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ORIGINAL RESEARCH

Overcoming Resistance Through Narratives: Findings from a Meta-Analytic Review

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To understand the mechanisms underlying narrative persuasion, a growing body of theoretical and empirical work suggests that narratives reduce audience resistance, possibly via narrative engagement. To synthesize this research, we performed a two-part meta-analysis using three-level random-effects models. Part I focused on experimental studies that directly compared narratives and non-narratives on resistance. Based on 15 effect sizes from nine experimental studies, the overall effect size was $d = -.213$ (equivalent $r = -.107$; $p < .001$), suggesting that narratives generated less resistance than non-narratives. Part II was a synthesis of studies of the relationship between narrative engagement and resistance, consisting of 63 effect sizes from 25 studies. Narrative engagement and resistance were negatively correlated ($r = -.131$; $p < .001$), and this relationship was moderated by narrative message characteristics, including genre, length, medium, and character unit. Implications of our findings and directions for future research are discussed.

Keywords: Meta-Analysis, Narrative Persuasion, Narrative Engagement, Resistance, Reactance, Entertainment Overcoming Resistance Model (EORM), Transportation

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Communication scholars are interested in whether narrative messages can persuade and, if so, under what circumstances and how. Recent meta-analyses have found that exposure to narrative messages can shape individuals' beliefs, attitudes, intentions, and behaviors (Braddock & Dillard, 2016; Shen, Sheer, & Li, 2015). To understand the psychological mechanisms underlying narrative persuasion (Bilandzic & Busselle, 2013), scholars have suggested that one route to persuasion may be through quelled resistance, as narratives have the unique ability to draw audiences into their storylines and characters (Green & Brock, 2000; Moyer-Gusé,

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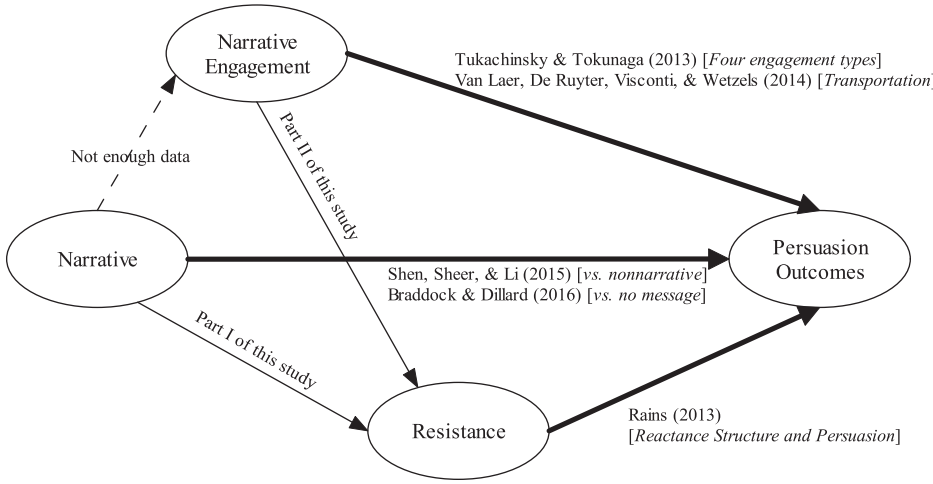


Figure 1 A depiction of meta-analyses on the processes of narrative persuasion.

2008; Slater & Rouner, 2002). Assessing the evidence for these explanatory pathways is the goal of the current meta-analysis (see Figure 1).

Empirical examinations of resistance in the context of narrative messages have taken on this question in two ways. Some studies directly compare narrative versus non-narrative messages in the amount of message resistance aroused (e.g., de Graaf et al., 2017), and other studies focus on aspects of narrative processing—namely, forms of narrative engagement, such as absorption in the story or merging with the character—as potential psychological correlates with resistance (e.g., Quintero Johnson & Sangalang, 2017; Reinhart & Anker, 2012). This paper reports a meta-analysis that synthesizes findings from these experimental (Part I) and correlational (Part II) studies. The primary goal is to provide a systematic answer to the question they collectively sought to address: to what extent, if any, do narratives overcome resistance? A second goal of our meta-analytic syntheses is to identify boundary conditions, if any, for the relationship between narrative messaging and resistance.

Narratives overcoming resistance

According to cognitive scientist Jerome Bruner (1986, p. 11), humans use two distinct, natural types of communication to persuade: "a good story and a well-formed argument." While the latter presents supporting evidence, the former offers an example by way of a depiction of characters and events (Braddock & Dillard, 2016). Non-narrative message formats include rhetorical arguments, statistical evidence, and instructions (Allen & Preiss, 1997; Braddock & Dillard, 2016). In contrast, in a narrative format, information or a persuasive appeal is embedded within a story that depicts characters' actions and outcomes, often conveying insight into primary characters' beliefs, desires, or motivational states (Bruner, 1991).

As a message strategy, narratives are increasingly used as an alternative to argumentation (Bilandzic & Busselle, 2013) and are employed in health promotion campaigns (Hinyard & Kreuter, 2007), advertising (Escalas, 2004), and educational entertainment (Moyer-Gusé, 2008), among other contexts. A few meta-analyses have shown small to moderate effects for narratives' persuasive potency. For example, narrative messages, when compared to a control group, had an overall effect of $r = .063$ ($p < .01$) on all persuasive outcomes combined (attitudes, behavioral intentions, and behaviors; Shen et al., 2015). Tukachinsky and Tokunaga's (2013) meta-analysis on the relationship between narrative engagement and persuasion showed an overall correlation of $r = .27$ ($p < .001$) across types of narrative engagement (e.g., transportation, identification, etc.) and persuasive outcomes (e.g., knowledge, attitudes, and behaviors).

In explaining how narratives persuade, the focus of much attention has been on the main roadblock of persuasion: resistance (Knowles & Linn, 2004). As attempts to persuade are often met with resistance, especially when these attempts are obvious (Brehm & Brehm, 1981), a narrative message may overcome this barrier by engrossing the audience (Dal Cin, Zanna, & Fong, 2004) and making the persuasive subtext unobtrusive (Slater & Rouner, 2002). Audiences of narratives are often described in the metaphor of a traveler who leaves their "world of origin" and enters the "narrative world" (van Laer, de Ruyter, Visconti, & Wetzels, 2014, p. 799; see also Green & Brock, 2000) to become part of the story and experience the event vicariously through the characters. Upon exit, they emerge from the transported experience somewhat transformed, "different from the person one was before entering the milieu of the narrative" (Green, Brock, & Kaufman, 2004, p. 315). When a persuasive message is embedded in the story and/or carried by the characters, persuasion occurs to the immersed, less critical, and less defensive "travelers."

Early work by Green and Brock (2000) showed that highly transported individuals were less likely to engage in critical assessment of a message. The extended elaboration likelihood model (E-ELM; Slater & Rouner, 2002) highlighted the idea that absorption in a narrative suppresses counterarguing, thus rendering engaged audiences open to the persuasive potential of a story. Going further, the entertainment overcoming resistance model (EORM; Moyer-Gusé, 2008; Moyer-Gusé & Nabi, 2010) expanded the notion of message resistance beyond just counterarguing by including reactance and perceived invulnerability as two other forms of resistance.

Moyer-Gusé and Nabi (2010) pointed out, in particular, that this theorized ability of narratives to overcome resistance was largely untested. Research on narrative persuasion has since increasingly included measures of resistance. One group of experimental studies has assessed the relative effect of narratives, compared to non-narratives, on reducing resistance. Other studies have focused on the processing of narratives (e.g., involvement with the storyline or the characters) and how such narrative engagement correlates with resistance. Our first goal is to empirically synthesize these findings to assess the ability of narratives to reduce resistance, as

proposed in the extant theoretical frameworks. These syntheses, on experimental and correlational data separately, fill in the pathways that have not been meta-analyzed in the larger picture of narrative persuasion (see Figure 1). We examine the following hypotheses:

> **H1:** Narrative message formats produce less resistance to persuasion than non-narrative formats (Part I, experimental data).
> **H2:** Narrative engagement is negatively associated with resistance (Part II, correlational data).

Forms of resistance and narrative engagement

Resistance and narrative engagement, the theoretical cornerstones of EORM, are broad constructs, each subsuming concepts that, in turn, are variedly the focus of different primary studies. In this section, we describe each form of resistance and of engagement.

