Receiver's Consumption of the Story

Consistent with Weick's (1995) observations that the story-receiver is not merely a reader

of the story but also an active interpreter and that receiving a story is actually an act of reading as

well as authoring through which the story is processed, we distinguish between the notion of

story and that of narrative. We define "narrative" as the story-receiver's consumption of the story

through which he or she does not just read the story but also makes it readable in the first place.

As De Certeau (1984, xxi) notes, "A different world (the reader's) slips into the author's place.

This mutation makes the text habitable, like a rented apartment. It transforms another person's

property into a space borrowed for a moment by a transient." In short, a narrative is a story the

consumer interprets in accordance with his or her prior knowledge, attention, personality,

demographics, and significant others (Fishbein and Yzer 2003).

This definition of narrative overtly acknowledges the agency of the story-receiver. The

story-receiver's act of interpretation may ultimately convert his or her consumption into a

memorable experience (Deighton 1992). For example, Chronis (2008) shows that visitors of

American Civil War battlefields participate in commercial stories by (1) voicing their prior

knowledge, which occasionally leads them to contest the designated storyteller guides; (2) filling

gaps in the story conveyed to them; (3) recontextualizing the plot through comparisons with their personal experiences; and (4) indulging in their own imagination. In their ethnography of the American Girl store, Borghini et al. (2009) report on the multistoried stories that young consumers receive and interpret during their shopping experience. Similarly, flagship retail stores (Nike Town in London), spectacular malls (West Edmonton Mall in Alberta), and theme parks (Disneyland) all display brand characters, visuals, and other narrative cues that help stimulate consumers to develop narratives from stories. Thus, consumers frequently interpret stories to appropriate cultural meanings (McCracken 1986, 2005), affirm their individual and/or social identity (Holt 1995), and inform their consumption experience (Bahl and Milne 2010).

In summary, consumers interpret stories. Interpretation constitutes an act of consumption through which a story is converted into a narrative. Though our definition of story as a storyteller's production and narrative as a story-receiver's consumption of the story does not reflect standard practice in narrative transportation research, the distinction helps separate two groups of antecedents of narrative transportation: storyteller and story-receiver antecedents. As such, this distinction facilitates conceptual clarity and integration across various streams of contributions to the field on which our overarching model of narrative transportation is grounded.

Narrative Transportation

Deighton, Romer, and McQueen (1989, 335) anticipate the construct of narrative transportation by arguing that a story invites story-receivers into the action it portrays and, as a result, makes them lose themselves in the story (Nell 1988). Gerrig (1993) was the first to coin

the notion of narrative transportation within the context of novels. Using travel as a metaphor for reading, he conceptualizes narrative transportation as a state of detachment from the world of origin that the story-receiver—in his words, the traveler—experiences because of his or her engrossment in the story, a condition that Green and Brock (2000) later describe as the story-receiver's experience of being carried away by the story. Notably, the state of narrative transportation makes the world of origin partially inaccessible to the story-receiver, thus marking a clear separation in terms of here/there and now/before, or narrative world/world of origin.

Most research on narrative transportation follows the original definition of the construct. Our review shows that scholars in the field constantly reaffirm the relevance of three features. First, narrative transportation requires that consumers process stories—the acts of receiving and interpreting. Second, story-receivers become transported through two main components: empathy (Slater and Rouner 2002) and mental imagery (Green and Brock 2002). Empathy implies that story-receivers try to understand the experience of a story character, that is, to know and feel the world in the same way. Thus, empathy offers an explanation for the state of detachment from the world of origin that is narrative transportation. In mental imagery, story-receivers generate vivid images of the story plot, such that they feel as though they are experiencing the events themselves. Third, when transported, story-receivers lose track of reality in a physiological sense. In accordance with these features, we define narrative transportation as the extent to which (1) a consumer empathizes with the story characters and (2) the story plot activates his or her imagination, which leads him or her to experience suspended reality during story reception.

Finally, narrative transportation is a form of experiential response to narratives and thus is similar to other constructs, such as absorption (Tellegen and Atkinson 1974), optimal experience

or flow (Csikszentmihalyi 1992), and immersion (Wang and Calder 2006). Yet several subtle, critical differences exist. Absorption refers to a personality trait or general tendency to be immersed in life experiences; transportation is an engrossing temporary experience (Sestir and Green 2010). Flow is a more general construct (i.e., people can experience flow in a variety of activities), whereas transportation specifically entails empathy and mental imagery, which do not occur in flow experiences (Bracken 2006). Phillips and McQuarrie (2010) demonstrate that immersion is primarily an experiential response to aesthetic and visual elements of images, whereas narrative transportation relies on a story with plot and characters, features that are not present in immersion. We do not include these adjacent constructs because doing so would raise doubts about construct validity. However, we include multiple quantitative operationalizations of narrative transportation so that the synthesis is sufficiently comprehensive to help unify and advance the field.

Narrative Persuasion

Since narrative transportation's conceptualization, research has demonstrated that the transported "traveler" can return changed by the journey (Gerrig 1993). Subsequent studies have confirmed that a story can engross the story-receiver in a transformational experience (Phillips and McQuarrie 2010), whose effects are strong and long-lasting (Green, Garst, and Brock 2004b; Green et al. 2008). The transformation that narrative transportation achieves is persuasion of the story-receiver. More specifically, our literature review, from which we develop precise hypotheses on the consequences of narrative transportation, reveals that narrative transportation can cause affective and cognitive responses, beliefs, and attitude and intention changes.

However, the processing pattern of narrative transportation is markedly different from that in well-established models of persuasion.

Before 2000, dual-process models of persuasion, especially the elaboration likelihood model (Petty and Cacioppo 1986) and heuristic-systematic model (Chaiken 1987), dominated persuasion research. These models attempt to explain why people accept or reject message claims. According to these models, the determination of a claim's acceptability can result from careful evaluation of the arguments presented or from reliance on superficial cues, such as the presence of an expert. Whether receivers scrutinize a message depends on the extent to which they are able and motivated to process it systematically. As important variables, these models include empathy (Shen 2010), familiarity (Wood, Kallgren, and Preisler 1985), involvement (Chaiken 1980), and the number and nature of thoughts the message evokes (Petty and Wegener 1998). If these variables are mainly positive, the receiver's attitudes and intentions tend to be more positive; if the variables are predominantly negative, the resulting attitudes and intentions are more negative.

These variables also exist in narrative persuasion; yet analytical persuasion and narrative persuasion differ depending on the role of involvement. In analytical persuasion, involvement depends on the extent to which the message has personally relevant consequences for a receiver's money, time, or other resources. If these consequences are sufficiently severe, receivers evaluate the arguments carefully and generate thoughts related to the arguments. Yet, as Slater (2002a, 171) notes, even though severe consequences for stories are relatively rare, "viewers or readers of an entertainment narrative typically appear to be far more engrossed in the message." This type of involvement, or narrative transportation, is arguably the crucial determinant of narrative persuasion.

Following Slater's (2002a) ascertainment, several authors (Escalas 2007; Green and Brock 2000, 2002; Slater 2002b) conclude that though the dual-process models provide a valid description of analytical persuasion, they do not encompass narrative persuasion. Analytical persuasion refers to attitudes and intentions developed from processing messages that are overtly persuasive, such as most lessons in science books, news reports, and speeches. However, narrative persuasion refers to attitudes and intentions developed from processing narrative messages that are not overtly persuasive, such as novels, movies, or video games. Addressing the strength and duration of the persuasive effects of processing stories, recent contributions to the field (Green et al. 2004b; Green et al. 2008) propose a fundamental distinction between analytical and narrative persuasion. That is, narrative transportation is a mental state that produces enduring persuasive effects without careful evaluation of arguments. Transported story-receivers are engrossed in a story in a way that is neither inherently critical, nor involves great scrutiny. In contrast, narrative transportation seems to be more unintentionally affective than intentionally cognitive in nature. This way of processing leads to potentially increasing and long-lasting persuasive effects. Appel and Richter (2007, 128) use the term "sleeper effect" to describe this paradoxical property of narrative transportation over time, which consists of a more pronounced change in attitudes and intentions and a greater certainty that these attitudes and intentions are correct.

We suggest plausible explanations for the sleeper effect; however, more empirical work is needed to assess the prolonged effect of narrative transportation. First, according to poststructural consumer research (Brown 1995; Holt 1997), language's articulation in narrative format is capable not only of mirroring reality but also of constructing it. As such, stories could cause profound and durable persuasion of the transported story-receiver as a result of his or her

progressive internalization (Vygotsky and Cole 1978). When stories transport story-receivers, not only do they present a narrative world but, by reframing the story-receiver's language, they also durably change the world to which the story-receiver returns after the transportation experience. Second, research demonstrates that consumers analyze and retain stories differently than other information formats (Deighton et al. 1989; Peracchio 1993). For example, Deighton et al. (1989) show that analytical advertisements stimulate cognitive responses whereas narrative advertisements are more likely to stimulate affective responses. Following this line of reasoning, we define narrative persuasion as the effect of narrative transportation, which manifests itself in story-receivers' affective and cognitive responses, beliefs, attitudes, and intentions from being swept away by a story and transported into a narrative world that modifies their perception of their world of origin. The conceptual distinction between analytical persuasion and narrative persuasion and the theoretical framework of sound interpretation of narrative persuasion both ground our model.

EXTENDING THE TRANSPORTATION-IMAGERY MODEL

Extant contributions have not developed an overarching model that includes the main antecedents and consequences of narrative transportation identified over the course of two decades of scholarly investigation. The transportation-imagery model (Green and Brock 2002) clearly marked the field's boundaries but is limited in scope. Thus, a comprehensive model is overdue not only to advance knowledge on narrative transportation per se but also to complement persuasion research.

We present three composite hypotheses on the antecedents and consequences of narrative transportation. Using a meta-analytic method, we subsequently test our hypotheses and draw conclusions about the model. Specifically, with a best-evidence, model-driven meta-analysis, we discern effects that stem solely from measurement variance, though we remain sensitive to findings that imply different directions across studies. That is, we review both interpretive and quantitative articles but inevitably test relationships on the basis of extant quantitative studies.

In line with the transportation-imagery model (Green and Brock 2002), our model comprises the story and consumer attributes as storyteller and story-receiver antecedents. Moreover, this "extended transportation-imagery model" (henceforth ETIM) considers affective and cognitive responses, beliefs, attitudes, and intentions as consequences of narrative transportation, as we detail in figure 1. Our model also includes measurement scales used in prior studies that might moderate the effect of narrative transportation. If this moderating effect exists, it represents the impact of the scales used in the original studies. Because narrative transportation theory does not allow for this potential effect, we discuss it in more detail only in the methodology section.

Insert figure 1 about here

As mentioned previously, our aim is to advance understanding of the current state-of-the-art of narrative transportation research; thus, we address substantial contributions to the field. Although classic models of persuasion theorize a relationship between medium and persuasion (Lasswell 1948), our review reveals that only six articles on narrative transportation address the channel through which storytellers transfer stories. This number is insufficient to provide meaningful insight into the extent to which a factor may have an influence (Valentine, Pigott,

and Rothstein 2010); therefore, our model does not include medium. Instead, we call for additional investigation of the potential effect of medium.

Researchers have also raised the point of story genre and its possible effect on the story-receiver's narrative transportation. In line with Genette (1979/1992), we define "story genre" as the different story categories that emerge from culturally determined conventions in a given society at a given time. Bilandzic and Busselle (2008) show that genre in and of itself does not have a distinctive effect on narrative transportation but that story-receivers' familiarity with a specific genre does. Moreover, from a purely methodological perspective, the inclusion of genre as an antecedent of narrative transportation would be problematic because this variable is of a nondichotomous nominal measurement level, which precludes higher operations that imply order. Following Bilandzic and Busselle, we therefore do not elaborate specific hypotheses on story genre. Instead, we develop hypotheses on the effect of story-receiver familiarity and discuss genre to a greater extent when we propose future research directions.

Storyteller Antecedents

We highlight three critical storyteller antecedents in our review, each of which may influence narrative transportation. We conceptually develop each antecedent separately and elaborate on their relationship to narrative transportation. We repeat this procedure for the other antecedents and for the consequences of narrative transportation.

