DOCUMENT SUMMARY This 2000 research paper by Green and Brock introduces

transportation theory as a mechanism explaining how narratives persuade and change beliefs. Through four experiments, the authors demonstrate that being "transported," or absorbed into a story, leads to more story-consistent beliefs and more favorable evaluations of protagonists. The research shows that this effect is largely independent of whether a story is labeled as fact or fiction, and it presents evidence distinguishing

transportation from **cognitive elaboration**.

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FORMATTED CONTENT

The Role of Transportation in the Persuasiveness of Public Narratives

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Transportation was proposed as a mechanism whereby narratives can affect beliefs.

> Defined as absorption into a story, transportation entails imagery, affect, and attentional focus.

A

transportation scale was developed and validated. Experiment 1

(N=97) demonstrated that extent of **transportation** augmented story-consistent beliefs and favorable evaluations of protagonists. Experiment 2

(N=69) showed that highly transported readers found fewer false notes in a story than less-transported readers. Experiments 3

(N=274) and 4 (N=258) again replicated the effects of **transportation** on beliefs and evaluations; in the latter study, **transportation** was directly manipulated by using processing instructions.

> Reduced transportation led to reduced story-consistent beliefs and evaluations.

The studies also showed that

transportation and corresponding beliefs were generally unaffected by labeling a story as fact or as fiction.

The scientific study of persuasion has reflected an unfortunate displacement of poetics by rhetoric. Advocacy messages rather than narrative messages have been the subject matter of persuasion scholars for the past half-century. This striking imbalance in scientific attention has been sustained even though in the experience of people everywhere, public narrative predominates over public advocacy: Novels, films, soap operas, music lyrics, stories in newspapers, magazines, TV, and radio command far more waking attention than do advertisements, sermons, editorials, billboards, and so forth. The power of narratives to change beliefs has never been doubted and has always been feared. Consequently, censorship has been ubiquitous for centuries: In the United States, one out of three high school students experiences banning of books (Davis, 1979).

In an attempt to redress the rhetoric-poetics imbalance, we explored the persuasive impact of a narrative in terms of the extent to which recipients were "transported" into the world of the narrative and became involved with its protagonists. In essence, a narrative account requires a story that raises unanswered questions, presents unresolved conflicts, or depicts not yet completed activity; characters may encounter and then resolve a crisis or crises. A story line, with a beginning, middle, and end, is identifiable.

Transportation Theory

To the extent that individuals are absorbed into a story or transported into a narrative world, they may show effects of the story on their real-world beliefs. We conceptualized

transportation into a narrative world as a distinct mental process, an integrative melding of attention, imagery, and feelings. Our conceptualization of

transportation was based on Gerrig's (1993) description:

> Someone ("the traveler") is transported, by some means of transportation, as a result of performing certain actions. The traveler goes some distance from his or her world of origin, which makes some aspects of the world of origin inaccessible. The traveler returns to the world of origin, somewhat changed by the journey. (pp. 10-11)

Following Gerrig, we conceived of

transportation as a convergent process, where all mental systems and capacities become focused on events occurring in the narrative. The first consequence of

transportation is that parts of the world of origin become inaccessible. The reader loses access to some real-world facts in favor of accepting the narrative world that the author has created. While the person is immersed in the story, he or she may be less aware of real-world facts that contradict assertions made in the narrative.

Beyond loss of access to real-world facts, transported readers may experience strong emotions and motivations, even when they know the events in the story are not real. A third consequence is that people return from being transported somewhat changed by the experience. Our

research attempted to measure these changes as they may be reflected in individuals' beliefs and attitudes.

Transportation Versus Cognitive Elaboration

Because

transportation is hypothesized to be related to belief or attitude change, it is helpful to distinguish between **transportation** and **cognitive elaboration**. In recent years, dual-process models such as the

elaboration likelihood model (ELM; Petty & Cacioppo, 1981) and the **heuristic-systematic model (HSM; Chaiken, 1980)** have dominated persuasion research. The critical element in these theories is the amount of thought an individual devotes to the message.

Rather than amount of thought per se,

transportation theory posits processing that is qualitatively different from the traditional systematic or heuristic modes described in dual-process models of persuasion.