Forms of resistance

First, a survey of the existing literature compels a conceptual clarification of the notion of resistance. Resistance, intuitively understood as a counterproductive force hindering persuasion, is rarely explicitly defined. In proposing EORM, Moyer-Gusé (2008, p. 414) described resistance as "a reaction against change in response to some perceived pressure for change." Building on the previous literature, we define resistance as an individual's motivated response, triggered by the perceived persuasive attempt and enacted to disregard the intent and/or the content of persuasion. We emphasize that resistance is a reaction during message processing, preceding the persuasive outcome (such as message acceptance or perceived effectiveness, or other attitudinal or behavioral outcomes).

In the original formulation of EORM, resistance encompasses three forms: counterarguing, reactance, and perceived invulnerability to a health risk (Moyer-Gusé & Nabi, 2010). Counterarguing, the form of resistance that is the focus in E-ELM, refers to the "generation of thoughts that dispute or are inconsistent with the persuasive argument" (Slater & Rouner, 2002, p. 180). Reactance is a psychological reaction consisting of anger and negative cognitions in response to a freedom threat, such as perceived attempts at persuasion (Brehm & Brehm, 1981; Dillard & Shen, 2005). Whereas narrative messages discourage counterarguing by reducing the motivation and/or abilities of audience members to engage in message scrutiny, narratives may bypass reactance by masking the persuasive intent (Moyer-Gusé, 2008). In our syntheses, we exclude EORM's third category, perceived invulnerability to a health risk, for two reasons. First, it is specifically about health risks and is not generalizable to other persuasive situations. Second, conceptually, perceived invulnerability is more akin to risk perception, which is typically regarded as a persuasion outcome rather than an aspect of message processing (Shen, Seung, Anderson, & McNeal, 2017). Operationalizations of the notion of resistance in extant narrative research are varied,

and can be summarized into four categories: counterarguing, perceived freedom threat, message derogation, and anger. We will briefly describe how each has been used in the primary studies.

Counterarguing

Counterarguments are thoughts that dispute the persuasive arguments. The central tenet of E-ELM is that entertainment-education programs facilitate persuasion by reducing counterarguing (Slater & Rouner, 2002). EORM further emphasizes this point, stating that counterarguing involves "careful attention and thoughtful elaboration on a message" under the condition that individuals are "sufficiently motivated and able to do so" (Moyer-Gusé & Nabi, 2010, p. 30). So situated, counterarguing is a concept that captures in-depth message processing in a critical manner (as opposed to more superficial criticisms, such as those captured with message derogation, below). Narratives reduce this form of resistance by disabling conditions for systematic processing.

In narrative persuasion studies, counterarguing is operationalized as the degree to which audiences generate arguments against the substantive content in the message. Most studies have adopted the counterarguing scales developed by Nabi, Moyer–Gusé, and Byrne (2007) and Silvia (2006), including items such as "I found myself actively disagreeing with the author" and "I was looking for flaws in the author's arguments." Examples of modified scale items were "While viewing the story, I sometimes felt like I wanted to 'argue back' to what was going on in the story" (Sangalang, 2015, p. 42) and "I wanted to correct one or more points in the advertisement" (Krakow et al., 2018, p. 308). A few studies used open-ended responses to code for refutation of specific points in a message. For example, Niederdeppe and colleagues coded specifically for refutations of societal causes of obesity, as advocated in the message (e.g., responses such as "lack of sidewalks is not an excuse for not walking"; Niederdeppe, Roh, & Shapiro, 2015; Niederdeppe, Shapiro, & Porticella, 2011).[1]

Perceived threat to freedom

Perceived threat to freedom is the perception that one's freedom to think, feel, or act of their own accord is being threatened (e.g., by a persuasive message; Brehm & Brehm, 1981). In the psychological reactance literature, perceived threat to freedom is strictly defined as the antecedent of the latent construct of reactance (Dillard & Shen, 2005). In the narrative literature, however, perceived freedom threat has sometimes been used as a direct representation of reactance itself (see Ratcliff, 2019). For example, authors have used threat to freedom measures to represent "cognitive reactance" (Moyer-Gusé & Nabi, 2010) or used the term interchangeably with "psychological reactance" (Reinhart & Anker, 2012). Several of the studies included in our analyses measured freedom threats using Dillard and Shen's 2005 scale (e.g., "the message threatened my freedom to choose"). A few studies used items adapted from Lindsey's 2005 scale of reactance (e.g., Sangalang, 2015; "I am uncomfortable being told how to feel about tobacco use").

Message derogation

Another category of cognitive resistance measures, which we refer to as message derogation, captures negative responses that disregard the message, irrespective of critical assessment of the persuasive argument. It differs from counterargument, which involves the reasoned (though not necessarily reasonable) refutation of specific points in the message (Miller & Baron, 1973; Osterhouse & Brock, 1970). In contrast, derogation represents a hostile reaction toward the story's characters or events (e.g., "I hate the character," "the event is disgusting"; Zhou & Shapiro, 2017, p. 1301) or negative evaluations of the overall message, irrelevant to the persuasive content itself (e.g., "the video was boring," "the video was too long"; McQueen & Kreuter, 2010, p. S19). Some studies used Witte's (1994) "message minimization" scale, which was derived from Witte's (1992) content analysis of negative cognitive responses to persuasion (e.g., Keer, van den Putte, de Wit, & Neijens, 2013; Kim & Niederdeppe, 2016).

Anger

Anger has been used to represent a component of reactance or just an affective form of resistance in this literature. A persuasive message can arouse this emotional reaction, as audience members resist and resent being told what to do. Some studies used the anger index by Dillard and Shen (2005; see also Dillard & Peck, 2001), which consists of four items (angry, irritated, annoyed, and aggravated). Other studies used a different measure, including anger toward the story's protagonist (Niederdeppe, Shapiro, Kim, Bartolo, & Porticella, 2014) and a scale of feeling repulsed or insulted (Krakow et al., 2018, using the scale from Madden, Allen & Twible, 1988).

Forms of narrative engagement

Narrative engagement or involvement has been key to understanding narrative effects (Tukachinsky & Tokunaga, 2013). Between the world of origin and the narrative world (van Laer et al., 2014), audiences switch between two reception modes: an involved mode and a distanced mode (Vorderer & Hartmann, 2009). In the distanced mode, users process the media content with an analytical lens. In the involved mode, immersion cultivates "a perceptual illusion of non-mediation" (Lombard, Reich, Grabe, Bracken, & Ditton, 2000, p. 77), rendering the narrative content the reference frame for sense-making. Narrative engagement refers to several related facets of such an involved mode, all highlighting the convergence between the audience and the narrative world. Three commonly measured engagement variables are transportation into the story, empathic identification with characters in the story, and parasocial interaction or a feeling of companionship with the characters (Tukachinsky & Tokunaga, 2013), as briefly reviewed below.[2]

Transportation

Transportation refers to the process of becoming absorbed in the plot of a story (Green & Brock, 2000). It is "an engrossing temporary experience" (van Laer et al.,

2014, p. 800) that distracts audiences from critical processing or message scrutiny (Green & Brock, 2000; Moyer-Gusé & Nabi, 2010; Slater & Rouner, 2002). Transported individuals, having suspended their real-life beliefs and knowledge and compromised their motivation and ability to evaluate the message, are more prone to persuasion. All the studies included in our meta-analysis used Green and Brock's (2000) scale of transportation, sometimes with adaptation (e.g., Walter, Murphy, Frank, & Baezconde-Garbanati, 2017).[3]

Character identification

As articulated by Cohen (2001), character identification is another concept representing audiences' immersive experiences. Also referred to as "empathic identification" (Tukachinsky & Tokunaga, 2013), identification takes place when users merge with the character(s) in the story and have a temporary suspension of their self-concept. As they "become the character" (Cohen, 2006), users adopt the character's perspectives and feelings and, in turn, align their viewpoints or behaviors with those suggested in the story. Most studies used the scale of character identification from Cohen (2001) or its adapted version from Tal-Or and Cohen (2010), except for one study using a measure of empathy toward story characters (Niederdeppe et al., 2014).