Identifiable Characters. A primary issue in narrative transportation research is how storytellers use narrative framing to refer to story characters. Following Küntay (2002) and Stern

(1994), we define identifiable characters as invented personas the story-receiver clearly pinpoints from the storyteller's use of context-derived assumptions. To be deemed transporting, stories require that storytellers clearly convey who they are talking about, and thus storytellers bear the double responsibility of formulating their characters according to their judgments of character identifiability and of specifying the characters from the beginning. In this way, they aid story-receivers' identification with and potential empathy for the characters. Thus, identifiability is the property a character must satisfy, such that story-receivers understand the experience of the character by knowing and feeling the world in the same way (Escalas and Stern 2003). Slater and Rouner (2002) propose that identifiable characters affect narrative transportation because story-receivers vicariously experience characters' beliefs and emotions, empathize with them, and become engrossed in the story. In turn, this state prompts story-receivers to interpret the story from the characters' bias (Hoffner, Levine, and Toohey 2008). Escalas, Moore, and Britton (2004) show that identifiable characters cause story-receivers to become more transported into stories consumed for commercial purposes. Furthermore, Slater et al. (2003) find that identifiable characters promoting a healthful lifestyle induce more nutritious eating habits among story-receivers. Relatedly, Dal Cin et al. (2007) reveal the dark side of identifiability, such that identifiable characters who smoke may increase story-receivers' intentions to smoke as well. Similarly, Greenwood (2007) determines that women's intention to engage in violent behaviors correlates with how easily they can identify with heroic female characters.

Imaginable Plot. Scholars have paid particular attention to the articulation of the story plot, which refers to the temporal sequence of events that happen to the characters in a described setting (Escalas 1998). Imagery of story plot is vital to narrative transportation, such that through

a mentally imagined plot, stories resemble real-life experiences (Green 2006). "Constituents of the narrative, chiefly its evoked scenes, then take on new meaning as a result of their links with the experience of entering the narrative world" (Green and Brock 2002, 323). People who do not mentally imagine the plot are less likely to experience this effect (Green et al. 2008). A story plot influences narrative transportation to the extent that it provokes mental imagery (Escalas 2004a; Green and Brock 2000). For example, Van den Hende et al. (2007) find that stories about newly introduced products evoke imagery and thereby help customers become transported into situations in which they might use a product.

Verisimilitude. With regard to story realism, researchers have developed two rival notions: fictionality and verisimilitude. Fictional stories are stories whose plots are purely imaginary or resemble real events but do not claim to accurately represent real-world events (Green 2004; Green et al. 2004b). In contrast, nonfictional stories are stories grounded in real characters and events that actually happened. However, each storyteller expresses dominance in accordance with the position he or she holds, which grants the storyteller the power to determine what a story will and will not mention (Stern 1997). Appel and Richter (2007) note that to a certain extent, a fictional story is a tautology because a story always contains some invented elements, which move it away from objective reality (Eco 1994). The storyteller's dominant position inevitably excludes a purely nonfictional story. Thus, Green and Donahue (2011) demonstrate that nonfiction versus fiction manipulations do not affect narrative transportation.

What matters more for story realism is verisimilitude. Bruner (1986, 11) observes that people assess analytical expressions in terms of their truth and stories in terms of their verisimilitude, which he defines as "lifelikeness." Bal, Butterman, and Bakker (2011, 362) add

that the central focus of verisimilitude "is on believability and not on consistency and noncontradictions…. Truth in fiction is not about empirical evidence." Thus, we define verisimilitude as the likelihood that story events may actually happen. Ang and Couling (1985, 135) also note that verisimilitude constitutes "imaginary solutions for real contradictions." As such, nonfictionality differs from verisimilitude. Whereas nonfictionality refers to facts or, in other words, that which has happened, verisimilitude is about everything that may happen. A higher level of verisimilitude increases story-receivers' suspended reality (Busselle and Bilandzic 2008) and narrative transportation (Green 2004). Thus:

H1:   The more stories have (a) characters with whom story-receivers can identify, (b) a plot that story-receivers can imagine, and (c) verisimilitude, the more narrative transportation increases.

Story-Receiver Antecedents

The story-receiver plays a major role in the interpretation of the story. Ultimately, he or she is the transported party whose key individual attributes may affect the intensity and effects of narrative transportation (Green 2008; Green and Brock 2002). Our review indicates six key story-receiver antecedents that scholars in the field of narrative transportation have addressed and that we include in the ETIM. In the interest of brevity, we focus on the contributions that tie these individual characteristics to narrative transportation.

Familiarity. Familiarity refers to the degree to which a story-receiver has prior knowledge about or personal experience with the story topic or genre (Green 2004). Minimal

familiarity seems crucial for narrative transportation to occur because the interpretation of a story requires the ability to process and understand the information contained in the story plot. As such, story-receivers should possess a certain degree of cultural knowledge to fully appreciate the story. The more cultural knowledge they possess, the greater narrative transportation they may experience within the topic or genre, whether because of their intrinsic interest or because they find it easier to imagine the story plot (Slater, Rouner, and Long 2006). This positive effect of familiarity on story processing and narrative transportation may be why people choose their preferred story again and again. For example, Morgan, Movius, and Cody (2009) reveal that people who have consented to donate their organs when they die experience greater narrative transportation into organ donation storylines than nondonors. Green (2004) presents a story of a gay man visiting a college fraternity; in that experiment, participants' closeness to someone who is gay and knowledge of fraternity life led to greater narrative transportation.

Attention. Building on the work of Berlyne (1960), we define "attention" as the story-receiver's degree of focused concentration on the story. Gerrig's (1993) foundational work proposes attention to the story as one relevant story-receiver attribute that affects narrative transportation. That is, when stories require more focused concentration (Nielsen and Escalas 2010) or when story-receivers are motivated to pay attention to a story (Polichak and Gerrig 2002), they experience greater narrative transportation as a result. However, story-receivers' attention can be perturbed and therefore reduced (Van Laer, De Ruyter, and Cox 2013). As a result, distraction causes lower levels of narrative transportation (Green and Brock 2000; Zwarun and Hall 2012).

Transportability. In line with Dal Cin, Zanna, and Fong (2004), we define "consumer transportability" as a story-receiver's chronic propensity to be transported, which functions independently of any particular story or genre. Transportability correlates with empathic ability (Davis 1983) and image-producing capacity (Betts 1909) and thus should induce narrative transportation beyond familiarity effects (Bilandzic and Busselle 2008; Mazzocco et al. 2010). For example, in the smoking study we described previously, transportability partly determined why people gave in to smoking behaviors they read in the story (Dal Cin et al. 2007). In a related study, greater transportability enabled both smokers and former smokers to recall narrative antismoking messages better than story-receivers with lesser transportability (Dunlop, Wakefield, and Kashima 2008).

Demographic Antecedents: Age, Education, and Sex. The three last consumer antecedents to narrative transportation are age, education, and sex. First, narrative transportation may be more pronounced for younger than older story-receivers. Younger people have relatively less knowledge of real-world limitations, are less able to evaluate information critically, and can assess verisimilitude less (Diekman and Murnen 2004). Although they may accept that commercial stories represent fantasies about brands, such skepticism does not prevent narrative transportation (Eagle 2007). Second, we expect that a higher education level leads to greater narrative transportation. We derive this expectation from the assumption that highly educated people read more and thus are likely to be better at inference making (Mar et al. 2006).

Third, we include the story-receiver's sex and his or her gender appurtenance. Sex pertains to the biological differences between men and women, whereas gender reflects the normative implications of sex—in terms of masculinity and femininity—as determined by a

person's social and cultural environment (Yannopoulou and Elliott 2008). Though theoretically clear-cut, sex and gender are difficult to separate in narrative transportation research. Some researchers favor a biological over a sociocultural interpretation of story-receivers' sex, whereas others contend that biological differences may have an impact despite their choice of a sociocultural interpretation (Stern 1992). Thus, we use a definition of sex that includes both the biological and the sociocultural facets of the difference between men and women.

In terms of how sex influences story interpretation, or what Stern (1993, 559) qualifies as "gendered reading," in Green and Brock's (2000) original study, women report significantly greater narrative transportation than men. That is, women are more likely to be readers (Mar et al. 2006) and therefore more likely to be familiar with a given story topic or genre (e.g., romance, Radway 1984). Women also differ in their empathy for various story characters (Ang and Couling 1985). Women are more apt to empathize than men (Argo, Zhu, and Dahl 2008; Davis 1983) and to generate more emotions in response to a story (Stern 1992, 1993), whereas men are more descriptive and distant (Yannopoulou and Elliott 2008). As an explanation for women's greater emotional participation during story reception, Stern (1992) notes that women are more prone to storytellers' dominance whereas men are more distrustful of storytellers.

In summary, narrative transportation may vary depending on story-receivers' familiarity, attention, transportability, age, education, and sex. Thus:

H2: The more story-receivers (a) are familiar with a story topic, (b) pay attention to a story, (c) possess transportability, (d) are young, (e) are educated, and (f) are female, the more narrative transportation increases.

Consequences of Narrative Transportation

Not only is narrative transportation conceptually intriguing, but it is also relevant for its potential effects on story-receivers. We identify affective and cognitive responses, beliefs, attitudes, and intentions as potential consequences of narrative transportation. Whereas affective responses are emotional in nature and represent expressions of feelings, cognitive responses—traditionally more often studied in persuasion research—are critical or narrative in nature and reflect expressions of thoughts (Batra and Ray 1986; Escalas 2004b). The distinguishing feature of beliefs is that they are descriptive in nature (Albarracín et al. 2005). Attitudes are the effect of the beliefs linked with the affective and cognitive responses evoked by a story. Attitudes refer to evaluations of beliefs with some degree of favor or disfavor (Eagly and Chaiken 1993). Intentions are a willingness to perform a particular behavior (Fishbein and Yzer 2003). Most investigations of attitudes and intentions stem from persuasion research, which suggests that affective and cognitive responses and beliefs are important mediating variables (Albarracín et al. 2005). We review each of these consequences and elaborate hypotheses that we test as part of the ETIM.

Affective Response. Both affective and cognitive responses mediate the relationship between messages and attitudes (Holbrook and Batra 1987), but affective responses are qualitatively different from cognitive responses (Edell and Burke 1987). They signal the importance of consumers' desires (Frijda et al. 1992). Stories often elicit emotions or feelings (Escalas et al. 2004). Thus, people presumably consume stories because of a strong desire to be entertained, to experience suspended reality (i.e., escapism), or to enhance their everyday lives. Narrative transportation may influence the generation of affective responses, such that greater

levels of narrative transportation cause story-receivers to perceive the story as more realistic and, thus, to express more intense and story-consistent affective responses (LaMarre and Landreville 2009). In this context, the level of intensity indicates the extent to which a story fulfills story-receivers' desire to be entertained. Chang (2009) and Escalas (2004a) confirm that when a story evokes greater narrative transportation, story-receivers generate more affect. Chang finds that exposure to a narrative advertisement generates greater narrative transportation and more warm feelings than exposure to an analytical advertisement. Escalas finds that narrative transportation has a positive effect on upbeat feelings.

Cognitive Response. Extant research addresses two distinct types of cognitive responses that stories can evoke: critical thoughts and narrative thoughts. Consumers tend to generate critical thoughts when confronted with a claim that differs from their own beliefs (Moyer-Gusé and Nabi 2010). Conversely, narrative thoughts are representations of the story's structure (Escalas 2004b); they contain precise narrative cues, such as characters or objects. Story-receivers generate these thoughts to construct a narrative from a story.

According to Green and Brock (2000), narrative transportation may reduce critical thoughts. In support of this claim, Slater and Rouner (2002) note that story-receivers often do not generate critical thoughts even when the story plot is inconsistent with prior beliefs. In contrast with these researchers, Chang (2009) finds a positive relationship between narrative transportation and narrative thoughts; he reports that narrative advertisements generate greater narrative transportation and narrative thoughts than analytical advertisements.

Belief. Narrative transportation can influence story-receivers' beliefs (Braverman 2008; Green and Brock 2000) because the more transported they are, the more they disconnect from existing beliefs (Green 2004; Green and Brock 2000). That is, transported story-receivers perceive the story plot as truthful, even if they know the story is false (Marsh and Fazio 2006). In turn, this perception of truth prompts story-receivers to adopt story-consistent beliefs.

Attitude. Attitude refers to the evaluation of the story plot, or how positive or negative story-receivers perceive it to be. Two determinants play a role in attitude: how desirable (or undesirable) story-receivers find the story plot (affective and cognitive responses) and how truthful they perceive it to be (beliefs). As mentioned, transported story-receivers are more likely to perceive the story plot as desirable and truthful, which positively affects their attitudes (Escalas 2004a, 2007; Green and Donahue 2011; Wang and Calder 2006).