> **Elaboration** implies critical attention to major points of an argument, whereas **transportation** is an immersion into a text.

Elaboration leads to attitude change via logical consideration and evaluation of arguments, whereas **transportation** may lead to persuasion through other mechanisms. First,

transportation may reduce negative cognitive responding. Next,

transportation may make narrative experience seem more like real experience. Finally,

transportation is likely to create strong feelings toward story characters; the experiences or beliefs of those characters may then have an enhanced influence on readers' beliefs.

Transportation is considered a convergent process, whereas **elaboration** might be conceived of as a divergent process.

Role of Protagonists

"Character is the driving force in fiction" (Surmelian, 1969, p. 139; see also Radway, 1997, p. 282), and therefore attachment to characters may play a critical role in narrative-based belief change. Because a protagonist may serve as an "internal" source of information or beliefs,

transportation may lead to greater liking for sympathetic protagonists.

Text Hegemony Versus Transportation

The controversial

text hegemony hypothesis states that texts of high quality may override the effects of variations in situations and in readers' predispositions to be moved. In contrast to

text hegemony, we posit that **transportation** is the key determinant of narrative impact, and further assume both that **transportation** may be affected by text-external manipulations and that individuals will vary in their proclivity for **transportation**.

Fiction and Belief Change

Theory advanced by Gilbert and colleagues is consistent with the proposal that narratives, regardless of their real-world truth status, can change beliefs. Gilbert suggested that the default is for people to believe anything they read or hear, and that "disbelieving" is an effortful correction process. Building on this work, we suggest that

transportation into a story causes people to be less motivated (or less able) to disbelieve any particular conclusion; transported individuals are so absorbed in the story that they would likely be reluctant to stop and critically analyze propositions presented therein.

Overview

In sum, individuals reading stories may become transported into a narrative world.

Transportation is a convergent mental process, a focusing of attention, that may occur in response to either fiction or nonfiction. The components of

transportation include emotional reactions, mental imagery, and a loss of access to real-world information; the resulting **transportation** may be a mechanism for narrative-based belief change.

Summary of Scale Development

We relied on Gerrig's (1993) exposition of

transportation to create a scale intended to capture its major dimensions, including emotional involvement in the story, cognitive attention to the story, feelings of suspense, lack of awareness of surroundings, and mental imagery. The final

Transportation Scale included 11 general items and 4 imagery items specifically related to the target narrative. The first narrative, titled "Murder at the Mall," was adapted from

How We Die, a bestseller by Sherwin Nuland (1994, pp. 123-128). "Murder at the Mall" is a true story about a little girl, Katie, who goes to the mall with her college-age sibling. While at the mall, Katie is brutally stabbed to death by a psychiatric patient.

All items were measured on a seven-point scale anchored by

very much and *not at all*. In a sample of 274 undergraduates, the scale had a Cronbach's alpha of .76. A maximum likelihood exploratory factor analysis was performed, and three interpretable factors were extracted: cognitive aspects, emotional-affective aspects, and visual imagery. However, these factors were intercorrelated.

Table 1: Transportation Scale Items

| Item | | :--- | | **Panel 1: General items** | | 1. While I was reading the narrative, I could easily picture the events in it taking place. | | 2. While I was reading the narrative, activity going on in the room around me was on my mind. (R) | | 3. I could picture myself in the scene of the events described in the narrative. | | 4. I was mentally involved in the narrative while reading it. | | 5. After finishing the narrative, I found it easy to put it out of my mind. (R) | | 6. I wanted to learn how the narrative ended. | | 7. The narrative affected me emotionally. | | 8. I found myself thinking of ways the narrative could have turned out differently. | | 9. I found my mind wandering while reading the narrative. (R) | | 10. The events in the narrative are relevant to my everyday life. | | 11. The events in the narrative have changed my life. | | **Panel 2: Items specific to "Murder at the Mall" (Experiments 1-3)** | | 12. While reading the narrative I had a vivid image of Katie. | | 13. While reading the narrative I had a vivid image of Joan (John). | | 14. While reading the narrative I had a vivid image of the psychiatric patient. | | 15. While reading the narrative I had a vivid image of the registered nurse. | | **Panel 3: Items specific to "Two Were Left" (Experiment 4)** | | 12. While reading the narrative I had a vivid image of the boy. | | 13. While reading the narrative I had a vivid image of the dog. | | 14. While reading the narrative I had a vivid image of the ice island. | | 15. While reading the narrative I had a vivid image of the pilot. | Note. R = reverse-scored.