Parasocial interaction

Parasocial interaction occurs when an individual engages in a "quasi-social, one-direction interaction" or relationship with a character in a story (Tukachinsky & Tokunaga, 2013, p. 289). Parasocial interaction with a story's main character has been found to reduce resistance, so long as viewers do not perceive persuasive intent in the message (Moyer-Gusé & Nabi, 2010). Parasocial interaction was measured using either the scale by Rubin and Perse (1987; e.g., in Moyer-Gusé & Nabi, 2010) or that by Schramm and Hartmann (2008; e.g., Shen et al., 2017).

In the above review, we described how resistance and narrative engagement have been approached differently in primary studies. How such differences may influence the estimated effect size is an empirical question to be addressed. We therefore examine this question via a moderator analysis:

> **RQ1:** Does the relationship between narrative engagement and resistance vary depending on (a) form of resistance and/or (b) form of narrative engagement?

Other possible moderating factors

Given the methodological differences in primary research, a second goal of our syntheses is to uncover factors that may amplify or constrain a narrative's capacity to reduce resistance. We consider two sets of factors that vary across primary studies: narrative stimuli characteristics and methodological features (see the Supporting Information for more details).

Narrative message characteristics

Narratives are not "a monolithic entity," as Dahlstrom et al. (2017, p. 4867) point out. How different conceptions of narratives and their operationalizations may

variedly influence processes and outcomes of narrative persuasion has been an understudied area (Dahlstrom et al., 2017; de Graaf, Sanders, & Hoeken, 2016). Variations in narrative form and function in primary studies may delineate boundaries of the potency of narrative persuasion. Our meta-analysis takes advantage of moderator analyses to reveal whether and how narrative message features may play a role in resistance reduction, thus providing empirical grounds for future efforts to develop theorizing about narrative typologies and associated psychological mechanisms.

We chose to focus on four narrative message features: genre, medium, length, and number of primary characters. These characteristics capture a range of differences among the narrative stimuli used in our primary studies, which is also reflected in the recent content analysis of narrative stimuli by Dahlstrom et al. (2017).

Genre. The explicitness of persuasive intent is theorized to influence the extent to which audiences resist messages (Dal Cin et al., 2004; Moyer-Gusé, 2008; Moyer-Gusé & Nabi, 2010). Narrative stimuli in this literature can be broadly classified as having either a more conspicuous persuasive appeal (e.g., public service announcements [PSAs] and commercial ads) or a subtler appeal embedded within entertainment (e.g., full-length films and TV shows). Our analysis therefore compares two genres of narratives: advocacy and education-entertainment messages.

Medium. Whether audiovisual and text-based story formats differ in their ability to engage audiences or lower resistance is an ongoing question in the literature. Text-based stories are said to foster more active generation of mental imagery than audiovisuals (Green et al., 2008), leading to the possibility that audiences are more transported when they actively generate imagery, rather than passively receive it. In contrast, the imagery provided in audiovisual formats has "sensory richness" (Green et al., 2008) that could facilitate engagement. In previous meta-analyses, Braddock and Dillard (2016) showed that narrative effects on persuasion did not vary with the medium of delivery, whereas Shen et al.'s (2015) finding showed that the persuasive advantage of narratives was significant for audio and video messages, but not messages in print. We include the medium of message delivery (audiovisual vs text-based) as a moderator.

Length. The length of narrative stimuli has been highlighted as an important feature to consider when examining the effectiveness of narratives (e.g., Dahlstrom et al., 2017; Zebregs, van den Putte, Neijens, & de Graaf, 2015). Conceivably, longer narratives allow more time for audience transportation or character development and audience bonding. Igartua (2010, p. 351) notes, for example, "one would suppose that the longer the exposure to a film, the greater the identification with the characters, since there is greater vicarious contact with the main characters." The effects of length have not been formally theorized or received much (or any) empirical examination, however. Our synthesis addresses this question by including the narrative length as

a moderator, consisting of three levels: short (e.g., a 30-second PSA), medium (e.g., a 10-minute film clip), and long (e.g., a 45-minute TV show episode).

Number of primary characters. Another attribute along which narratives differ is "character units" (Dahlstrom et al., 2017). For instance, the story may focus on a single character (e.g., "Michele," who benefited from a community health intervention; Niederdeppe, Roh, & Shapiro, 2015) or multiple primary characters (e.g., a series of women who share testimonials about breast cancer survivorship; McQueen & Kreuter, 2010), which could influence the extent to which audiences engage with the character(s). Are people more likely to experience character-based engagement when there is a single rather than several main characters? We code this as a moderator to lend insight into this question.

Methodological features

We also examine the potential influence of methodological features, including demographic characteristics of the sample and attributes of the study or report. For sample characteristics, demographic composition, such as gender, age, and race, may introduce methodological artifacts in the study findings. For study/report characteristics, we examine the setting of data collection (lab, online, or "natural"), the type of sample (college students, general public, or a specific population segment), and publication status (published vs unpublished) as moderators.

We examine the potential effects of these sets of moderators through the following research question:

> **RQ2:** What are the potential effects, if any, of (a) narrative message characteristics, (b) sample characteristics, and (c) study characteristics on the relationship between narrative engagement and resistance?

Methods

Literature search

Using a Boolean search term, we searched the following databases, with a cutoff time point of 22 September 2017: PsycARTICLES, PsycINFO, Communication and Mass Media Complete, Academic Search Premier, ERIC, MEDLINE, and Psychology and Behavioral Sciences Collection. The search included published studies, conference papers, theses, and dissertations. This search rendered an initial pool of 173 papers, from which 124 papers were removed (109 were irrelevant, 9 were duplicates, and 6 did not contain empirical data) and 49 papers were retained. We then scanned review articles and reference lists to ensure that no relevant studies were missed; this rendered one additional study. We also contacted scholars in this area to locate unpublished papers; 10 papers were provided that met the search criteria, rendering a final pool of 60 papers for further screening. More details of the search and coding processes can be found in the Supporting Information.

Table 1 Included Studies and Effect Size Estimates in Part I

Study	Resistance Type	Sample Size	Effect Size, *d* (*SE*)
de Graaf et al. (2017)[a]	Counterarguing	252	.05 (.13)
Gardner & Leshner (2016)[a]	Counterarguing	52	−.13 (.06)
	Anger	52	−.20 (.06)
	Freedom threat	52	−.21 (.04)
Keer et al. (2013)[a]	Message derogation	81	−.10 (.22)
Kim & Niederdeppe (2016)[a]	Message derogation	258	−.45 (.13)
Krakow et al. (2018),[a] Intel ad	Counterarguing	105	−.58 (.20)
	Anger	105	−.43 (.20)
	Freedom threat	105	−.52 (.20)
Krakow et al. (2018),[a] Subaru ad	Counterarguing	109	−.29 (.19)
	Anger	108	.01 (.19)
	Freedom threat	109	.04 (.19)
Kreuter et al. (2010)	Counterarguing	489	−.33 (.09)
Niederdeppe et al. (2011)[a]	Counterarguing	187	−.22 (.18)
Niederdeppe, Heley, & Barry (2015)[a]	Counterarguing	3333	−.10 (.04)

Note: The type labels reflect our classification and labeling scheme and not necessarily the primary authors' terminology.
[a]Additional data were requested and obtained from the authors to compute our effect sizes.

Inclusion criteria

The resulting 60 papers were scrutinized to determine whether they met the inclusion criteria for Part I (experimental data) or Part II (correlational data). For Part I, we included studies that (a) used an experiment to test a narrative condition against a non-narrative condition, where the non-narrative was a topically relevant message; and (b) measured resistance as an outcome variable following message exposure (operationalized as counterarguing, anger, threat to freedom, or message derogation). For Part II, studies were included if they measured the correlation between resistance (counterarguing, anger, threat to freedom, and/or message derogation) and narrative engagement (transportation, identification, and/or parasocial interaction). Most studies in Part II used only narratives as message stimuli (with the exception of Keer et al., 2013, Kim & Niederdeppe, 2016, and Moyer-Gusé & Nabi, 2010). For the papers that did not provide the primary data needed for an effect size calculation, we requested data from the authors and excluded two papers whose authors did not respond to our requests. A final pool of 8 papers for Part I and 21 papers for Part II were retained (see Tables 1 and 2). We use the term "study" to refer to each independent sample from which the effect size estimates are extracted. For example, if a paper reports data from two independent samples, they are counted as two studies. There were 9 studies for Part I (total $N = 4{,}866$ participants) and 25 studies for Part II (total $N = 6{,}488$ participants).