Intention. Transported story-receivers tend to be more willing to perform an action (Dal Cin et al. 2007; Dunlop, Wakefield, and Kashima 2010; Schlosser 2003). For example, Schlosser (2003) shows that consumers exhibit increased purchase intentions when they experience greater narrative transportation into the website of a digital camera manufacturer. Similarly, Dunlop et al. (2010) reveal that greater narrative transportation into a narrative advertisement in which the character realizes she has skin cancer leads to a greater willingness to use sunscreen. In summary, we anticipate that the effects of narrative transportation function as follows:

H3: The more narrative transportation increases, the more (a) story-consistent affective responses increase, (b) critical thoughts decrease, (c) narrative thoughts increase,

(d) story-consistent beliefs increase, (e) story-consistent attitudes increase, and (f) story-consistent intentions increase.

METHOD

Search Process and Sampling Frame

Our search encompassed an inclusive linguistic range spanning Dutch, English, French, German, and Italian. We excluded articles in other languages because of the difficulties of translation. We also limited our search to the 13 years following Green and Brock's (2000) quantitative operationalization . Noting the potential upward bias of published studies (Bozarth and Roberts 1972), we deemed all relevant articles eligible, regardless of their publication form. We employed various methods in our literature search. (The complete list of methods including all shelf-searched journals is available on request.)

Our search produced nine unpublished and 270 published articles (including book sections) related to narrative transportation. However, to appear in our meta-analysis, a study needed to meet our narrative transportation definition. Therefore, the study needed to include narrative transportation as a variable measured by the Transportation (Green and Brock 2000, 704), Being Hooked (Escalas et al. 2004, 110), or Mysticism (Hood 1975, 31-32) scales. These scales provide data on participants' degree of empathy, mental imagery, and suspended reality. With these criteria, the number of articles ultimately appearing in the meta-analysis was 76. Citations marked with an asterisk in the reference list are included in the meta-analysis. (The

complete list of articles is available on request.) No other articles measured narrative transportation quantitatively.

Variable Coding

Together, the 76 articles featured 132 effect sizes of narrative transportation. To ensure the independence of the effect sizes, two expert coders blind to the hypotheses classified the multitude of variables reported in the articles, using the nine antecedent and six consequence categories. The coders achieved average agreement levels that were acceptable (Cohen's $\kappa = .75$, $p < .001$) and in line with previous meta-analyses (κ point estimate = .73, 95% CI = .72 ± .76, Sun 2011). Disagreements were resolved by discussion. A professional marketing research consultant served as an independent moderator. We provide illustrative examples in table 1.

Insert table 1 about here

Effect Size Computation

The effect size statistic contrasts groups according to their mean scores on narrative transportation and its consequences. The Pearson correlation provided our effect size indicator. We used Hullett and Levine's (2003) method to calculate a simple average correlation by converting F values from the analyses of variance into effect size estimates. We weighted these estimates using the inverse of the variance. We then corrected these weighted correlations for differences in the reliability of the variables involved. Our formula for calculating the reliability-adjusted, inverse variance-weighted correlation ρ between variables x and y is

$$\rho = \frac{r_{xy}}{\sqrt{r_{xx}} \sqrt{r_{yy}}}$$

where r_{xx} and r_{yy} represent the measurement reliabilities of x and y, respectively (Hunter and Schmidt 2004). We also adapted this formula by setting r_{xy} equal to the inverse variance-weighted correlation and r_{xx} equal to 1. Most studies report coefficient reliability values (e.g., Cronbach's α, Cohen's κ), which we used to estimate the dependent measures of r_{yy}.

To test the effects of the relevant antecedents on narrative transportation and the effect of narrative transportation on each consequence, we calculated not only the reliability-adjusted, inverse-variance weighted ρ but also the 95% confidence interval and the conservative random effect z (Hunter and Schmidt 2004). In addition, we determined the file drawer N, or the number of studies with a zero effect size that would be required to reduce the mean effect size to a probability level of α = .05 (Rosenthal 1991). In support of our analysis, we relied on the Comprehensive Meta-Analysis software program (Borenstein et al. 2005).

Measurement Scale Moderator

The ETIM contains measurement scale as a factor that could moderate the overall effect of narrative transportation (see figure 1). We explore whether the study used the Transportation scale. To determine the presence of heterogeneity due to measurement decisions in prior studies, we used the Q statistic.

RESULTS

We report the effects of the antecedent, consequence, and moderator variables of the effect of narrative transportation in table 2. We first consider each antecedent separately. Our results support the overall prediction that narrative transportation varies for different characteristics under the control of the storyteller; this variation is significant for identifiable characters ($\rho = .20$, z = 4.15, p < .001), imaginable plot ($\rho = .29$, z = 7.39, p < .001), and verisimilitude ($\rho = .27$, z = 4.34, p < .001); thus, we find support for hypotheses 1a, 1b, and 1c.

When story-receivers experience narrative transportation, their own characteristics influence the salience of the experience. The effect sizes indicate that narrative transportation differs depending on story-receivers' familiarity ($\rho = .21$, z = 5.65, p < .001), attention ($\rho = .29$, z = 5.73, p < .001), transportability ($\rho = .30$, z = 8.15, p < .001), education ($\rho = .10$, z = 15.67, p < .001), and sex ($\rho = .15$, z = 26.44, p < .001), in support of hypotheses 2a, 2b, 2c, 2e, and 2f. However, no significant effect emerges for age ($\rho = .00$, z = .01, p < .496); thus, we find no support for hypothesis 2d.

Insert table 2 about here

We also examined the effect of narrative transportation on the consequence variables, as we summarize in table 2. We find that, consistent with hypotheses 3a–3f, narrative transportation has significant, positive effects on affective responses ($\rho = .57$, z = 9.33, p < .001), narrative thoughts ($\rho = .20$, z = 4.06, p < .001), beliefs ($\rho = .26$, z = 10.82, p < .001), attitudes ($\rho = .44$, z = 12.16, p < .001), and intentions ($\rho = .31$, z = 5.62, p < .001) and a significant, negative effect on critical thoughts ($\rho = -.20$, z = 2.60, p < .01). Furthermore, we confirm a positive effect size for studies that present multiple consequences ($\rho = .36$, z = 8.37, p < .001).

Because no other meta-analyses have been performed on narrative transportation, we compare the observed effect sizes with Cohen's (1992) guidelines. We establish that the effect sizes for transportability, attitude, intention, and combined consequences are medium-sized (.30 $< \rho <$ .50). The effect size for affective response is large ($\rho >$ .50). The other significant effect sizes are small but not trivial (.10 $< \rho <$ .30).

Considering publication bias, the file drawer results demonstrate that the effect sizes are robust and probably not a reflection of publication bias; it would require between 80 and 6627 null effects to reduce the statistical significance of the effect sizes to .05 at the two-tailed level.

Next, we consider the effect of measurement scale as a moderator of the overall effect of narrative transportation (see table 2). The Q statistic is significant ($Q_{(1)} =$ 10.25, p < .01), such that this effect size is heterogeneous, and thus it is beneficial to assess the levels of this moderator. Studies that used the Transportation scale ($\rho = .34$, z = 11.66, p < .001) reveal smaller effect sizes than studies that used other scales ($\rho = .56$, z = 7.79, p < .001).

DISCUSSION AND FUTURE RESEARCH DIRECTIONS

The Extended Transportation-Imagery Model

The findings of our meta-analysis provide several insights into the antecedents and consequences of narrative transportation. Overall, we can assign the significant antecedents into two categories: (1) under the control of the storyteller and (2) related to the story-receiver. In the first category, we identify identifiable story characters, an imaginable story plot, and

verisimilitude, which, consistent with our predictions, exert small effects on narrative transportation. In the second category, we identify story-receiver familiarity, attention, education, and (female) sex, which, consistent with our predictions, exert small effects on narrative transportation. Yet we note that the effect size of transportability is large enough that laypeople can easily perceive the difference between less and more transportable consumers (i.e., medium-sized, Cohen 1992). This result highlights the importance of story-receiver characteristics that change relatively little over time.

With regard to age—the only nonsignificant antecedent—younger story-receivers may be transported more because of greater influenceability, whereas older story-receivers may experience greater narrative transportation because of more extended life experiences and their superior cultural knowledge. Consonant with this view, Mar et al. (2006) suggest that familiarity, story-relevant knowledge, and experience with stories are greater in older than younger consumers. However, 43.44% of the original studies do not report age, and 32.79% report an average age between 18 and 22, which reduces the validity of the nonsignificant finding for age.

All the effects of narrative transportation on the consequence variables in the ETIM are significant and consistent with the predicted direction. The effect of narrative transportation on affective responses is especially large. This finding confirms the importance of entertainment for consumers as well as the special effectiveness of stories in delivering this entertainment. In line with Slater and Rouner's (2002) findings, narrative transportation also leads to less critical thoughts, though this effect is less significant than the effect on the other consequence variables. Perhaps the process responsible for the effect of narrative transportation on critical thoughts is more complex. Next to entertainment, stories are read for a different reason as well—namely, to be informed. A need to be informed can be due to the extent to which the story is personally

relevant to the story-receiver. With personally relevant stories, story-receivers may be more inclined to evaluate the story carefully and to generate critical thoughts related to the story. Thus, whether story-receivers generate critical thoughts or not may depend on the extent to which they are transported and motivated to process the story cognitively.

With regard to the methodological moderator, the results show that measurement scale moderates the effects of narrative transportation on the consequence variables. More precisely, whenever a study used a scale other than Green and Brock's (2000) Transportation scale, the effect sizes of narrative transportation on the consequence variables were inflated. As an explanation for this finding, we note that 83.33% of the studies that used a different scale first measured affective responses using a positively worded set of items. The manner in which items on a questionnaire are worded may produce transient mood states in participants, a source of common method bias (Podsakoff et al. 2003). It might be that the positive wording of the affective responses set of items on the questionnaire predisposed the participants to complete the narrative transportation set of items while in a positive mood state. In turn, this context-induced positive mood may have produced artificially high effect sizes of narrative transportation. Indeed, an additional test showed that the effect of measurement scale became nonsignificant ($Q_{(1)} = .001$, p = .973) when the effect sizes for affective responses were excluded from the moderation analysis. Though not directly testing transient mood states, this result further supports our methodological explanation. Furthermore, the different effect sizes according to different measurement scales suggest that narrative transportation is not generalizable across quantitative operationalizations. Therefore, we conclude that the Transportation scale, which reports more conservative effect sizes, is the best measure for exploring narrative transportation because it is more robust to common method bias.

Limitations

As with any type of research, meta-analytic research suffers certain limitations. First, we explain narrative transportation using three storyteller and five story-receiver antecedents, six consequences, and one significant moderator, but the case can always be made that additional factors account for variance. In particular, the inclusion of one potential antecedent and one moderator would have been methodologically problematic. We could not include genre as an antecedent of narrative transportation because this variable is of a nondichotomous nominal measurement level, which precludes higher operations that imply order. We could not code the potential effect of medium on the relationship between storyteller antecedents and narrative transportation because, to date, the number of located articles for medium is only six. Moreover, we could not uncover some potential consequences, such as actual behavior or repeated narrative transportation into the same story, because of a lack of data.

Second, we examined neither how the storyteller and story-receiver antecedents influence the consequences directly nor how the measurement scale variable moderates the influence of narrative transportation on affective and cognitive responses, beliefs, attitudes, and intentions separately, because we had too few effects. Although the consequence variables seem sequential, formal mediation analysis was also not feasible because of the low number of the intercorrelations (Cheung and Chan 2005). The low magnitude of the intercorrelations seems to indicate that common method bias in our meta-analysis was limited. However, future studies should control for common method bias by using multiple observers of narrative transportation

or separating the measurement of narrative transportation and its antecedents and consequences temporally, methodologically, or psychologically (Podsakoff et al. 2003).

Suggested Directions for Further Research

Our multidisciplinary approach has shown the need for narrative transportation research that goes beyond the limitations of our meta-analysis. Over time, as additional studies satisfy this need, it will become possible to determine the effects of our approach. We discuss these avenues next and provide more detail in figure 2.

Insert figure 2 about here

Storyteller's Narrative Transportation as an Antecedent. Both the transportation-imagery model and its extension start from the assumption that it is the story-receiver (not the storyteller) who experiences narrative transportation. By challenging this assumption, we can further expand research on narrative transportation.