- **Discriminant Validation: Need for Cognition:** The **Need for Cognition Scale** (Cacioppo & Petty, 1982), which predicts spontaneous elaboration, would not necessarily predict **transportation**. Results indicated that the correlation between **need for cognition** and **transportation** was small and nonsignificant, $r(272)=.09$, $p>.10$.
- **Convergent Validation: Tellegen Absorption Scale: Transportation** should be related to a general tendency to become absorbed into life experiences. We found a moderate association between **transportation** and the **Tellegen (1982) Absorption Scale**, $r(59)=.24$, $p<.05$.
- **Effect of Text Manipulation:** An alternative, less compelling version of "Murder at the Mall" called "Bubbles in the Mall" was created. As expected, readers reported significantly less **transportation** into "Bubbles in the Mall" than into "Murder at the Mall," $F(1,36)=7.36$, $p<.01$.

Experiment 1

Experiment 1 was designed to observe whether measured

transportation would be related to the beliefs of story recipients. We expected that highly transported participants would feel more positively toward the (sympathetic) characters in the narrative. We also manipulated the alleged truth status of the narrative, presenting it as either fact or fiction.

Results

- **Source Effects:** The source of the story (fact vs. fiction) did not affect reported **transportation**. Responses on the belief indexes and character evaluations also did not differ as a function of story source. Even when considering only participants who correctly recalled the story's truth status, the basic pattern of results remained the same.
- **Transportation Effects:** A median split divided participants into high and low **transportation** groups.

    - **Beliefs:** There was a significant effect of **transportation** on the violence index, with highly transported participants indicating that violence was more likely. Highly transported participants also reported beliefs more consistent with those implied in the story regarding psychiatric patient freedoms.
    - **Character Evaluations: Transportation** had a significant effect on the evaluations of the character Katie, with highly transported participants reporting greater positivity toward her, $F(1,83)=10.52$, $p<.01$.
- **Thought-listings:** Traditional thought-coding procedures were not appropriate for the responses, which tended to be global reactions or emotions rather than belief-related comments.

Discussion

The data provided initial evidence that

transportation is associated with story-consistent beliefs. Highly transported participants showed beliefs more consonant with story conclusions as well as more positive evaluations of the story protagonists. Experiment 1 also showed that fact versus fiction labeling did not affect

transportation.

Experiment 2

The purpose of Experiment 2 was to challenge the

text hegemony hypothesis by manipulating the story frame and readers' instructions. We also created a new measure to assess questioning or doubtful reactions to a story, called "

Pinocchio circling," where participants circled "false notes" in the story. We hypothesized that more transported participants would be less likely to find false notes.

The design was a 2 (source: fiction, nonfiction) × 3 (instructions: theater, narrative, fourth grade) factorial.

- **Theater instructions** were intended to foster higher **transportation**.
- **Narrative instructions** served as a baseline.
- **Fourth-grade instructions** were intended to undermine **transportation** by having readers focus on identifying difficult words.

Results

- **Instruction and Source Effects:** The instructional conditions only marginally affected reported **transportation**. A number of participants in the fourth-grade condition commented that they got caught up in the story and were unable to follow the instructions. There was no significant effect of source (fact vs. fiction) on reported **transportation**.
- **Transportation and Beliefs:** An ANOVA revealed a main effect on the "crime doesn't pay" belief, such that highly transported people were more likely to agree. Other belief measures were in the expected direction.

- **Transportation and Character Evaluations: Transportation** was a significant predictor of positive evaluation for both characters, Joan and Katie.
- **Transportation and Pinocchio Circling:** There was a main effect of **transportation** on both the number of circles and lines circled, with highly transported participants identifying fewer "false notes". This finding supports the idea that transported individuals are less likely to doubt, question, or engage in disbelieving processing.