Table 2 Included Studies and Effect Size Estimates in Part II

Study	Engagement Type–Resistance Type	Sample Size	Effect Size, *r* (*SE*)
Asbeek Brusse et al. (2010)	Transportation–Counterarguing	142	−.19 (.08)
	Identification–Counterarguing	142	−.07 (.08)
Banerjee & Greene (2012)	Transportation–Anger	500	.05 (.04)
Igartua & Vega Casanova (2016),[a] Episode on adolescent sexuality	Identification–Counterarguing	63	.24 (.12)
Igartua & Vega Casanova (2016),[a] Episode on gender violence	Identification–Counterarguing	70	.47 (.09)
Igartua & Vega Casanova (2016),[a] Episode on sexual diversity	Identification–Counterarguing	59	.12 (.13)
Keer et al. (2013)	Transportation–Derogation	81	−.34 (.10)
Kim & Niederdeppe (2016)[a]	Transportation–Derogation	258	−.13 (.06)
	Identification–Derogation	257	−.12 (.06)
Krakow, Jensen, & Christy (2017)[a]	Transportation–Counterarguing	409	−.52 (.04)
	Transportation–Anger	409	−.06 (.05)
	Transportation–Freedom threat	409	−.23 (.05)
Krakow, Yale, et al. (2017)[a]	Transportation–Counterarguing	348	−.36 (.05)
	Transportation–Anger	348	−.01 (.05)
	Transportation–Freedom threat	348	−.25 (.05)
	Identification–Counterarguing	348	−.40 (.05)
	Identification–Anger	348	.02 (.05)
	Identification–Freedom threat	348	−.28 (.05)
McQueen & Kreuter (2010)	Transportation–Derogation	489	−.33 (.04)
Moyer-Gusé & Nabi (2010)	Transportation–Freedom threat	189	−.11 (.07)
	PSI–Freedom threat	189	−.19 (.07)
	Identification–Freedom threat	189	−.06 (.07)
	Transportation–Counterarguing	189	.09 (.07)
	PSI–Counterarguing	189	−.13 (.07)
	Identification–Counterarguing	189	−.07 (.07)
Moyer-Gusé et al. (2011)	Identification–Counterarguing	81	−.42 (.09)
Niederdeppe, Roh, & Shapiro (2015)	Identification–Counterarguing	629	−.24 (.04)
Niederdeppe et al. (2012)[a]	Identification–Counterarguing	186	−.32 (.07)
Niederdeppe et al. (2014)[a]	Identification–Counterarguing	362	−.23 (.05)
	Identification–Anger	363	−.23 (.05)
Quintero Johnson & Sangalang (2017)	Transportation–Freedom threat	362	−.13 (.05)
	Transportation–Counterarguing	362	.00 (.05)

(Continued)

Table 2 Continued

Study	Engagement Type–Resistance Type	Sample Size	Effect Size, *r (SE)*
Reinhart & Anker (2012)	Transportation–Freedom threat	201	−.36 (.06)
Sangalang (2015)[a]	Transportation–Freedom threat	566	.08 (.04)
	Transportation–Counterarguing	566	.34 (.04)
Scherr et al. (2017)[a]	Transportation–Freedom threat	190	−.11 (.07)
	Transportation–Anger	190	.02 (.07)
	Transportation–Derogation	190	−.34 (.06)
Shade (2014)	Transportation–Counterarguing	325	−.41 (.05)
	Identification–Counterarguing	325	−.31 (.05)
Shen et al. (2017)[a,b]	PSI–Anger	374	−.18 (.05)
	Identification–Anger	374	−.30 (.05)
	Transportation–Anger	374	−.19 (.05)
	PSI–Freedom Threat	374	.05 (.05)
	Identification–Freedom threat	374	.00 (.05)
	Transportation–Freedom threat	374	−.06 (.05)
	PSI–Derogation	373	−.09 (.05)
	Identification–Derogation	373	−.07 (.05)
	Transportation–Derogation	373	−.08 (.05)
Walter et al. (2017),[a] Audiovisual/film	Transportation–Freedom threat	117	−.30 (.08)
Walter et al. (2017),[a] Print	Transportation–Freedom threat	126	−.33 (.08)
Zhou & Shapiro (2017), Study 1[a]	Transportation–Counterarguing	206	.03 (.07)
	Transportation–Derogation	206	−.09 (.07)
	Transportation–Freedom threat	227	.02 (.07)
	Identification–Counterarguing	200	.09 (.07)
	Identification–Derogation	200	−.23 (.07)
	Identification–Freedom threat	201	.33 (.06)
Zhou & Shapiro (2017), Study 2[a]	Transportation–Counterarguing	155	−.03 (.08)
	Transportation–Derogation	155	.04 (.08)
	Transportation–Freedom threat	155	.08 (.08)
	Identification–Counterarguing	155	.09 (.08)
	Identification–Derogation	155	−.01 (.08)
	Identification–Freedom threat	155	.17 (.08)

Notes: Type labels reflect our classification and labeling scheme and not necessarily the primary authors' terminology. PSI = parasocial interaction.

[a] Additional data were requested and obtained from the authors to compute our effect sizes.

[b] During coding, we carefully examined the stated criteria in papers using thought-listing measures. Whereas in most cases, the coding was explicitly of thoughts against the advocacies in the message (i.e., "counterarguing"), the coding of negative thoughts in (Shen et al. 2017) included a broader range of thoughts, including disliking toward the message, derogation of the source, perceived irrelevance, disagreement with message or message source, and so on. Overall, we deemed it to represent global criticism and, thus, fall within our "message derogation" classification. However, we wish to note the possible overlap between counterarguing and message derogation in this instance.

Effect size extraction and calculation

The unit of analysis is each conceptually distinct effect estimate representing a type of narrative engagement or resistance. In other words, multiple effect estimates could be extracted from one study. Statistical dependency among effect sizes was handled by three-level models (explained below), where differences in engagement and/or resistance types were subject to empirical analyses.

In Part I, we used Cohen's *d*, the standardized mean difference, to represent the effect of narrative versus non-narrative messages (Cohen, 1988).[4] A negative *d* represents less resistance after exposure to a narrative message, compared to a non-narrative message (i.e., a stronger effect of narrative in overcoming resistance). To make results from the two parts comparable, *d* is converted to the effect size metric *r* in summary statistics.

In Part II, the sample zero-order correlation between narrative engagement and resistance was first transformed to Fisher's *z*, which was the metric used in analyses; the summary value of Fisher's *z* was then converted back into *r* for presentation and interpretation purposes (Borenstein, Hedges, Higgins, & Rothstein, 2009). A negative Fisher's *z* or *r* means less resistance associated with increased narrative engagement.

Coding of moderators

To establish intercoder reliability, a subset of randomly selected studies that included 15 to 20 effect sizes per variable (representing roughly 25% of the total number of effect sizes) was first coded by one author and an independent coder. Krippendorff's alphas for these variables (Hayes & Krippendorff, 2007) ranged from .78 to 1.00. Disagreements were discussed and resolved. One author then completed coding for the rest of the data (the full coding scheme and distribution of effect sizes are included in the Supporting Information). We performed moderator analyses only for Part II. For Part I, estimates would likely have been unstable due to the small number of effect sizes.

Analytic procedures

Meta-analytic models

The choice of fixed-effect or random-effects (RE) models depends on the nature of the data and the researchers' assumptions (Hedges & Vevea, 1998; Hunter & Schmidt, 2000; Schmidt, Oh, & Hayes, 2009). Fixed-effect models assume one "true" effect size across all studies, whereas RE models assume variations among "true" effect sizes and empirically assess the true effect variance. This paper reports results from RE models, which we deem to be more appropriate for our data.

Assessing and explaining heterogeneity

Three diagnostic indices of heterogeneity were obtained to assess the presence of non-sampling variance (Borenstein et al., 2009). The *Q* test yields evidence of statistical significance of heterogeneity (i.e., whether true effect sizes differ). I^2 is the ratio of heterogeneity to the total variance. T^2 or T (in RE models) represents

the amount of true variability in the metric of the effect size. In the presence of heterogeneity, three-level mixed-effects models (see below) were then analyzed to identify potential moderators. These models estimated the fixed effects of moderator variables, as well as the reduction in study-level and effect size–level random variances.