Moore (2012) shows that the act of storytelling has a particular effect on the storyteller. She demonstrates that explaining language in stories weakens storytellers' attitudes toward and intentions to repeat/recommend hedonic experiences but strengthens their attitudes and intentions in the case of utilitarian experiences, regardless of experience valence. She does not, however, elaborate on the mechanism underlying the storytellers' (self-)persuasion. As such, her article marks a starting point from which to initiate a line of research into a possible narrative transportation experience at the moment of story production. The research questions are manifold: If a storyteller experiences narrative transportation at the moment of story production,

what is the impact on the story-receiver's narrative transportation? Are transported storytellers better able to tell stories that transport story-receivers? If so, how does narrative transportation transfer from the storyteller to the story-receiver?

On the one hand, a storyteller's emotional participation in the story could lead to emotional contagion and thus facilitate a story-receiver's narrative transportation. Emotional contagion refers to "someone (hereafter the receiver) catching the emotion being experienced by another (hereafter the sender), wherein the emotion of the receiver converges with that of the sender" (Howard and Gengler 2001, 189). On the other hand, transported storytellers may lose control of their artistic craftsmanship (Green and Brock 2002), which should decrease story-receivers' narrative transportation. Considering the opposing arguments for the effect of storyteller's narrative transportation on story-receiver's narrative transportation, we suggest the following research proposition:

> **P1:** Storytellers' narrative transportation leads to emotional contagion and loss of control of their artistic craftsmanship (at different rates) which have opposite effects on story-receivers' narrative transportation. At low levels of storytellers' narrative transportation, emotional contagion is greater than loss of control of their artistic craftsmanship, leading to a net positive effect on story-receivers' narrative transportation. Beyond a certain level of storytellers' narrative transportation, loss of control of their artistic craftsmanship is greater than emotional contagion leading to a net negative effect on story-receivers' narrative transportation.

Genre as an Antecedent. Bilandzic and Busselle (2008) show that genre in and of itself has no distinctive effect on narrative transportation but that story-receivers' familiarity with a

specific genre does, as our meta-analysis confirms. Still, we argue that genre should be put back on the narrative transportation research agenda.

The number and types of genres have been modified many times. For example, Stern (1995) describes four types of genres qualified by their outcome and entertainment value. Elaborating on Frye's (1957/1973) taxonomy of myths, she states (1995, 167), "Comedy ends in joy, and its correspondent value is happiness; tragedy ends in sadness, and its value is wisdom; romance ends in nostalgia, and its value is ideal peace or beauty; and irony ends in surprise, and its value is excitement." We note that outcomes and entertainment value may constitute a valid qualification of genre, but not necessarily the most marketing focused. A distinction in genre that may be important to the marketing domain is that between noncommercial and commercial stories. Noncommercial stories acknowledge and maintain genre's constructed nature, whereas commercial stories are told with a different aim in mind (i.e., persuasion). According to Holt (2002, 83), to be deemed transporting, stories must be perceived as produced by storytellers "who are intrinsically motivated by their inherent value," without an overtly persuasive aim. When story-receivers instead realize a profit motive behind a story—its "sponsored persuasion" (Holt 2002, 85)—narrative transportation may be inhibited. As a result, story-receivers may be inclined to generate critical thoughts in response to stories that ooze with commercial interest, such as Visa's 2009 commercial in which superheroes advertise the benefits of a check card (ACNE Film Showreel 2009). Recent other overtly commercial stories include Cartier's (2012) *L'Odyssée*, Jaguar's (2013) *Desire*, and Magnum's (2013) *As Good As Gold*. In summary, we conceptualize genre in terms of storytellers' dominant aim, namely their intention to entertain in the case of noncommercial stories versus their intention to persuade in the case of commercial stories. This leads us to the following proposition:

P2:   The more stories are noncommercial, the more narrative transportation increases.

Age as an Antecedent. Although age was a nonsignificant antecedent in our analysis, we note that the participants in all the original studies were adolescents or adults. Further research should recruit young children as participants because commercial stories are commonly directed at young children, whose developing abilities may lead to different narrative transportation.

Infants and toddlers typically lack the cognitive abilities to interpret stories and therefore are less likely to be transported (Peracchio 1992). Conversely, middle childhood represents a stage in a young child's development that may facilitate narrative transportation for four reasons. First, stories are ubiquitous, universal, and central to family identity construction (Epp and Price 2008), socialization (John 1999), and literacy development (Ryokai, Cati, and Justine 2003) of young children of all cultures. Second, as young children become literate, they become active storytellers and use the stories they tell to frame their experiences (Ryokai et al. 2003), thus developing familiarity with stories not only as consumers but also as producers. Third, young children develop narrative processing abilities before analytical processing abilities (Berman and Nir-sagiv 2007). Fourth, only from age seven or eight are young children able to detect deception in commercial stories and thus contest stories' verisimilitude (Diekman and Murnen 2004; John 1999). From puberty, children quickly develop transportability and story consumption practices similar to those of adults (Piaget 1972). Thus, we propose the following:

P3:   Young children develop literacy and deception detection abilities (at different
             rates) which have opposite effects on their narrative transportation. Under seven
             or eight years, literacy development is greater than the development of deception
             detection abilities, leading to a net positive effect on young children's narrative

transportation. From age eight, the development of deception detection abilities is greater than literacy development leading to a net negative effect on young children's narrative transportation.

Medium as a Moderator. Our work indicates that there is ample room to investigate medium as an additional moderator of the relationship between storyteller antecedents and narrative transportation. From a practical perspective, we observe that the majority of media include a combination of auditory and visual elements. Prior consumer research has addressed storytelling using different media, including advertisements (Phillips and McQuarrie 2010; Scott 1994), brand biographies (Paharia et al. 2011), brand communities (Muniz and O'Guinn 2001), brand histories (Diamond et al. 2009; Simon 2009), brand myths (Luedicke, Thompson, and Giesler 2010), festivals and shows (Kozinets 2002; Peñaloza 2001), mobile phones (Karapanos et al. 2012), newspapers (Thompson and Tian 2008), novels (Gerrig 1993), sales agents (Grayson 1997), service encounters (Stern, Thompson, and Arnould 1998), social media (Kozinets et al. 2010; Van Laer and De Ruyter 2010), stores and commercial spaces (Borghini et al. 2009; Sherry et al. 2001), and television programs (Ang and Couling 1985; Peracchio 1993).

From a conceptual perspective, more scholarly attention to the intricacies of different media that can affect narrative transportation is required. We propose an investigation of media in terms of the story modality they allow. At one extreme, we would locate media that prompt an auditory story reception (e.g., telephone calls, radio plays); at the other extreme, we would place media that grant a purely pictorial or visual text story reception (e.g., billboards, Instagram, train station icons). Although most articles on narrative transportation currently examine only one modality, the same story can be delivered through multiple modalities (e.g., movies). With

respect to the effect of modality, cognitive psychology states that pictorial information and visual texts compete for limited cognitive resources; thus, pictures and subtitles in movies interfere with each other, whereas pictorial information and auditory texts are processed in different cognitive subsystems without interference in original version or dubbed movies (Ginns 2005). We argue that this distribution of cognitive resources increases narrative transportation by using both resources available for processing of auditory text and those available for processing of pictorial information. Thus:

P4: As medium's modality improves story-receivers' distribution of cognitive resources, story-receivers' responsiveness to the storyteller antecedents increases, thus increasing the effect of the storyteller antecedents on narrative transportation.

Social Group as a Moderator. Although story-receivers play an active role in interpreting a story, both the transportation-imagery model and its extension assume that story consumption largely occurs in isolation. By challenging this assumption, we can further expand research on narrative transportation.

Notably, narrative persuasion can also occur in social groups, such as families, circles of friends, professional networks, brand and consumption communities, and other groups of significant others (Wang and Escalas in Brinberg and Hamby 2012). In literary theory, Fish (1980) opened the door to a critical revision of the solipsistic communication model built on the reader-response paradigm. His work shows that interpretation may occur within "interpretive communities"—that is, groups of people sharing interpretive strategies that position the interpretation of a text in between a purely objective position (the text as a carrier of irreversible and unique meanings) and a purely subjective position (the text as interpreted by each individual

differently). Thus, social groups may perceive norms of interpretation embedded in identifiable codes (Schrøder 1994) and participate in the conversion of stories into narratives. Perceived norms apply to what story-receivers think significant others find important and provide a summary of story-receivers' normative beliefs combined with their motivation to comply. Normative beliefs refer to what story-receivers think other people think they should interpret. In addition, the extent to which story-receivers are motivated to comply with the interpretation of others plays an important role. For example, Yannopoulou and Elliott (2008) show that interpretive communities can emerge from interpretive strategies that people of the same gender or social class share. More specifically, Ritson and Elliott (1999) document the social uses of commercial stories in various British adolescent groups.

In summary, both cognitive psychologists and consumer culture theory researchers support the notion of an active role of the consumer. However, extant consumer research does not account for possible effects of interpretive communities on the relationship between story-receiver antecedents and narrative transportation. What are the effects of social uses of stories on one story-receiver's narrative transportation? Are consumers less or more likely to become transported if they also collectively interpret the story, such as in the case of the increasingly popular fan-fiction with its best-selling spinoff Fifty Shades of Grey by E.L. James? In any case:

P5: As story-receivers' perceive norms to be stronger or share more interpretive strategies with their social group, their sensitivity to the story-receiver antecedents decreases, thus decreasing the effect of the story-receiver antecedents on narrative transportation.

Self-Efficacy Effects of Narrative Transportation. Extant work mostly measures the direct consequences of narrative transportation after a single story reception. An exception is Green et al. (2008), who investigate the effect of story repetition by exposing story-receivers twice to either J.K. Rowling's Harry Potter and the Chamber of Secrets or John Grisham's The Rainmaker. Repeated exposure to the same story is a frequent occurrence in real life (e.g., bedtime stories, narrative advertisements) and may affect story-receivers' self-efficacy (Bandura 2004). Self-efficacy is the degree to which people believe that they have control over their behavior. For example, many people are aware of the health risks of unhealthy behaviors, such as eating too much fatty foods. At the same time, they may know that they are not able to engage in healthful eating. Repeated narrative transportation into a story that shows how barriers can be overcome may lead to more positive self-efficacy and intention. Stories often include a key learning point or moral, which story-receivers can retrieve to exert control over their behavior consistent with the story's takeaway. Such a story revival may more durably weave the story into story-receivers' life choices. Further research on this topic could also reveal fruitful insights into the sleeper effect of narrative transportation. Thus, we propose the following:

P6:   The more narrative transportation increases, the more story-consistent self-efficacy increases.

Behavioral Effects of Narrative Transportation. First, empirical work on the behavioral effects of narrative transportation is scant. Our review shows that only Lochbuehler et al. (2010) and Williams et al. (2011) measure actual (smoking) behavior, rather than affective or cognitive responses, beliefs, attitudes, or intentions.

Second, the potential effects of narrative transportation on behavior may raise moral questions for storytellers. When story-receivers are transported into a story with a plot that constitutes a danger to themselves or to the safety of others, they are likely to develop story-consistent intentions. Alcohol abuse, drug usage, smoking, and other self-destructive behaviors may play a part in or even be at the center of a story plot and therefore may negatively influence a story-receiver's intentions toward his or her personal health and safety. Similarly, violent video games and movies may stimulate antisocial intentions and thus extend the indirect behavioral effects of narrative transportation to the safety of society at large.

Third, the potential behavioral effects of narrative transportation may be exacerbated when behavioral preconditions, which Fishbein and Yzer (2003) distinguish, are met: (1) a person has sufficient ability to perform a particular behavior, and (2) there are no environmental constraints to inhibit the behavior. As such, the ETIM may provide some explanation for the behavioral effects of sagas, such as Twilight. Narrative transportation seems to have an effect on story-receivers when they act on the behavioral templates the Twilight books, movies, and television programs provide. Head, Schau, and Thompson (2011) report that story-receivers adapt their dress, strengthen within-gender social ties, organize Twilight parties, and produce thematic consumer goods (e.g., cakes, tattoos). Research into these and other potential story-consistent behavioral effects of narrative transportation is clearly warranted. In summary, we propose the following:

P7: The more narrative transportation increases, the more story-consistent behavior increases.

