

Narrative Worlds, Real Impact: How Stories Affect Beliefs

Melanie C. Green
University of Pennsylvania

Presented at IGEL 2002, Pecs, Hungary

Correspondence may be addressed to Melanie C. Green, Department of Psychology, University of Pennsylvania, 3815 Walnut Street, Philadelphia, PA 19104, or by email at mcgreen@psych.upenn.edu.

Narrative Worlds, Real Impact: How Stories Affect Beliefs

Think about hearing a favorite story. What happens while you're listening? For a moment, you might forget about the activity going on around you, or the stresses of your day. For a moment, you may be taken away to the land of the story. Perhaps you visualize the scene, or feel sympathy or anxiety or happiness for the characters. You might even feel suspense.

This experience of being temporarily immersed in a story is what we call transportation into a narrative world. This experience, and the consequences of it, are the subject of my research program. How do the stories we tell one another affect us? How does the experience of being taken to a narrative world affect our real-world beliefs and actions?

The current research, conducted in collaboration with Timothy Brock (Ohio State University), attempted to address a series of related questions. First, are the processes which underlie narrative persuasion different from those which mediate the influence of non-narrative or nonfiction communications on beliefs? In other words, HOW do stories affect our beliefs? Second, when a narrative is explicitly labeled as fiction, under what conditions can it nonetheless change beliefs about issues entailed in the story? Does it matter whether a communication is called fiction or nonfiction? Finally, what is the scope of narrative impact? Can a narrative affect broader attitudes, ones that are only implied by the focal text?

One reason for the lack of empirical attention to narrative-based belief change may be that there has been no identification of a mechanism by which fiction-based persuasion could occur. Our research takes as a starting point the phenomenological experience of being swept away by a powerful story, entranced by it, lost in the pages of a book. We call this kind of absorption transportation into a narrative world. We believe that this experience, this journey into the world of narrative, can be the means by which stories affect our real-world knowledge structures, and thus, may be a powerful persuasive tool.

Transportation theory

I will begin by describing the theory behind the transportation concept, and then I will describe studies investigating the role of transportation in narrative-based belief change. (Additional detail about these studies is available in Green & Brock, 2000.) We define transportation as an integrative melding of attention, imagery, and feelings, focused on story events.

Being transported into a narrative world has certain consequences. Richard Gerrig (1993) highlighted these consequences through analogy to physical travel:

1. Someone ("the traveler") is transported
2. by some means of transportation
3. as a result of performing certain actions.
4. The traveler goes some distance from his or her world of origin
5. which makes some aspects of the world of origin inaccessible
6. The traveler returns to the world of origin, somewhat changed by the journey.

Like a literal traveler, the reader loses access to aspects of the world of origin. In other words, the reader may consciously or unconsciously push real world facts to the side in favor of accepting the narrative world created by the author. This loss of access may occur on a physical level—a person transported by a story may not notice others entering a room, for example. More importantly, it may occur on a psychological level, a subjective distancing from reality. 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.

This distancing may lead to another aspect of transportation—the traveler returns somewhat changed by the experience. At a minimum, these changes include a memory of the narrative world, but we believe that the effects of visiting a narrative world can be even more profound, including changes in attitudes and beliefs. Other consequences of transportation may include emotional reactions, feelings of suspense, or a desire to participate in the action of the narrative.

We conceptualize transportation as a convergent process, whereby the bulk of an individual's thoughts and attention are focused on the events in the narrative. A transported reader may lose track of time, respond emotionally to events occurring in the narrative, or form vivid mental images of settings or characters, but meanwhile, the majority of the reader's cognitive resources are absorbed by the narrative.

Transportation is proposed to be equally likely into fictional and nonfictional works. Narrative worlds are broadly defined with respect to modality; the term "reader" may be construed to include listeners, viewers, or any recipient of narrative information. Although individuals could be transported into a well-written rhetorical or non-narrative passage, transportation is more likely to be instigated by narrative works.

How does the phenomenological experience of being lost in a book translate into belief change? First, transportation may aid in suspension of disbelief and reduction of counterarguing. If individuals are putting aside real-world facts, they may not use these facts to contract implications of the narrative. There's a fairly substantial literature on mental correction, including the work of Dan Gilbert, suggesting that individuals need both motivation and ability to correct beliefs based on untrue, inaccurate, or incomplete information. The reduction of negative cognitive responding resulting from transportation could be due to ability factors—the person's mental resources are so engaged in experiencing the story that they are not able to "disbelieve" story conclusions.

Transportation's reduction of counterarguing could also be based in motivation—if people are being swept along by an exciting tale, interrupting it to counterargue story points would destroy the pleasure of the experience. Even after the narrative is completed, individuals may not be motivated to go back and evaluate the implications of the story, especially if they don't

believe the story has had any effect on them.

Another means by which transportation may affect beliefs is by making narrative events seem more like personal experience. Research has shown that direct experience with attitude objects can result in strong and enduring attitudes. If a reader feels as if she has been part of narrative events, the lessons implied by those events may seem more powerful. Work by Marcia Johnson and her colleagues on source monitoring suggests that imagined events may be misremembered as real to the extent that the memories have qualities similar to real memories—for example, concreteness and vivid detail. Narratives, particularly ones into which readers have become transported, are likely to meet those criteria.