Multilevel modeling

Meta-analytic data are, by nature, multilevel models with at least two levels: participants nested under studies (Hox, 2002; Raudenbush & Bryk, 2002). A three-level model is an extension of the two-level random-effects model to handle dependent effect sizes extracted from the same sample (Cheung, 2014; Pastor & Lazowski, 2018). A three-level model assumes that outcomes within a study are a random sample from the population of all possible outcomes of interest. Compared to traditional, univariate approaches to handling statistical dependency (e.g., a sample-wise procedure or separate analyses), three-level meta-analytic models have been shown to be a theoretically more encompassing and statistically more flexible, efficient, and powerful approach (Van den Noortgate, López-López, Marín-Martínez, & Sánchez-Meca, 2013, 2015). The parameters estimated in the three-level model typically include (a) the overall mean effect size; (b) the fixed effects of outcome characteristics (Level 2), study characteristics (Level 3), and sometimes cross-level interactions between the two; and (c) the within-study (Level 2) and between-study (Level 3) random variances.

All statistical analyses were conducted using the *metafor* package (version 2.0–0; Viechtbauer, 2010) in R (version 3.5.0; R Core Team, 2018), using the maximum likelihood estimation. Results from intercept-only RE models are first reported for Parts I and II to show the mean effect sizes and evidence of heterogeneity. Moderator analyses from a three-level mixed-effects meta-regression are then presented for Part II.

Results

Description of studies

Most studies in both Part I and Part II were in the domain of health communication, covering topics such as binge drinking (Keer et al., 2013; Kim & Niederdeppe, 2016; Zhou & Shapiro, 2017), cigarette or drug use (Banerjee & Greene, 2012; de Graaf et al., 2017; Sangalang, 2015), sexual health (Moyer-Gusé, Chung, & Jain, 2011; Quintero Johnson & Sangalang, 2017; Shen et al., 2017), and cancer screening (Krakow, Yale et al., 2017; Kreuter et al., 2010; Walter et al., 2017). A few papers were situated in the context of social issues, such as bullying (Shade, 2014) and sexual diversity (Igartua & Vega Casanova, 2016), while others focused on policy support (e.g., Niederdeppe, Kim, Lundell, Fazili, & Frazier, 2012) or commercial advertisements (Krakow et al., 2018). The samples included in both analyses featured a higher percentage of female participants ($M = 65\%$, $SD = 17\%$ for Part I; $M = 69\%$, $SD = 19\%$ for Part II) and

Table 3 Mean Effect Size by Resistance Type and Narrative Engagement Type (Part II)

	k	Fisher *z*	*(SE)*	95% CI_z	*r*
By resistance type					
Anger	9	−.063	(.064)	−.189 to .062	−.063
Freedom threat	19	−.110*	(.050)	−.208 to −.012	−.110*
Counterarguing	23	−.135**	(.047)	−.228 to −.042	−.134**
Message derogation	12	−.213***	(.061)	−.332 to −.094	−.210***
By narrative engagement type					
Transportation	33	−.149***	(.044)	−.236 to −.063	−.148***
Identification	25	−.107*	(.048)	−.201 to −.013	−.107*
Parasocial interaction	5	−.137	(.088)	−.310 to .036	−.136

Notes: Estimates were obtained from three-level random-effects models. k = the number of effect sizes for each analysis.
$^{*}p < .05$; $^{**}p < .01$; $^{***}p < .001$.

White participants ($M = 68\%$, $SD = 31\%$ for Part I; $M = 57\%$, $SD = 29.71\%$ for Part II). The average sample age was 37.3 years ($SD = 16.5$) for Part I, and 25.5 years ($SD = 11.1$) for Part II.

Overall effect size and heterogeneity

Findings from the three-level intercept-only RE models are first discussed here. For Part I, based on 15 effect sizes, the overall effect size d was −.213 ($SE = .054$, 95% CI −.318 to −.107; the equivalent $r = -.107$, $SE = .027$, 95% CI −.160 to −.055; $p < .001$). H1 was supported: exposure to narrative messages, compared to non-narrative messages, generated less resistance. For Part II ($k = 63$ effect sizes), the weighted mean of correlations between narrative engagement and resistance was also significant (Fisher's $z = -.132$; $r = -.131$, 95% CI −.206 to −.055; $p < .001$; the equivalent $d = -.264$). H2, predicting that less resistance is associated with greater narrative engagement, was supported. Both were small effect sizes according to Cohen (1992). For Part II data, we also obtained mean effect sizes for each resistance type and narrative engagement type from the three-level RE models (see Table 3). For different types of resistance, the relationship was significant for all but anger. For narrative engagement types, the effect size was significant for transportation and identification but not for parasocial interaction.

There was heterogeneity among effect sizes for both analyses. In Part I, the Q test was significant ($Q[14] = 28.69$; $p = .012$) and 66.77% of the total variability was unrelated to sampling (I^2). The estimated variance of true effect sizes (T^2) was .019. For Part II, the Q test was also significant ($Q[62] = 659.80$; $p < .001$) and the I^2 statistics indicated that 91.61% of the total variability was attributable to heterogeneity. The amount of "true" variance was estimated to be .043 (T^2).

Moderator analyses for Part II

As mentioned before, the small number of effect sizes in Part I hindered us from further moderator analyses. For Part II, three-level mixed-effects meta-regressions were conducted. We fitted separate models on each set of moderator variables to both avoid inflation of Type II error rates (Higgins & Green, 2011; Raudenbush & Bryk, 2002) and control for effects of similar covariates. Due to the uneven presence of missing data (i.e., certain sample demographics were not reported in all primary studies), the demographic variables (sample age, female percentage, and White percentage) were each examined separately to avoid substantial data loss.[5] Our moderator analyses thus involved the following models to address RQ1 and RQ2: Models 1a through 1c (sample mean age, percentage of females, and percentage of White participants, respectively), Model 2 (study/report characteristics), Model 3 (narrative message characteristics), and Model 4 (construct operationalization variables).

Unstandardized coefficients from the meta-regression models are reported in Table 4. Given the coding of effect size (i.e., a negative r means less resistance associated with greater narrative engagement), a negative regression coefficient indicates that the predictor variable enhances the effect of narrative engagement in resistance reduction. Table 4 also provides model-level statistics for Models 2 through 4: (a) Q_M *(df)* represents the moderating effect of the group of variables in the model; and (b) R^2_{META} is the proportion of true variance explained by the moderators, reported separately for the effect size level ($R^2_{META(2)}$) and the study level ($R^2_{META(3)}$).

Results from Models 1a–1c showed significant effects of the average sample age ($b = -.008$, 95% CI $-.015$ to $-.001$; $p = .030$) and percentage of female participants ($b = -.524$, 95% CI $-.845$ to $-.202$; $p = .001$). Studies with either an older sample or a higher percentage of females tended to observe a stronger relationship between narrative engagement and resistance. The percentage of White participants was unrelated to the effect size estimate.

In Model 2, the only significant effect was from the comparison between data collection in a "natural" setting (e.g., shopping mall, school, or participant's home) versus in a lab ($b = -.294$, 95% CI $-.576$ to $-.013$; $p = .041$), suggesting a stronger relationship between narrative engagement and resistance in the natural setting. Neither the study population nor publication status was a significant predictor.