CONCLUSION

Consistent with the study's objectives, our contributions are threefold. First, in updating Green and Brock's (2002) transportation-imagery model, we provide an extension that considers the complicated relationships among storyteller, story-receiver, narrative transportation, narrative persuasion, and a host of underlying variables. Second, our meta-analysis of the ETIM underscores the robustness of narrative transportation and builds on previous research to refine and extend current knowledge. Third, we identified several paths that research on narrative transportation has not yet trod and thus provide avenues for further inquiry.

Noting the distinct lack of epistemologically integrated research, our work constitutes the first multidisciplinary study on narrative transportation, integrating the literature on cognitive psychology and consumer culture theory. While the methodological specificities of meta-analysis require tests based on purely quantitative contributions to the field, the conceptualization of the model, the development of our hypotheses, and the interpretation of our results explicitly rely on both interpretative and quantitative best evidence. From our reflections on the disciplines' theorizing, we conceive the ETIM, which incorporates insights from both streams of consumer research.

References

ACNE Film Showreel (2009), "Commercial for Visa - "Superheroes","
http://www.youtube.com/watch?v=doFWpiT6qjs.

Adaval, Rashmi, Linda M. Isbell, and Robert S. Wyer (2007), "The Impact of Pictures on Narrative- and List-Based Impression Formation: A Process Interference Model," Journal of Experimental Social Psychology, 43 (3), 352-64.

Adaval, Rashmi and Robert S. Wyer (1998), "The Role of Narratives in Consumer Information Processing," Journal of Consumer Psychology, 7 (3), 207-45.

Alba, Joseph W. (2012), "In Defense of Bumbling," Journal of Consumer Research, 38 (6), 981-87.

Albarracín, Dolores, Mark P. Zanna, Blair T. Johnson, and G. Tarcan Kumkale (2005), "Attitudes: Introduction and Scope," in The Handbook of Attitudes, ed. Dolores Albarracín, Blair T. Johnson and Mark P. Zanna, Mahwah, NJ: Lawrence Erlbaum, 3-19.

Ang, Ien and Della Couling (1985), Watching Dallas: Soap Opera and the Melodramatic Imagination, London: Methuen.

* Appel, Markus and Barbara Malečkar (2012), "The Influence of Paratext on Narrative Persuasion: Fact, Fiction, or Fake?," Human Communication Research, 38 (4), 459-84.

Appel, Markus and Tobias Richter (2007), "Persuasive Effects of Fictional Narratives Increase over Time," Media Psychology, 10 (1), 113-34.

* --- (2010), "Transportation and Need for Affect in Narrative Persuasion: A Mediated Moderation Model," Media Psychology, 13 (2), 101-35.

* Argo, Jennifer J., Rui Zhu, and Darren W. Dahl (2008), "Fact or Fiction: An Investigation of Empathy Differences in Response to Emotional Melodramatic Entertainment," Journal of Consumer Research, 34 (5), 614-23.

Bahl, Shalini and George R. Milne (2010), "Talking to Ourselves: A Dialogical Exploration of Consumption Experiences," Journal of Consumer Research, 37 (1), 176-95.

Bal, P. Matthijs, Olivia S. Butterman, and Arnold B. Bakker (2011), "The Influence of Fictional Narrative Experience on Work Outcomes: A Conceptual Analysis and Research Model," Review of General Psychology, 15 (4), 361-70.

Bandura, Albert (2004), "Health Promotion by Social Cognitive Means," Health Education and Behavior, 31 (2), 143-65.

* Banerjee, Smita C. and Kathryn Greene (2012a), "'I Quit' Versus 'I'm Sorry I Used': A Preliminary Investigation of Variations in Narrative Ending and Transportation," Psychology & Health, 27 (11), 1308-22.

* --- (2012b), "Role of Transportation in the Persuasion Process: Cognitive and Affective Responses to Antidrug Narratives," Journal of Health Communication, 17 (5), 564-81.

Baranowski, Tom, Richard Buday, Debbe I. Thompson, and Janice Baranowski (2008), "Playing for Real: Video Games and Stories for Health-Related Behavior Change," American Journal of Preventive Medicine, 34 (1), 74-82.

Barthes, Roland (1975), "An Introduction to the Structural Analysis of Narrative," New Literary History, 6 (2), 237-72.

Batra, Rajeev and Michael L. Ray (1986), "Affective Responses Mediating Acceptance of Advertising," Journal of Consumer Research, 13 (2), 234-49.

Bennett, Andrew and Nicholas Royle (2004), Introduction to Literature, Criticism and Theory, Harlow: Pearson.

Berlyne, Daniel Ellis (1960), Conflict, Arousal, and Curiosity, New York, NY: McGraw-Hill.

Berman, Ruth A. and Bracha Nir-sagiv (2007), "Comparing Narrative and Expository Text Construction across Adolescence: A Developmental Paradox," Discourse Processes, 43 (2), 79-120.

Betts, George Herbert (1909), The Distribution and Functions of Mental Imagery, New York, NY: Columbia University.

Bilandzic, Helena and Rick W. Busselle (2008), "Transportation and Transportability in the Cultivation of Genre-Consistent Attitudes and Estimates," Journal of Communication, 58 (3), 508-29.

Borenstein, Michael, Larry V. Hedges, Julian P. T. Higgins, and Hannah R. Rothstein (2005), "Comprehensive Meta-Analysis," Englewood, NJ: Biostat.

Borghini, Stefania, Nina Diamond, Robert V. Kozinets, Mary Ann McGrath, Albert M. Muñiz Jr, and John F. Sherry Jr (2009), "Why Are Themed Brandstores So Powerful? Retail Brand Ideology at American Girl Place," Journal of Retailing, 85 (3), 363-75.

Boyd, Brian (2009), On the Origin of Stories: Evolution, Cognition, and Fiction, Cambridge, MA: Belknap Press of Harvard University.

Bozarth, Jerold D. and Ralph R. Roberts (1972), "Signifying Significant Significance," American Psychologist, 27 (8), 774-75.

Bracken, Cheryl Campanella (2006), "Perceived Source Credibility of Local Television News: The Impact of Television Form and Presence," Journal of Broadcasting & Electronic Media, 50 (4), 723-41.

* Braverman, Julia (2008), "Testimonials Versus Informational Persuasive Messages: The Moderating Effect of Delivery Mode and Personal Involvement," Communication Research, 35 (5), 666-94.

Brinberg, David and Anne Hamby (2012), "Narrative Persuasion: Applications and Reflections on This Approach from Three Disciplines," Advances in Consumer Research, 40 (1), 191-94.

Brown, Stephen (1995), "Postmodern Marketing Research: No Representation without Taxation," Journal of the Market Research Society, 37 (3), 287-310.

Bruner, Jerome (1986), Actual Minds, Possible Worlds, Cambridge, MA: Harvard.

Busselle, Rick W. and Helena Bilandzic (2008), "Fictionality and Perceived Realism in Experiencing Stories: A Model of Narrative Comprehension and Engagement," Communication Theory, 18 (2), 255-80.

* Caputo, Nicole Mossing and Donna Rouner (2011), "Narrative Processing of Entertainment Media and Mental Illness Stigma," Health Communication, 26 (7), 595-604.

Cartier (2012), "L'odyssée De Cartier,"
http://www.youtube.com/watch?v=yaBNjTtCxd4&feature=c4-overview&playnext=1&list=TLwEjuL8h5I9o.

Chaiken, Shelly (1980), "Heuristic Versus Systematic Information Processing and the Use of Source Versus Message Cues in Persuasion," Journal of Personality and Social Psychology, 39 (5), 752-66.

--- (1987), "The Heuristic Model of Persuasion," in Social Influence: The Ontario Symposium, Vol. 5, ed. Mark P. Zanna, James M. Olson and C. Peter Herman, Hillsdale, NJ: Lawrence Erlbaum, 3-39.

* Chang, Chingching (2009), ""Being Hooked" by Editorial Content: The Implications for Processing Narrative Advertising," Journal of Advertising, 38 (1), 21-33.

Chase, Susan E. (1995), "Taking Narrative Seriously: Consequences for Method and Theory in Interview Studies," in Interpreting Experience: The Narrative Study of Lives, ed. Ruthellen Josselson and Amia Lieblich, Thousand Oaks, CA: Sage, 1-26.

Cheung, Mike W. L. and Wai Chan (2005), "Meta-Analytic Structural Equation Modeling: A Two-Stage Approach," Psychological Methods, 10 (1), 40-64.

Chronis, Anthinodoros (2008), "Co-Constructing the Narrative Experience: Staging and Consuming the American Civil War at Gettysburg," Journal of Marketing Management, 24 (1/2), 5-27.

Cohen, Jacob (1992), "A Power Primer," Psychological Bulletin, 112 (1), 155-59.

Csikszentmihalyi, Mihaly (1992), Flow: The Psychology of Happiness, New York, NY: Harper & Row.

Dal Cin, Sonya, Bryan Gibson, Mark P. Zanna, Roberta Shumate, and Geoffrey T. Fong (2007), "Smoking in Movies, Implicit Associations of Smoking with the Self, and Intentions to Smoke," Psychological Science, 18 (7), 559-63.

* Dal Cin, Sonya, Mark P. Zanna, and Geoffrey T. Fong (2004), "Narrative Persuasion and Overcoming Resistance," in Resistance and Persuasion, ed. Eric S Knowles and Jay A Linn, Mahwah, NJ: Lawrence Erlbaum, 175-91.

David, Bruno and Meredith Wilson (2002), "Spaces of Resistance: Graffiti and Indigenous Place Markings in the Early European Contact Period of Northern Australia," in Inscribed Landscapes: Marking and Making Place, ed. Bruno David and Meredith Wilson, Honolulu, HI: University of Hawaii.

Davis, Mark H. (1983), "Measuring Individual Differences in Empathy: Evidence for a Multidimensional Approach," Journal of Personality and Social Psychology, 44 (1), 113-26.

De Certeau, Michel Jean Emmanuel de La Barge (1984), The Practice of Everyday Life, Berkeley, CA: University of California.

Deighton, John (1992), "The Consumption of Performance," Journal of Consumer Research, 19 (3), 362-72.

Deighton, John, Daniel Romer, and Josh McQueen (1989), "Using Drama to Persuade," Journal of Consumer Research, 16 (3), 335-43.

Diamond, Nina, John F. Sherry, Albert M. Muñiz, Mary Ann McGrath, Robert V. Kozinets, and Stefania Borghini (2009), "American Girl and the Brand Gestalt: Closing the Loop on Sociocultural Branding Research," Journal of Marketing, 73 (3), 118-34.

Diekman, Amanda and Sarah Murnen (2004), "Learning to Be Little Women and Little Men: The Inequitable Gender Equality of Nonsexist Children's Literature," Sex Roles, 50 (5), 373-85.

Dunlop, Sally M., Melanie Wakefield, and Yoshihisa Kashima (2008), "The Contribution of Antismoking Advertising to Quitting: Intra- and Interpersonal Processes," Journal of Health Communication, 13 (3), 250-66.

* --- (2010), "Pathways to Persuasion: Cognitive and Experiential Responses to Health-Promoting Mass Media Messages," Communication Research, 37 (1), 133-64.

Eagle, Lynne (2007), "Commercial Media Literacy," Journal of Advertising, 36 (2), 101-10.

Eagly, Alice H. and Shelly Chaiken (1993), The Psychology of Attitudes, Fort Worth, TX: Harcourt Brace Jovanovich.

Eco, Umberto (1994), Six Walks in the Fictional Woods, Cambridge, MA: Harvard University.

Edell, Julie A. and Marian Chapman Burke (1987), "The Power of Feelings in Understanding Advertising Effects," Journal of Consumer Research, 14 (3), 421-33.

Epp, Amber M. and Linda L. Price (2008), "Family Identity: A Framework of Identity Interplay in Consumption Practices," Journal of Consumer Research, 35 (1), 50-70.

Escalas, Jennifer Edson (1998), "Advertising Narratives. What Are They and How Do They Work?," in Representing Consumers: Voices, Views, and Visions, ed. Barbara B. Stern, London: Routledge, 267-89.

* --- (2004a), "Imagine Yourself in the Product: Mental Simulation, Narrative Transportation, and Persuasion," Journal of Advertising, 33 (2), 37-48.

* --- (2004b), "Narrative Processing: Building Consumer Connections to Brands," Journal of Consumer Psychology, 14 (1/2), 168-80.