Discussion

The results showed that framing and instructions had negligible effects on felt

transportation. The

Pinocchio findings illuminated one possible means by which **transportation** may influence belief change—specifically, by reducing discounting processes. The

Pinocchio technique also provided further support for the distinction between **transportation** and **cognitive elaboration**, as **Need for Cognition** was not related to the number of false notes circled.

Experiment 3

To correct for the small cell sizes of Experiment 2, Experiment 3 was conducted with increased power. We retained the fiction-nonfiction manipulations but added a third source condition: some participants were told the story came from a dream.

Results

- **Source and Instruction Effects:** Source (nonfiction, fiction, or dream) did not affect reported **transportation**. The instruction effect was also nonsignificant.
- **Transportation and Beliefs:** Highly transported participants were significantly more likely to respond in a story-consistent direction, such as saying that violence was more likely and that the world was less just. They were also more likely to agree that crime does not pay.
- **Transportation and Character Evaluations: Transportation** was significantly related to positive evaluation of both characters, John/John and Katie.

Combined Analysis (Experiments 1-3)

An omnibus statistical combination of results from the three experiments was conducted. The combined results supported the theorized relationship of

transportation to narrative-related beliefs and to evaluation of the narrative's protagonists. All combined belief indexes showed significant differences between high- and low-transported participants.

Table 2: Belief Means (and Standard Deviations) as a Function of Transportation (Combined p-values)

| Item | Combined p-value | | :--- | :--- | | Violence | .001 | | Psychiatric patient | .016 | | Just world | .006 | | Crime doesn't pay | .001 |

Table 3: Evaluation of Characters as a Function of Transportation (Combined p-values)

| Character | Combined p-value | | :--- | :--- | | Katie Mason | .001 | | Joan Mason | .001 |

Experiment 4

A primary goal of Experiment 4 was to create stronger external manipulations of

transportation to establish causality. The experimental story was changed to "Two Were Left," a fable-like story with a positive outcome. The story is about an Eskimo boy and his dog stranded on an iceberg who resist evil impulses and are rescued. The fact-fiction manipulation was strengthened by requiring participants to acknowledge their understanding of the story source before reading.

Results

- **Experimental vs. Control:** The experimental story ("Two Were Left") changed beliefs from baseline compared to control groups.
- **Instruction Effects:** As expected, the instruction set had a significant impact on reported **transportation**, with fourth-grade participants reporting less **transportation** than narrative participants.
- **Instructions on Beliefs and Evaluations:** Fourth-grade participants, in whom **transportation** was reduced, showed beliefs less consistent with the story and less liking of the characters (boy and dog).
- **Mediational Analyses:** Results indicated that instructions affected **transportation**, which in turn affected beliefs and character evaluations, supporting a causal path. *[Figure 1 shows a path diagram where the beta coefficient for the direct effect of instructions on beliefs is reduced from .16* to .12 when mediated by transportation. Similarly, the effect on boy evaluations is reduced from .17* to .11, and on dog evaluations from .24** to .16*.]*
- **Source Effects:** Again, there were no main effects of source (fact vs. fiction) on the belief index or on character evaluations.

General Discussion

The present demonstrations of an association between

transportation into a narrative world and the reporting of story-consistent beliefs contributed to redressing the emphasis on rhetoric, rather than poetics, in the scientific study of persuasion. Even when the narrative was clearly labeled as fiction, real-world beliefs were affected by magnitude of

transportation.

The development of the

Pinocchio circling technique showed that extent of **transportation** reliably distinguished between participants who circled many false notes (low-transported) versus few false notes (highly transported).

In sum,

transportation appeared to be distinct from **cognitive elaboration** and to display characteristics consistent with the conceptualization from Gerrig (1993): immersion (involving imagery, emotionality, and attentional focus) in another setting with temporary distancing from a reader's original situation.

We predict that narrative-based belief change, particularly to the extent that it instigates

transportation, would lead to stronger and more persistent beliefs than rhetoric-based change. This is based on three premises: (a) the universal human affinity for narrative, (b) the ability of narrative to marry affective and cognitive contributions, and (c) the fact that attitudes based on both affect and cognition are more persistent.