In Model 3, narrative message characteristics were all significant predictors. Stronger effects were associated with messages of medium length, compared to short messages ($b = -.408$, 95% CI $-.631$ to $-.185$; $p < .001$). The difference between long and short messages was not statistically significant. The effect was also larger for medium-length messages than long messages (not shown in the table; $b = -.284$, $SE = .087$; $p = .001$). Education-entertainment messages produced a stronger relationship than messages with a clear persuasive advocacy ($b = -.350$, 95% CI $-.550$ to $-.149$; $p < .001$). Narratives that featured multiple main characters showed a weaker relationship than those with a single identifiable character ($b = .406$, 95% CI .227 to .584; $p < .001$). The message medium was a significant predictor, such

Table 4 Results of Three-Level Mixed-Effects Models for Moderator Analyses (Part II)

		b (SE)	95% CI	*Model-Level Statistics*
Models 1a–1c: Sample Demographics				
Mean age, years		−.008* (.004)	−.015 to −.001	
Female %		−.524** (.164)	−.845 to −.202	
White %		.014 (.154)	−.288 to .316	
Model 2: Study/Report Characteristics				
Intercept		−.168 (.094)		
Setting *(Lab)*	Online	−.057 (.083)	−.219 to .106	Q_M (*df*): 5.17(5)
	Natural	−.294* (.144)	−.576 to −.013	$R^2_{META(2)}$: 3.7%
Sample *(College)*	General	.136 (.127)	−.113 to .385	$R^2_{META(3)}$: 14.4%
	Specific	.136 (.086)	−.033 to .304	
Publication status *(Unpublished)*	Published	.040 (.090)	−.137 to .216	
Model 3: Narrative Message Characteristics				
Intercept		−.022 (.038)		
Length *(Short)*	Medium	−.408*** (.114)	−.631 to −.185	
	Long	−.124 (.143)	−.405 to .157	Q_M (*df*):
Genre *(Advocacy)*	E-E	−.350*** (.102)	−.550 to −.149	42.01(5)***
Characters *(Single)*	Multiple	.406*** (.091)	.227 to .584	$R^2_{META(2)}$: 1.4%
Medium *(Audiovisual)*	Textual	−.222*** (.052)	−.323 to −.120	$R^2_{META(3)}$: 100%
Model 4: Construct Operationalization				
Intercept		.011 (.075)		
NE *(Content-based)*	Character-based	−.148 (.096)	−.337 to .041	
Resistance *(Anger)*	FT	−.163* (.078)	−.316 to −.010	Q_M (*df*): 11.49(7)
	CA	−.164* (.083)	−.327 to −.001	$R^2_{META(2)}$: 27.6%
	MD	−.241** (.090)	−.416 to −.065	$R^2_{META(3)}$: 0%
Interaction terms	NE x FT	.264* (.115)	.038 to .489	
	NE x CA	.183 (.113)	−.039 to .404	
	NE x MD	.197 (.125)	−.048 to .442	

Notes: Unstandardized coefficients are reported in the table. The parentheses after each variable name designate the reference category. CA = counterarguing; E-E = education-entertainment; FT = freedom threat; MD = message derogation; NE = narrative engagement; Q_M = Q statistic for test of moderators; $R^2_{META(2)}$ = % of true heterogeneity explained at the effect size level; $R^2_{META(3)}$ = % of true heterogeneity explained at the study level.

*$p < .05$; ** $p < .01$; *** $p < .001$.

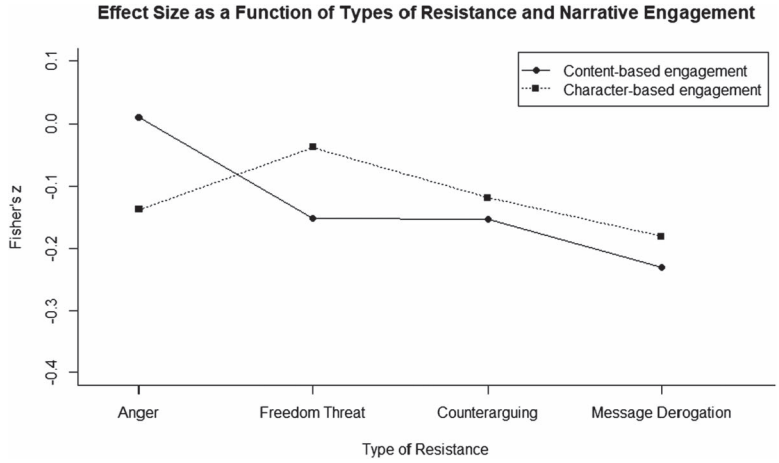


Figure 2 Depicting the interaction effect between types of reactance and narrative engagement (Part II).

that textual messages produced a stronger relationship than audiovisual messages ($b = -.222$, 95% CI $-.323$ to $-.120$; $p < .001$).

Model 4 examined different operationalizations of narrative engagement and resistance by including both the main effect and interaction effect terms. We wanted to gather some evidence as to whether the effect size was a function of the resistance and/or engagement variables used. Given that there were only five effect size estimates for parasocial interaction, we combined it with character identification to form a category of character-based engagement,[6] to compare with transportation as content-based engagement. There was indication of an interaction effect: the differential effect of freedom threat versus anger was contingent upon the type of narrative engagement ($b = .264$, 95% CI .038 to .489; $p = .022$). As depicted in Figure 2, character-based engagement had a stronger negative relationship with anger than content-based engagement; the reverse was true for freedom threat, where content-based engagement exhibited a stronger relationship than character-based engagement. There was no main effect for engagement type. For resistance types, the difference was between the cognitive resistance measures (perceived freedom threat, counterarguing, message derogation) and the affective measure, anger (p-values = .037, .049, and .007 for freedom threat, counterarguing, and message derogation, respectively; Table 4); there were no significant differences among the three cognitive resistance measures (results not displayed in the table).

Model-level statistics

Model-level statistics in Table 4 showed that the group of narrative message characteristics significantly reduced heterogeneity (Q_M [5] = 42.01; $p < .001$) and

explained 100% of the true variance at the study level. Study/report characteristics as a group did not have a significant moderating effect (Q_M [5] = 5.17; n.s.). Construct operationalizations were not significant moderators as a group either (Q_M [7] = 11.49; n.s.), explaining 27.6% of the variance at the effect-size level.

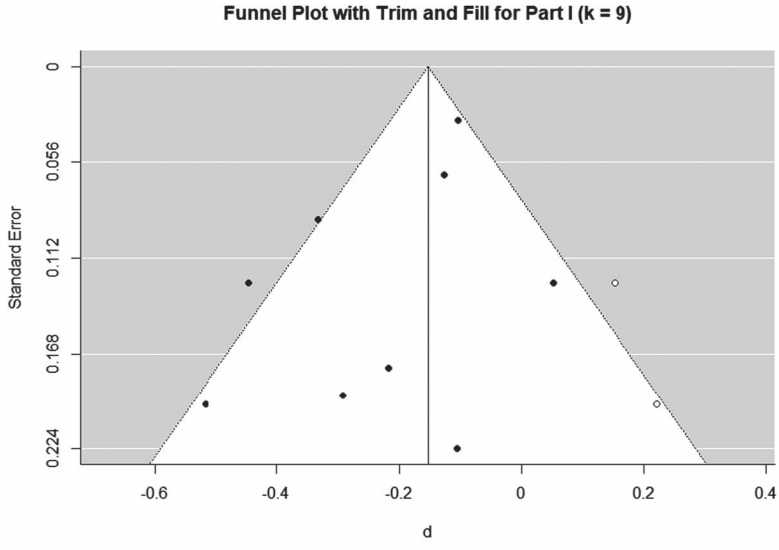
Publication bias

Publication bias is a threat to the validity of meta-analytic findings. We assessed the possibility of publication bias using multiple methods. First, we inspected the funnel plot, with standard errors plotted against effect sizes. Asymmetry of the plot would indicate the potential presence of bias. Second, we conducted Egger's regression test to formally test the association between effect size and standard error. Because it tends to have low statistical power (Sterne & Egger, 2006), a significance level of .10 is typically applied. Third, we performed the trim and fill procedure, which provides an adjusted estimate of the overall effect size if bias is detected (Duval & Tweedie, 2000). Finally, we also performed the recently developed *p*-uniform test (van Assen, van Aert, & Wicherts, 2015). According to Borenstein et al. (2009), a publication bias analysis serves to categorize the results into one of three scenarios: (a) a trivial impact of bias; (b) the impact of bias is not trivial but does not invalidate major findings (i.e., modest); or (c) the impact of bias is substantial and calls major findings into question.