* --- (2007), "Self-Referencing and Persuasion: Narrative Transportation Versus Analytical Elaboration," Journal of Consumer Research, 33 (4), 421-29.

Escalas, Jennifer Edson, Marian Chapman Moore, and Julie Edell Britton (2004), "Fishing for Feelings? Hooking Viewers Helps!," Journal of Consumer Psychology, 14 (1-2), 105-14.

Escalas, Jennifer Edson and Barbara B. Stern (2003), "Sympathy and Empathy: Emotional Responses to Advertising Dramas," Journal of Consumer Research, 29 (4), 566-78.

Fish, Stanley Eugene (1980), Is There a Text in This Class? The Authority of Interpretive Communities, Cambridge, MA: Harvard.

Fishbein, Martin and Marco C. Yzer (2003), "Using Theory to Design Effective Health Behavior Interventions," Communication Theory, 13 (2), 164-83.

Frijda, Nico H., Andrew Ortony, Joep Sonnemans, and Gerald L. Clore (1992), "The Complexity of Intensity: Issues Concerning the Structure of Emotion Intensity.," in Emotion: Review of Personality and Social Psychology, Vol. 13, ed. Margaret S. Clark, Thousand Oaks, CA: Sage, 60-89.

Frye, Herman Northrop (1957/1973), Anatomy of Criticism: Four Essays, Princeton, NJ: Princeton University.

Genette, Gérard (1979/1992), The Architext: An Introduction, Berkeley, CA: University of California.

Gergen, Kenneth J. and Mary M. Gergen (1988), "Narrative and the Self as Relationship," in Advances in Experimental Social Psychology, Vol. 21, ed. Leonard Berkowitz, New York, NY: Academic Press, 17-56.

Gerrig, Richard J. (1993), Experiencing Narrative Worlds: On the Psychological Activities of Reading, New Haven, CT: Yale.

Ginns, Paul (2005), "Meta-Analysis of the Modality Effect," Learning and Instruction, 15 (4), 313-31.

Grayson, Kent (1997), "Narrative Theory and Consumer Research: Theoretical and Methodological Perspectives," Advances in Consumer Research, 24 (1), 67-70.

* Green, Melanie C. (2004), "Transportation into Narrative Worlds: The Role of Prior Knowledge and Perceived Realism," Discourse Processes, 38 (2), 247-67.

--- (2006), "Narratives and Cancer Communication," Journal of Communication, 56 (s1), S163-S83.

--- (2008), "Transportation Theory," in International Encyclopedia of Communication, ed. Wolfgang Donsbach, Oxford, UK: Wiley-Blackwell, 5170-75.

* Green, Melanie C. and Timothy C. Brock (2000), "The Role of Transportation in the Persuasiveness of Public Narratives," Journal of Personality and Social Psychology, 79 (5), 701-21.

--- (2002), "In the Mind's Eye: Transportation-Imagery Model of Narrative Persuasion.," in Narrative Impact: Social and Cognitive Foundations., ed. Melanie C. Green, Jeffrey J. Strange and Timothy C. Brock, Mahwah, NJ: Lawrence Erlbaum, 315-41.

Green, Melanie C., Timothy C. Brock, and Geoff F. Kaufman (2004a), "Understanding Media Enjoyment: The Role of Transportation into Narrative Worlds," Communication Theory, 14 (4), 311-27.

* Green, Melanie C. and John K. Donahue (2011), "Persistence of Belief Change in the Face of Deception: The Effect of Factual Stories Revealed to Be False," Media Psychology, 14 (3), 312-31.

Green, Melanie C., Jennifer Garst, and Timothy C. Brock (2004b), "The Power of Fiction: Determinants and Boundaries," in The Psychology of Entertainment Media: Blurring the Lines between Entertainment and Persuasion, ed. L. J. Shrum, Mahwah, NJ: Erlbaum, 161-76.

* Green, Melanie C., Sheryl Kass, Jana Carrey, Benjamin Herzig, Ryan Feeney, and John Sabini (2008), "Transportation across Media: Repeated Exposure to Print and Film," Media Psychology, 11 (4), 512-39.

Greenwood, Dara N. (2007), "Are Female Action Heroes Risky Role Models? Character Identification, Idealization, and Viewer Aggression," Sex Roles, 57 (9-10), 725-32.

Hall, Alice (2009), "Perceptions of the Authenticity of Reality Programs and Their Relationships to Audience Involvement, Enjoyment, and Perceived Learning," Journal of Broadcasting & Electronic Media, 53 (4), 515-31.

Head, Gabriela, Hope Jensen Schau, and Katherine Thompson (2011), "Facilitating Collective Brand Engagement and Collaborative Production through Cultural Marketing," in Marketing Management: A Cultural Perspective, ed. Lisa Peñaloza, Nil Toulouse and Luca M. Visconti, London: Routledge, 194-211.

Hoffner, Cynthia A., Kenneth J. Levine, and Raiza A. Toohey (2008), "Socialization to Work in Late Adolescence: The Role of Television and Family," Journal of Broadcasting & Electronic Media, 52 (2), 282-302.

Holbrook, Morris B. and Rajeev Batra (1987), "Assessing the Role of Emotions as Mediators of Consumer Responses to Advertising," Journal of Consumer Research, 14 (3), 404-20.

Holt, Douglas B. (1995), "How Consumers Consume: A Typology of Consumption Practices," Journal of Consumer Research, 22 (1), 1-16.

--- (1997), "Poststructuralist Lifestyle Analysis: Conceptualizing the Social Patterning of Consumption in Postmodernity," Journal of Consumer Research, 23 (4), 326-50.

--- (2002), "Why Do Brands Cause Trouble? A Dialectical Theory of Consumer Culture and Branding," Journal of Consumer Research, 29 (1), 70-90.

Hood, Ralph W., Jr. (1975), "The Construction and Preliminary Validation of a Measure of Reported Mystical Experience," Journal for the Scientific Study of Religion, 14 (1), 29-41.

Howard, Daniel J. and Charles Gengler (2001), "Emotional Contagion Effects on Product Attitudes," Journal of Consumer Research, 28 (2), 189-201.

Hullett, Craig R and Timothy R Levine (2003), "The Overestimation of Effect Sizes from F Values in Meta-Analysis: The Cause and a Solution," Communication Monographs, 70 (1), 52-67.

Hunter, John Edward and Frank L Schmidt (2004), Methods of Meta-Analysis: Correcting Error and Bias in Research Findings Newbury Park, CA: Sage.

Jaguar (2013), "Jaguar F-Type Presents Desire," http://www.youtube.com/watch?feature=player_embedded&v=Trlv9UdIheM.

* Jensen, Jakob D., Jennifer K. Bernat, Kari M. Wilson, and Julie Goonewardene (2011), "The Delay Hypothesis: The Manifestation of Media Effects over Time," Human Communication Research, 37 (4), 509-28.

John, Deborah Roedder (1999), "Consumer Socialization of Children: A Retrospective Look at Twenty-Five Years of Research," Journal of Consumer Research, 26 (3), 183-213.

* Karapanos, Evangelos, Mary Barreto, Valentina Nisi, and Evangelos Niforatos (2012), "Does Locality Make a Difference? Assessing the Effectiveness of Location-Aware Narratives," Interacting with Computers, 24 (4), 273-79.

* Kaufman, Geoff F. and Lisa K. Libby (2012), "Changing Beliefs and Behavior through Experience-Taking," Journal of Personality and Social Psychology, 103 (1), 1-19.

Kozinets, Robert V. (2002), "Can Consumers Escape the Market? Emancipatory Illuminations from Burning Man," Journal of Consumer Research, 29 (1), 20-38.

Kozinets, Robert V., Kristine de Valck, Andrea C. Wojnicki, and Sarah J. S. Wilner (2010), "Networked Narratives: Understanding Word-of-Mouth Marketing in Online Communities," Journal of Marketing, 74 (2), 71-89.

* Krakowiak, K. Maja and Mary Beth Oliver (2012), "When Good Characters Do Bad Things: Examining the Effect of Moral Ambiguity on Enjoyment," Journal of Communication, 62 (1), 117-35.

Küntay, Aylin (2002), "Development of the Expression of Indefiniteness: Presenting New Referents in Turkish Picture-Series Stories," Discourse Processes, 33 (1), 77-102.

* LaMarre, Heather L. and Kristen D. Landreville (2009), "When Is Fiction as Good as Fact? Comparing the Influence of Documentary and Historical Reenactment Films on Engagement, Affect, Issue Interest, and Learning," Mass Communication and Society, 12 (4), 537-55.

Lasswell, Harold D. (1948), "The Structure and Function of Communication in Society," in The Communication of Ideas: A Series of Addresses, ed. Lyman Bryson, New York, NY: Institute for Religious and Social Studies, 37-51.

* Lochbuehler, Kirsten, Michiel Peters, Ron H. J. Scholte, and Rutger C. M. E. Engels (2010), "Effects of Smoking Cues in Movies on Immediate Smoking Behavior," Nicotine & Tobacco Research, 12 (9), 913-18.

Luedicke, Marius K., Craig J. Thompson, and Markus Giesler (2010), "Consumer Identity Work as Moral Protagonism: How Myth and Ideology Animate a Brand-Mediated Moral Conflict," Journal of Consumer Research, 36 (6), 1016-32.

Magnum Ice Cream US (2013), "Magnum Ice Cream Presents as Good as Gold Starring Joe Manganiello, Caroline Correa & Zac Posen," http://www.youtube.com/watch?v=reTPmnvJ3Ng&feature=youtu.be.

Mar, Raymond A., Keith Oatley, Jacob Hirsh, Jennifer. dela Paz, and Jordan B. Peterson (2006), "Bookworms Versus Nerds: Exposure to Fiction Versus Non-Fiction, Divergent Associations with Social Ability, and the Simulation of Fictional Social Worlds," Journal of Research in Personality, 40 (5), 694-712.

* Marsh, Elizabeth J. and Lisa K. Fazio (2006), "Learning Errors from Fiction: Difficulties in Reducing Reliance on Fictional Stories," Memory & Cognition, 34 (5), 1140-49.

* Mazzocco, Philip J., Melanie C. Green, Jo A. Sasota, and Norman W. Jones (2010), "This Story Is Not for Everyone: Transportability and Narrative Persuasion," Social Psychological and Personality Science, 1 (4), 361-68.

McCracken, Grant (1986), "Culture and Consumption: A Theoretical Account of the Structure and Movement of the Cultural Meaning of Consumer Goods," Journal of Consumer Research, 13 (1), 71-84.

--- (2005), Culture and Consumption Ii: Markets, Meaning, and Brand Management, Bloomington, IN: Indiana.

McGill, Ann, Laura Peracchio, and Mary Frances Luce (2011), "Solidarity of Purpose: Building an Understanding of Consumers through a Community of Scholars," Journal of Consumer Research, 38 (1), ii-viii.

Moore, Sarah G. (2012), "Some Things Are Better Left Unsaid: How Word of Mouth Influences the Storyteller," Journal of Consumer Research, 38 (6), 1140-54.

Morgan, Susan E., Lauren Movius, and Michael J. Cody (2009), "The Power of Narratives: The Effect of Entertainment Television Organ Donation Storylines on the Attitudes, Knowledge, and Behaviors of Donors and Nondonors," Journal of Communication, 59 (1), 135-51.

Moyer-Gusé, Emily (2008), "Toward a Theory of Entertainment Persuasion: Explaining the Persuasive Effects of Entertainment-Education Messages," Communication Theory, 18 (3), 407-25.

* Moyer-Gusé, Emily and Robin L. Nabi (2010), "Explaining the Effects of Narrative in an Entertainment Television Program: Overcoming Resistance to Persuasion," Human Communication Research, 36 (1), 26-52.

Muniz, Albert M. and Thomas C. O'Guinn (2001), "Brand Community," Journal of Consumer Research, 27 (4), 412-32.

Nabi, Robin L. and Marina Krcmar (2004), "Conceptualizing Media Enjoyment as Attitude: Implications for Mass Media Effects Research," Communication Theory, 14 (4), 288-310.

* Nabi, Robin L., Carnien R. Stitt, Jeff Halford, and Keli L. Finnerty (2006), "Emotional and Cognitive Predictors of the Enjoyment of Reality-Based and Fictional Television Programming: An Elaboration of the Uses and Gratifications Perspective," Media Psychology, 8 (4), 421-47.

Nell, Victor (1988), Lost in a Book: The Psychology of Reading for Pleasure, New Haven, CT: Yale University.

* Nielsen, Jesper H. and Jennifer Edson Escalas (2010), "Easier Is Not Always Better: The Moderating Role of Processing Type on Preference Fluency," Journal of Consumer Psychology, 20 (3), 295-305.

Paharia, Neeru, Anat Keinan, Jill Avery, and Juliet B. Schor (2011), "The Underdog Effect: The Marketing of Disadvantage and Determination through Brand Biography," Journal of Consumer Research, 37 (5), 775-90.

Peñaloza, Lisa (2001), "Consuming the American West: Animating Cultural Meaning and Memory at a Stock Show and Rodeo," Journal of Consumer Research, 28 (3), 369-98.

Pennington, Nancy and Reid Hastie (1988), "Explanation-Based Decision Making: Effects of Memory Structure on Judgment," Journal of Experimental Psychology: Learning, Memory, and Cognition, 14 (3), 521-33.

Peracchio, Laura A. (1992), "How Do Young Children Learn to Be Consumers? A Script-Processing Approach," Journal of Consumer Research, 18 (4), 425-40.

--- (1993), "Young Children's Processing of a Televised Narrative: Is a Picture Really Worth a Thousand Words?," Journal of Consumer Research, 20 (2), 281-93.

Petty, Richard E. and John T. Cacioppo (1986), Communication and Persuasion: Central and Peripheral Routes to Attitude Change, New York, NY: Springer.

Petty, Richard E. and Duane T. Wegener (1998), "Attitude Change: Multiple Roles for Persuasion Variables," in The Handbook of Social Psychology, ed. Daniel Todd Gilbert, Susan T. Fiske and Gardner Lindzey, Boston, MA: McGraw-Hill, 323-90.

Phillips, Barbara J. and Edward F. McQuarrie (2010), "Narrative and Persuasion in Fashion Advertising," Journal of Consumer Research, 37 (3), 368-92.

Piaget, Jean (1972), "Intellectual Evolution from Adolescence to Adulthood," Human

Development, 15 (1), 1-12.

Podsakoff, Philip M., Scott B. MacKenzie, Jeong-Yeon Lee, and Nathan P. Podsakoff (2003),

"Common Method Biases in Behavioral Research: A Critical Review of the Literature and

Recommended Remedies," Journal of Applied Psychology, 88 (5), 879-903.

Polichak, James W. and Richard J. Gerrig (2002), ""Get up and Win!" Participatory Responses to

Narrative," in Narrative Impact: Social and Cognitive Foundations, ed. Timothy C. Brock,

Melanie C. Green and Jeffrey J. Strange, Mahwah, NJ: Lawrence Erlbaum.

Radway, Janice A. (1984), Reading the Romance: Women, Patriarchy and Popular Literature,

Chapel Hill, NC: University of North Carolina.

Ritson, Mark and Richard Elliott (1999), "The Social Uses of Advertising: An Ethnographic

Study of Adolescent Advertising Audiences," Journal of Consumer Research, 26 (3), 260-77.

Rosenthal, Robert (1991), Meta-Analytic Procedures for Social Research, Newbury Park, CA:

Sage.

Ryokai, Kimiko, Vaucelle Cati, and Cassell Justine (2003), "Virtual Peers as Partners in

Storytelling and Literacy Learning," Journal of Computer Assisted Learning, 19 (2), 195-208.

* Schlosser, Ann E. (2003), "Experiencing Products in the Virtual World: The Role of Goal and Imagery in Influencing Attitudes Versus Purchase Intentions," Journal of Consumer Research, 30 (2), 184-98.

Schrøder, Kim C. (1994), "Audience Semiotics, Interpretive Communities and the Ethnographic Turn in Media Research," Media, Culture & Society, 16 (2), 337-47.

Scott, Linda M. (1994), "Images in Advertising: The Need for a Theory of Visual Rhetoric," Journal of Consumer Research, 21 (2), 252-73.

* Sestir, Marc and Melanie C. Green (2010), "You Are Who You Watch: Identification and Transportation Effects on Temporary Self-Concept," Social Influence, 5 (4), 272-88.

Shankar, Avi, Richard Elliott, and Christina Goulding (2001), "Understanding Consumption: Contributions from a Narrative Perspective," Journal of Marketing Management, 17 (3/4), 429-53.

Shavitt, Sharon (2011), "What's New? Novelty in Consumer Research," ACR Presidential Address, Assocation for Consumer Research, St. Louis, MO.

Shen, Lijiang (2010), "Mitigating Psychological Reactance: The Role of Message-Induced Empathy in Persuasion.," Human Communication Research, 36 (3), 397-422.

Sherry, John F., Jr., Robert V. Kozinets, Diana Storm, Adam Duhachek, Krittinee Nuttavuthisit, and Benét DeBerry-Spence (2001), "Being in the Zone," Journal of Contemporary Ethnography, 30 (4), 465-510.

Simon, Bryant (2009), Everything but the Coffee: Learning About America from Starbucks, Berkeley, CA: University of California.

Singhal, Arvind and Everett M Rogers (2002), "A Theoretical Agenda for Entertainment-Education," Communication Theory, 12 (2), 117–35.

Slater, Michael D. (2002a), "Entertainment Education and the Persuasive Impact of Narratives," in Narrative Impact: Social and Cognitive Foundations, ed. Timothy C. Brock, Melanie C. Green and Jeffrey J. Strange, Mahwah, NJ: Lawrence Erlbaum, 157-81.

--- (2002b), "Involvement as Goal-Directed Strategic Processing: Extending the Elaboration Likelihood Model," in The Persuasion Handbook: Developments in Theory and Practice, ed. James Price Dillard and Michael Pfau, Thousand Oaks, CA: Sage, 175-94.

Slater, Michael D., David B. Buller, Emily Waters, Margarita Archibeque, and Michelle LeBlanc (2003), "A Test of Conversational and Testimonial Messages Versus Didactic Presentations of Nutrition Information," Journal of Nutrition Education and Behavior, 35 (5), 255-59.

Slater, Michael D. and Donna Rouner (2002), "Entertainment-Education and Elaboration Likelihood: Understanding the Processing of Narrative Persuasion," Communication Theory, 12 (2), 117-244.

Slater, Michael D., Donna Rouner, and Marilee Long (2006), "Television Dramas and Support for Controversial Public Policies: Effects and Mechanisms," Journal of Communication, 56 (2), 235-52.

Smith, Keri (2007), The Guerilla Art Kit, New York, NY: Princeton Architectural.

Stern, Barbara B. (1992), "Feminist Literary Theory and Advertising Research: A New "Reading" of the Text and the Consumer," Journal of Current Issues & Research in Advertising, 14 (1), 9-21.

--- (1993), "Feminist Literary Criticism and the Deconstruction of Ads: A Postmodern View of Advertising and Consumer Responses," Journal of Consumer Research, 19 (4), 556-66.

--- (1994), "Authenticity and the Textual Persona: Postmodern Paradoxes in Advertising Narrative," International Journal of Research in Marketing, 11, 387-400.

--- (1995), "Consumer Myths: Frye's Taxonomy and the Structural Analysis of Consumption Text," Journal of Consumer Research, 22 (2), 165-85.

--- (1997), "Postmodern Consumer Research Narratives: Problems in Construct Definition, Structure, and Classification," Advances in Consumer Research, 24 (1), 68-69.

Stern, Barbara B., Craig J. Thompson, and Eric J. Arnould (1998), "Narrative Analysis of a Marketing Relationship: The Consumer's Perspective," Psychology & Marketing, 15 (3), 195-214.

Sun, Shuyan (2011), "Meta-Analysis of Cohen's Kappa," Health Services and Outcomes Research Methodology, 11 (3-4), 145-63.

Tellegen, Auke and Gilbert Atkinson (1974), "Openness to Absorbing and Self-Altering Experiences ('Absorption'), a Trait Related to Hypnotic Susceptibility," Journal of Abnormal Psychology, 83 (3), 268-77.

Thompson, Craig J. (1997), "Interpreting Consumers: A Hermeneutical Framework for Deriving Marketing Insights from the Texts of Consumers' Consumption Stories," Journal of Marketing Research, 34 (4), 438-55.

Thompson, Craig and Kelly Tian (2008), "Reconstructing the South: How Commercial Myths Compete for Identity Value through the Ideological Shaping of Popular Memories and Countermemories," Journal of Consumer Research, 34 (5), 595-613.

Valentine, Jeffrey C., Therese D. Pigott, and Hannah R. Rothstein (2010), "How Many Studies Do You Need?," Journal of Educational and Behavioral Statistics, 35 (2), 215-47.

* Van den Hende, Ellis A., Jan P. L. Schoormans, Kaj P. N. Morel, Tatiana Lashina, Evert van Loenen, and Erik I. de Boevere (2007), "Using Early Concept Narratives to Collect Valid Customer Input About Breakthrough Technologies: The Effect of Application Visualization on Transportation," Technological Forecasting and Social Change, 74 (9), 1773-87.

* Van Laer, Tom (forthcoming), "The Means to Justify the End: Combating Cyber Harassment in Social Media," Journal of Business Ethics, 115 (3).

* Van Laer, Tom and Ko De Ruyter (2010), "In Stories We Trust: How Narrative Apologies Provide Cover for Competitive Vulnerability after Integrity-Violating Blog Posts," International Journal of Research in Marketing, 27 (2), 164-74.

* Van Laer, Tom, Ko De Ruyter, and David Cox (2013), "A Walk in Customers' Shoes: How Attentional Bias Modification Affects Ownership of Integrity-Violating Social Media Posts," Journal of Interactive Marketing, 27 (1), 14-27.

Visconti, Luca M., John F. Sherry Jr, Stefania Borghini, and Laurel Anderson (2010), "Street Art, Sweet Art? Reclaiming the "Public" in Public Place," Journal of Consumer Research, 37 (3), 511-29.

* Volkman, Julie E. and Roxanne L. Parrott (2012), "Expressing Emotions as Evidence in Osteoporosis Narratives: Effects on Message Processing and Intentions," Human Communication Research, 38 (4), 429-58.

Vygotsky, Lev Semenovič and Michael Cole (1978), Mind and Society: The Development of Higher Psychological Processes, Cambridge, MA: Harvard University.

* Wang, Jing and Bobby J. Calder (2006), "Media Transportation and Advertising," Journal of Consumer Research, 33 (2), 151-62.

Weick, Karl E. (1995), Sensemaking in Organizations, Thousand Oaks, CA: Sage.

* Williams, Jessica H., Melanie C. Green, Connie. Kohler, Jeroan J. Allison, and Thomas K. Houston (2011), "Stories to Communicate Risks About Tobacco: Development of a Brief Scale to Measure Transportation into a Video Story - the Acce Project," Health Education Journal, 70 (2), 184-91.

Wood, Wendy, Carl A. Kallgren, and Rebecca M. Preisler (1985), "Access to Attitude-Relevant Information in Memory as a Determinant of Persuasion: The Role of Message Attributes," Journal of Experimental Social Psychology, 21 (1), 73-85.

Yannopoulou, Natalia and Richard Elliott (2008), "Open Versus Closed Advertising Texts and Interpretive Communities," International Journal of Advertising, 27 (1), 9-36.

* Zwarun, Lara and Alice Hall (2012), "Narrative Persuasion, Transportation, and the Role of Need for Cognition in Online Viewing of Fantastical Films," Media Psychology, 15 (3), 327-55.