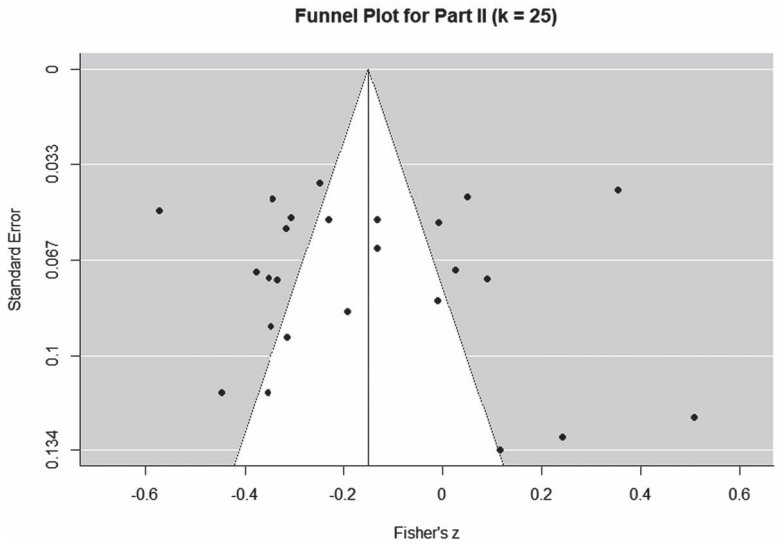
As these methods were developed for traditional two-level meta-analyses, we randomly selected one effect size estimate per study and used them for publication bias analyses. For the two-level data, the estimated overall effect sizes were comparable to those from the three-level data presented earlier (in Part I, based on 9 effect sizes, $d = -.207$, $SE = .058$, 95% CI −.321 to −.094 [$p < .001$]; in Part II, based on 25 effect sizes, Fisher's $z = -.150$, $SE = .051$, $r = -.149$, 95% CI_r −.246 to −.049 [$p = .004$]).

For Part I, Egger's regression test was non-significant at $p > .10$ ($t[7] = -1.678$; $p = .137$), though we caution that Egger's test is recommended for 10 or more effect sizes (and there were 9 in our data). The trim and fill procedure identified two missing studies on the right (the positive side). After filling in the two missing studies, the overall effect size based on 11 effect sizes was $d = -.153$ ($SE = .064$, 95% CI −.279 to −.027; $p = .017$). The funnel plot with the two filled studies is displayed in Figure 3a. The *p*-uniform analysis showed the publication bias test to be non-significant ($p = .88$), and the adjusted estimate of effect size to be $d = -.148$ (95% CI −.230 to −.051; $p = .001$). Both bias-correcting methods, therefore, showed the adjusted effect size estimate to be reduced, though still statistically significant.

For Part II, Egger's test was non-significant at $p > .10$ ($t[23] = .024$; $p = .981$). No missing studies were identified by trim and fill, which then produced no adjustment of the effect size estimate. The funnel plot is displayed in Figure 3b. The *p*-uniform analysis showed that the publication bias test was not significant ($p = .99$) and yielded a larger adjusted effect estimate ($r = -.303$, 95% CI −.346 to −.256; $p < .001$).



(a)



(b)

Figure 3 Funnel plots (with one effect size randomly selected per study). (a) Funnel plot (with trim and fill) for Part I. (b) Funnel plot for Part II.

Using Borenstein et al.'s (2009) guideline, it seems that the potential impact of publication bias in Part I was likely to be modest, given a 25% downward adjustment in the effect size estimate. For the Part II data, the impact of publication bias was likely to be trivial based on all evidence.

Discussion

Previous meta-analyses have shown that narratives can persuade (Braddock & Dillard, 2016; Shen et al., 2015; Tukachinsky & Tokunaga, 2013), but whether it is through reducing resistance remained a question. As depicted in Figure 1, we sought to fill this gap by synthesizing empirical tests of the theoretical idea that narratives overcome resistance (Dal Cin et al., 2004; Green & Brock, 2000, 2002; Moyer-Gusé, 2008; Slater & Rouner, 2002). Our findings showed that there was less resistance as a result of viewing narrative versus non-narrative messages (Part I, $d = -.213$, equivalent $r = -.107$; $p < .001$), and that narrative engagement was negatively correlated with resistance (Part II, $r = -.131$, equivalent $d = -.264$; $p < .001$). Both effect sizes were in the "small" category (Cohen, 1992), comparable to summary effects observed in persuasion research (see Rains, Levine, & Weber, 2018).

Braddock and Dillard (2016, p. 461), in closing their meta-analysis, call out that "efforts to construct a comprehensive theory of narrative will need to incorporate both moderators and mediators." Above and beyond previous meta-analyses, our findings add empirical credence to resistance reduction as a possible explanatory pathway between exposure to narratives, narrative engagement, and persuasive outcomes. Through moderator analyses, we also reveal conditions under which resistance mitigation is more or less effective. Our Part II analysis systematically investigated narrative message characteristics and resistance and engagement types as potential boundary conditions.

Narrative message characteristics

Not all narratives are equal. As Dahlstrom et al. (2017, p. 24) lamented, the concept of narrative "remains a diffusely bounded construct." Echoing their call to systematically depict and examine features of narratives, our study contributed empirical evidence in this regard. In Part II data, including message characteristics (genre, character unit, length, and medium) as predictors completely explained the between-study heterogeneity.

Specifically, in terms of genre, we observed a larger effect size for education-entertainment than for advocacy messages. This finding was in alignment with the argument that narrative effects may vary with the explicitness of the persuasive effort (Bilandzic & Busselle, 2013). EORM also postulates that entertainment has a unique ability to mitigate perceived persuasive intent and other forms of resistance by engaging audiences (Moyer-Gusé, 2008). Compared to the education-entertainment genre, advocacy narratives (e.g., PSAs, advertisements, policy advocacy, etc.) may be perceived as more obtrusive. Another narrative feature that mattered was character unit, which is one aspect where narrative messages used in extant research vary (Dahlstrom et al., 2017). More specifically, stronger effects emerged when the program featured a single primary character to identify with rather than multiple main characters. Potentially, featuring a single character facilitates more concentrated narrative processing, creating greater immersion into the storyline and/or identification

with the character. Single-character narratives could also reduce measurement noise in the research by avoiding participants' confusion over which character to identify or counterargue with when they answer related survey questions. We also found that messages that were of medium length (e.g., a 15- to 20-minute TV program) generated a larger effect size, compared to both short (e.g., a 30-second PSA or a one-page story) and long (e.g., a 30- or 40-minute TV program) messages. Short messages may not be sufficient to get the participants engaged with the narrative. Conversely, long ones could produce fatigue or introduce other nuisance factors that may weaken the relationship (for instance, the underlying appeal may get lost in the story or be more easily forgotten).

Medium also made a difference. For textual narratives, compared to those in audiovisual formats, there was a stronger relationship between narrative engagement and resistance. In Shen et al.'s (2015) meta-analysis, the persuasive advantage of narratives over non-narratives was significant for audio and video messages, but not messages in print. Our Part II data showed the difference in medium *within* narrative messages, after controlling for other message characteristics. In other words, for example, greater engagement with a short textual message, compared to a short audiovisual, would be related to less resistance. One possible explanation is that, as most of the short, audiovisual narratives used in the studies in Part II were PSAs, the audiovisual effects could render the message more engaging but also more "in-the-face," potentially generating more resistance. Another possibility is that text-based stories may foster an engagement process that hinges more on the audiences' own creation, where "individuals are able to pace themselves and create an imagined narrative world," and thus text narratives may better weaken their defensive mechanisms (Green et al., 2008, p. 530).

These findings have practical implications for message design. For example, everything else being equal, narrative messages that are of medium length, that fit within the entertainment-education genre, or that highlight one identifiable character should be less likely to arouse resistance. Implications are less clear from a theoretical standpoint, however, pointing to room for growth in future research. Extant theorizing has generally pronounced that messages that "better engage audiences" and/or "better disguise persuasive intent" will better quell resistance, without specific predictions about which narrative formats should best achieve these goals and why (Dal Cin et al., 2004; Green & Brock, 2000, 2002; Moyer-Gusé, 2008; Slater & Rouner, 2002).

Findings from the current meta-analysis, therefore, highlight the need for more systematic explication and testing of narrative message features in primary studies. Greater attention needs to be paid to the *a priori* explication of message features and theory-based designs to specifically investigate what message dimensions may enhance engagement or suppress resistance, and why. Future studies should undertake conceptual explications of narrative message features, and experimentally manipulate levels of narrative engagement to shed better light on the psychological mechanisms of narrative persuasion. Findings from this review, in combination with

recent narrative reviews and typologies (Dahlstrom et al., 2017; de Graaf et al., 2016), could facilitate such efforts. We see this as an important next step in narrative research for both theoretical advancement and practical implications for effective message design.