TABLE 1

NARRATIVE TRANSPORTATION, ANTECEDENTS, AND CONSEQUENCES: EXAMPLE

OPERATIONALIZATIONS AND REPRESENTATIVE ARTICLES

Variable	Operationalization	(Representative Articles)
Narrative transportation	Measure	(Being Hooked scale, Escalas et al. 2004, 110; Transportation scale, Green and Brock 2000, 704; Mysticism scale, Hood 1975, 31-32)
Storyteller antecedents		
Identifiable characters	Manipulation	(first versus third person, Banerjee and Greene 2012b; Volkman and Parrott 2012) (personality-matched characters, Kaufman and Libby 2012)
Imaginable plot	Manipulation	(informational versus testimonial message, Braverman 2008; advocacy versus narrative advertisement, Dunlop et al. 2010)
Verisimilitude	Manipulation	(fictional versus reality-based television programming, Nabi et al. 2006; fantastical versus live-action story, Zwarun and Hall 2012)
Story-receiver antecedents		
Familiarity	Observation	(participant cocaine use and an antidrug story, Banerjee and Greene 2012b; homosexual friend or family member and a story about a gay man, Green 2004)
	Manipulation	(smoking participants and non-smoking versus smoking story scenes, Lochbuehler et al. 2010) (genre exposure, Bilandzic and Busselle 2008; familiarity with people who have serious mental illness
	Measure	and a story about mental illness, Caputo and Rouner 2011)
Attention	Manipulation	(instructions to critique versus no instructions, Escalas 2007; fourth-grade, narrative, or theater instructions, Green and Brock 2000)
Transportability	Measure	(Transportability Scale, Dal Cin et al. 2004)
Age	The sample age the authors report	
Education	Proportion of university-educated participants in the sample	
Sex	Proportion of women in the sample	
Consequences		
Affective response	Measure	(affective response scales, Escalas 2004a, 2007) (thought-listing technique, Dunlop et al. 2010)
Cognitive response		
Critical thought	Measure	(critical thought scales, Banerjee and Greene 2012b) ("Pinocchio" or false note-circling technique, Green and Brock 2000) (thought-listing technique, Dunlop et al. 2010; Green and Brock 2000)

Narrative thought	Measure	(various narrative thought scales, Escalas 2004b; Krakowiak and Oliver 2012; Sestir and Green 2010) (thought-listing technique, Escalas 2004a)
Belief	Measure	(various belief scales, Appel and Richter 2010; Bilandzic and Busselle 2008; Green 2004; Jensen et al. 2011)
Attitude	Measure	(various attitude scales, Argo et al. 2008; Escalas 2004a; Mazzocco et al. 2010; Wang and Calder 2006)
Intention	Measure	(various intention scales, Banerjee and Greene 2012b; Dunlop et al. 2010; Escalas 2004a, 2007; Moyer-Gusé and Nabi 2010; Schlosser 2003)

TABLE 2

ANTECEDENTS, CONSEQUENCES, AND MODERATOR OF THE EFFECT OF NARRATIVE TRANSPORTATION

	k	N	r_u	CI_{ru}	r	CI_r	ρ	CI	z	FD	Q	df_Q
Storyteller antecedents												
Identifiable character	16	3134	.18	.00–.34	.17	.09–.26	.20	.10–.28	4.15***	365		
Imaginable plot	28	4117	.26	.06–.43	.26	.20–.32	.29	.21–.36	7.39***	2080		
Verisimilitude	8	1524	.23	.05–.39	.23	.12–.34	.27	.15–.39	4.34***	207		
Story-receiver antecedents												
Familiarity	30	4150	.20	.02–.36	.20	.13–.28	.21	.15–.30	5.65***	994		
Attention	22	3383	.27	.07–.44	.28	.18–.38	.29	.20–.39	5.73***	1655		
Transportability	17	2562	.27	.11–.42	.27	.21–.34	.30	.23–.36	8.15***	947		
Age	34	5691	.00	.00–.00	.00	.00–.00	.00	.00–.00	.01	0		
Education	45	5754	.06	-.05–.18	.08	.07–.08	.10	.09–.11	15.67***	80		
Sex	45	5846	-.02	-.17–.12	.10	.09–.11	.15	.14–.16	26.44***	312		
Consequences												
Affective response	13	2047	.52	.38–.63	.54	.40–.65	.57	.47–.65	9.33***	2265		
Cognitive response												
Critical thought	7	2373	-.19	-.31––.06	-.18	-.31–.05	-.20	-.34––.05	2.60**	127		
Narrative thought	8	1730	.18	.04–.31	.18	.10–.25	.20	.10–.29	4.06***	122		
Belief	13	1706	.23	.05–.39	.23	.19–.28	.26	.21–.30	10.82***	362		
Attitude	31	4121	.40	.24–.54	.41	.35–.47	.44	.38–.50	12.16***	6627		
Intention	9	1129	.28	.10–.44	.29	.20–.38	.31	.21–.41	5.62***	249		
Combined	20	3031	.33	.15–.48	.34	.26–.41	.36	.28–.44	8.37***	2028		
Measurement scale												
Transportation scale	127	20,620	.30	.14–.44	.31	.26–.36	.34	.28–.39	11.66***		10.25**	1
Other scale	5	588	.51	.36–.64	.53	.41–.62	.56	.44–.66	7.79***			

k = number of effect sizes; N = number of participants in the original studies; r_u = unadjusted mean correlation; CI_{ru} = lower and upper limit of the 95% confidence interval around the unadjusted mean correlation; r = inverse variance-weighted mean correlation; CI_r = lower and upper limit of the 95% confidence interval around the inverse variance-weighted mean correlation; ρ = reliability-adjusted, inverse variance-weighted mean correlation; CI = lower and upper limit of the 95% confidence interval around the reliability-adjusted, inverse variance-weighted mean correlation; z = test of null (two-tailed); FD = file drawer N, giving an indication

of publication bias; Q = test of difference between moderator levels; and df$_Q$ = degrees of freedom of the test of difference between moderator levels.

** p < .01; *** p < .001.

FIGURE 1

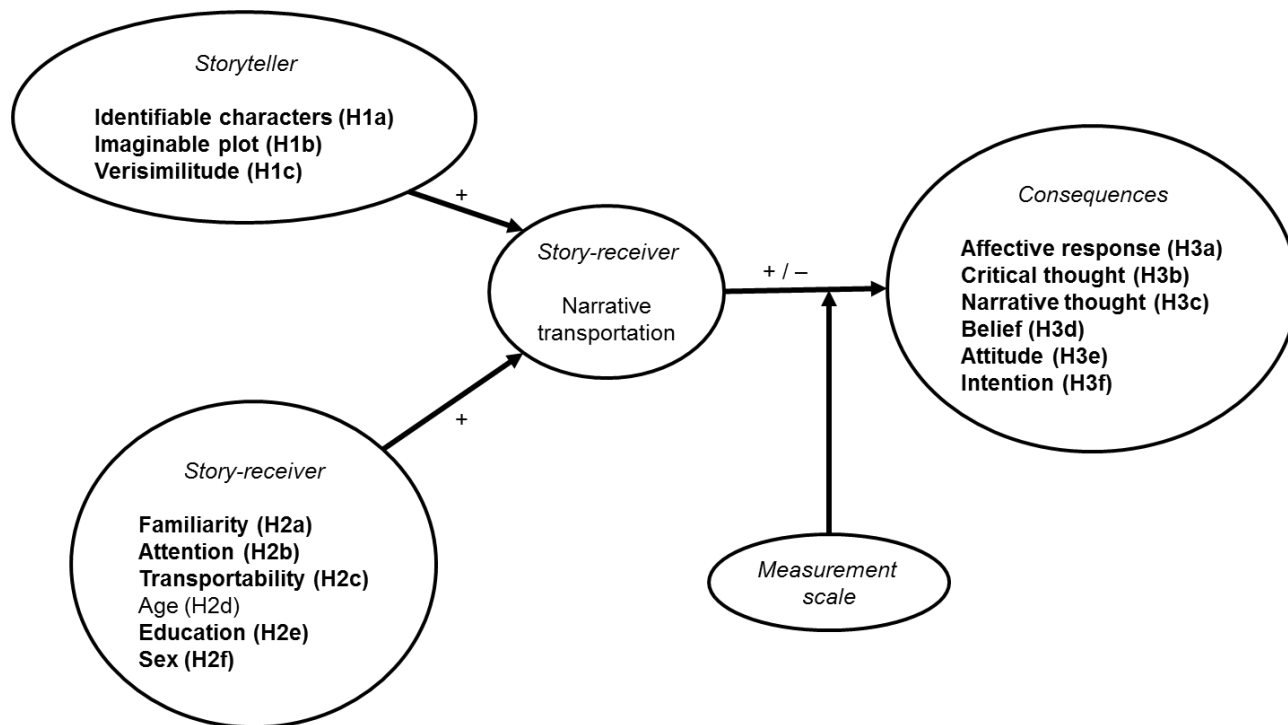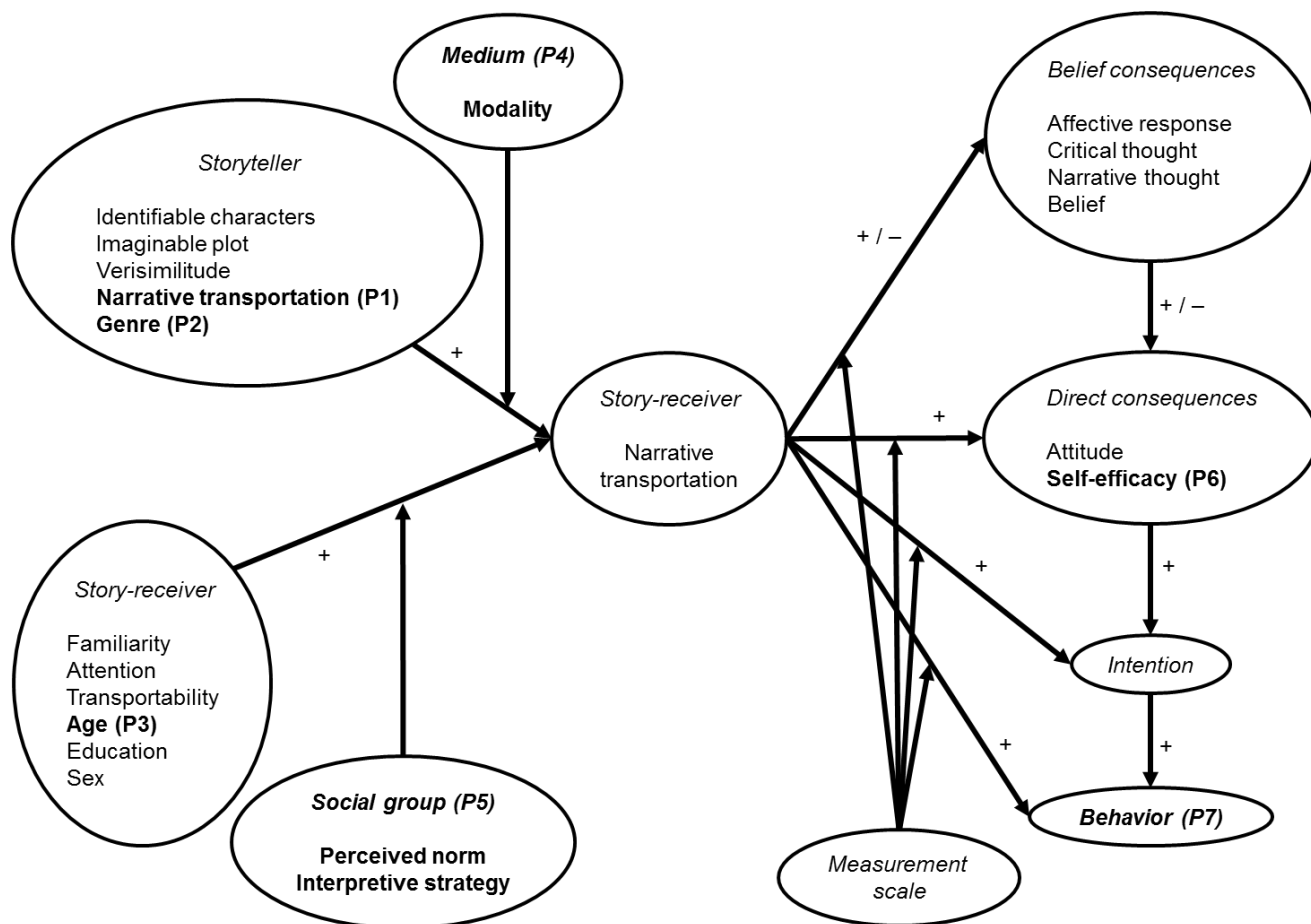EXTENDED TRANSPORTATION-IMAGERY MODEL

NOTE.—Variables that tested significant in the meta-analysis appear in bold.

FIGURE 2

EXTENDED TRANSPORTATION-IMAGERY MODEL INCLUDING FUTURE RESEARCH

PROPOSALS

NOTE.—Variables suggested for future research directions appear in bold.

FIGURE 1

EXTENDED TRANSPORTATION-IMAGERY MODEL

Variables that tested significant in the meta-analysis appear in bold.

FIGURE 2

EXTENDED TRANSPORTATION-IMAGERY MODEL INCLUDING FUTURE RESEARCH

PROPOSALS

Variables suggested for future research directions appear in bold.