Forms of resistance and narrative engagement

As noted earlier, the idea of narratives overcoming resistance was examined in extant research with a variety of constructs of resistance and narrative engagement. In response to RQ1, findings from Part II showed that the relationship between engagement and resistance was the weakest for anger. Compared to anger, all other forms of resistance had significantly stronger relationships with narrative engagement (Table 4). Subgroup summary effects (Table 3) also showed that the effect size was the smallest for anger and was non-significant. For types of narrative engagement, summary effects were significant for transportation and identification but not parasocial interaction (likely due to the small number of effect sizes in this category).

There also seemed to be an interaction effect: the relationship with freedom threat was stronger (i.e., more negative) for transportation than for character-based engagement (identification and parasocial interaction), while the opposite was true for the relationship with anger. Being transported into the storyline, in other words, seemed to be more effective in reducing perceived threat to freedom than anger, whereas identifying or parasocially interacting with a character helped overcome anger more than perceptions of freedom threat. These findings suggest that empirical examinations of EORM may yield different conclusions when anger and freedom threat are used to represent resistance in combination with different forms of narrative engagement. As a group, these construct operationalization variables reduced the effect-size level variance by a small (but not statistically significant) amount.

In our analyses, these forms of resistance and narrative engagement were treated as different operationalizations of the underlying constructs central to EORM (Moyer-Gusé, 2008), which best captures the range of operationalizations in the primary studies. While we acknowledge the interrelationships among freedom threat, anger, and negative cognitions that have been established in the reactance literature (Dillard & Shen, 2005; Rains, 2013), we were unable to empirically specify and test them as such in our analysis, due to the lack of primary data.[7] For the same reason, we could not address the interrelationships among narrative engagement types in our analyses, the incorporation of which would yield a more precise estimate of the unique contributions of each engagement type.

We examined how effect sizes may vary with methodological characteristics. Among the sample and study characteristics, we found that the sample average age, female percentage, and data collection setting emerged as significant moderators. Especially worth noting is the rather large effect of gender composition: a larger effect size was observed for samples with a higher percentage of female participants. Given that primary studies in this area of research had an overall majority of female

participants, there could be a female bias in the observed overall effect sizes. In future research, unless the goal is to specifically study female audiences, researchers should strive for better gender balance in their sampling approach.

A note on power

The power of detecting moderator effects in a meta-analysis is often very low (Hedges & Pigott, 2004). While highlighting the above statistically significant findings, we also hasten to emphasize that the absence of statistical significance does not necessarily mean no effect. Assessing power for a meta-analysis is a challenging task, especially for random-effects models, as a prospective power analysis (which is recommended over a retrospective power analysis) requires assumptions about parameters that are unknown before the review (especially for a random-effects model; Borenstein et al., 2009; Valentine, Pigott, & Rothstein, 2010). Here, we echo Valentine et al.'s (2010) suggestion that meta-analytic findings are best interpreted using both the point estimate and the confidence interval, which provides information about the range of values and the amount of uncertainty in the estimate. Confidence intervals should be used in addition to or in place of the *p* value and can be more informative than the power analysis alone (Valentine et al., 2010). We reported confidence intervals for all the analyses in our paper and hope that readers use that information in interpreting the results.

Limitations

Our study has a few limitations. First, the number of studies included in Part I was small. We located only 15 effect sizes that directly compared narrative and non-narrative messages on some measures of message resistance. Whereas a meta-analytic review of this size is not uncommon (Borenstein et al., 2009)[8] and could achieve reasonable power in random-effects models (Jackson & Turner, 2017), the small number of effect sizes prevented us from a moderator analysis. The small corpus of extant experiment studies calls for more future research that uses experimental methods to investigate the mechanisms underlying narrative persuasion. Experimental designs will allow more direct testing of the theorized mechanisms and increase confidence in causal inferences about the effect of narratives.

Second, due to the lack of primary data on the interrelations among constructs, we could not investigate narrative engagement as a mediating path between exposure to a narrative and resistance. As a result, our two-part analysis contributed two separate pieces of evidence of narratives overcoming resistance—(a) the direct experimental effect; and (b) the correlation between narrative engagement and resistance—but not evidence about narrative messages reducing resistance via narrative engagement.

Finally, we hope to draw narrative researchers' attention to exploring other potential theoretical conditions for narrative persuasion. For example, one such condition postulated by Slater and Rouner (2002) is the relationship between one's pre-existing attitudes and the position advocated by the message. In their explication of E-ELM, they wrote, "absorption in a narrative, and response to characters in a narrative,

should enhance persuasive effects and suppress counterarguing *if the implicit persuasive content is counterattitudinal*" (Slater & Rouner, 2002, p. 173, emphasis added). Echoing that, Dal Cin et al. (2004, p. 177) argue that the persuasive advantage of narratives should be specifically in changing "strong attitudes—those that truly elicit resistance." From our review of the literature, this point has not received its due attention from narrative persuasion researchers. More primary data on such theoretically based conditions would allow future syntheses to better delineate and evaluate theoretical developments in this area of research.

Conclusion

This paper reports a two-part meta-analysis that synthesized experimental and correlational data on narratives overcoming resistance. Results from Part I suggested that narratives, compared to non-narratives, generated less resistance. Part II showed that narrative engagement was negatively correlated with resistance, and narrative message characteristics were found to be important moderators of the relationship. Results from these syntheses help to resolve what appeared as inconsistent or contradictory findings in some primary studies. As was predicted in EORM, narrative messages can indeed be an effective strategy in lowering audience resistance.

Supporting Information

Additional Supporting Information may be found in the online version of this article.

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Notes

1. Although questioning the veracity of a narrative, or "false note finding," is sometimes considered a form of critical thinking akin to counterarguing (e.g., Green & Brock, 2000; van Laer et al., 2014), we do not consider this to exclusively capture resistance. Questioning the plausibility of story events or character actions can certainly be a form of message discounting; however, we take into account that perceived fictionality does not necessarily mean rejection of a story or its underlying argument. Indeed, fictional and fake stories can still be persuasive (Appel & Malečkar, 2012). For this reason, we do not include false note finding as a resistance measure in our analyses.

2. Tukachinsky and Tokunaga (2013) considered perceived similarity between oneself and story characters to be another measure of narrative engagement. However, perceived similarity is typically characterized as a cognitive assessment about a narrative, whereas absorptive processes entail immersion into the narrative (Cohen, 2001; Moyer-Gusé, 2008). Perceived similarity has also been suggested as an antecedent to engagement (specifically, to identification; Cohen, 2001), but this has not been well supported empirically (see Cohen & Tal-Or, 2017). Aligning with the notion of engagement as suspension of one's own perspective, we do not include perceived similarity as a construct of narrative engagement in our analysis.
3. Some studies in our analysis used, as an additional measure, the narrative engagement scale developed by Busselle and Bilandzic (2009), a multidimensional scale that captures narrative understanding, attentional focus, narrative presence, and emotional engagement. In these cases, we chose to extract effect size estimates from the unidimensional scales of transportation to be conceptually consistent with other studies.
4. Only a couple of papers reported other forms of data (e.g., odds ratio [Niederdeppe et al., 2011] or within-subject design [Gardner & Leshner, 2016]), and they were converted into *d* using the appropriate formula (Borenstein et al., 2009).
5. The *rma.mv* command for the *metafor* package in R, which we use to estimate the meta regression models, performs listwise deletion. Including all three demographic variables in one model would reduce the sample size from 15 to 11 in Part I and from 63 to 37 in Part II.
6. A preliminary analysis on the subgroup means of identification and parasocial interaction showed that they were not statistically different. (Means for the identification and parasocial interaction subgroups were, respectively, −.107 and −.137; mean difference = −.030, $SE = .086$; $p = .726$.)
7. Narrative researchers have adopted the notion of reactance, and related variables, largely without the aim to study their internal relationships or use reactance's established empirical structure (Ratcliff, 2019). For example, some studies used a single scale focused on perceived freedom threat to indicate reactance (e.g., Quintero Johnson & Sangalang, 2017; Reinhart & Anker, 2012), or measured only message derogation (e.g., Keer et al., 2013). Other studies used multiple variables—such as anger and counterarguing—but treated these as parallel indicators of resistance (e.g., Krakow et al., 2018). The interrelationships among resistance variables do not appear to be a question of theoretical interest or concern, at least so far, for narrative researchers.
8. In the Cochrane Database of Systematic Reviews, a database consisting of 3,000 reviews, the median number of studies included in a review is six.

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