This mechanism also underlies our prediction that labeling a narrative as fact or fiction will not change the degree of transportation experienced by a reader. The important element is whether the narrative feels real and engaging, not whether it reflects actual events.

Another effect of transportation is likely to be creating strong feelings toward characters in a narrative. Because the narrative world becomes real to a transported reader, sympathetic characters may come to seem like friends. By the same token, readers may develop a passionate hatred of story villains. This attachment to characters may play a critical role in narrative-based belief change, and thus may serve as another route by which transportation leads to belief change. If a reader likes or identifies with a particular character, statements made by the character or implications of events experienced by that character may carry special weight.

Transportation theory thus engenders a number of hypotheses. In the current studies, we focused on a subset of them. Specifically, we propose that:

1. Transported readers will show more story-consistent beliefs than non (or less) transported readers.
2. Transported readers will feel more positively toward sympathetic characters in a narrative.
3. Transported readers will show less counterarguing or negative cognitive responding when reading a narrative.
4. Situational factors can affect the extent of transportation experienced into a narrative.

Fact and Fiction

Our research has also explored the effect of labeling a narrative as factual or fictional. Does narrative impact depend on whether a narrative is described as true or not?

There are a number of reasons to believe that our reactions to narrative should depend on whether they're fictional or not, and in fact, various aspects of our culture reflect the perceived importance of this difference. Bookstores and libraries are divided into fiction and nonfiction sections. Journalists lose their jobs and professional reputations if they are caught fabricating parts of stories. It seems reasonable to think that we should learn more about the world from a newscast, which at least attempts to be an accurate reflection of real events, rather than a television drama, which may engage in untold amounts of artistic license.

So, it could be argued that the cultural default is to believe that the distinction between fact and fiction is a useful one, and that furthermore, fiction should not be relied upon as much as fact in forming real-world opinions.

On the other hand, though, some psychological evidence suggests that individuals don't always separate information into tidy categories, accepting one and rejecting the other. For example, Gilbert's work suggests that the default is for us to accept everything we hear as true, and that it takes a more effortful correction process to disbelieve information. In some of our own work (Wheeler, Green, & Brock, 1999), we found that people accepted false assertions, such as "chocolate helps you lose weight" and "mental illness is contagious" if those assertions were embedded in fictional narratives. If people either don't want to or aren't able to separate out fictional information, they may be affected by it.

An additional hypothesis that we wished to test, then, was whether individuals who read stories labeled as nonfiction would be more affected than individuals who read stories labeled as fiction, even when beliefs were not directly stated as assertions in the text.

Overview of transportation studies

This paper will describe two example studies that attempted to test the hypotheses about transportation and fiction/nonfiction labeling. The basic design of the transportation studies was as follows: participants came to the laboratory, read a narrative (which was labeled as fiction or nonfiction), rated their transportation into that narrative, and then responded to belief items

related to or implied by the narrative. These belief measures included items specific to the story, as well as more general items. In the first study, the narrative we used was called *Murder in the Mall*. It was about a little girl, Katie, who was stabbed to death in a shopping mall by an unsupervised psychiatric patient. Part of the story is told from the point of view of Joan, Katie's college-age sister. We selected this story because it was well-written and gripping, but also because it was plausibly framed as either fact or fiction.

Transportation Study 1

In our first study, 97 undergraduate participants were assigned to either the fiction or nonfiction conditions.

Fiction condition participants were informed that, "The events in *Murder at the Mall* comprise a short story, the Fiction Feature, as published in Akron Best Fiction, an Ohio Fiction magazine, in December 1993. Resemblance to real persons and places is of course coincidental."

In the non-fiction condition, participants were led to believe that the narrative was a journalistic account: "The events in *Murder at the Mall* occurred recently and were reported in the Akron Beacon Journal, an Ohio daily newspaper, in December 1993."

After being exposed to the fiction/nonfiction manipulation, participants then read *Murder in the Mall*.

On the dependent variable side, to observe whether transportation would be related to the beliefs of story recipients, we created measures of beliefs that might be affected by the story. These beliefs were logical implications of the story events. For example, a murder occurring at a shopping mall suggests that malls are not safe places; the fact that the killer was a psychiatric patient implies that such patients should not be left unsupervised; and the fact that the victim was an innocent child implies that the world is unjust. These beliefs were implied rather than stated.

To test the idea that transportation would increase liking for sympathetic characters, participants completed a series of semantic differential scales, rating the main characters—Joan and her sister Katie—on attributes such as pleasant/unpleasant and attractive/unattractive.

We also measured the extent of transportation readers felt. We developed a fifteen-item

paper and pencil scale to measure the extent of transportation into narrative worlds. Participants rate their agreement with each statement on a seven-point scale.

Example items (show slide) include “While I was reading the narrative, I could easily picture the events in it taking place”, “I was emotionally involved in the narrative” and the reverse-scored item, “I found my mind wandering while reading the narrative.” Transportation appears to have three intercorrelated components: cognitive, affective, and imagery, as illustrated by these example items.

Results

Did fiction/nonfiction labeling have any effect on felt transportation? Was it easier for individuals to become lost in a fictional world or a factual world? Results revealed that as expected, the fiction/nonfiction manipulation did not have any effect on reported transportation. Individuals were equally absorbed into stories labeled as fiction and as nonfiction.

We also looked at the effect of fiction and nonfiction on beliefs. In contrast to the cultural distinctions drawn between fact and fiction, we found that fact and fiction were equivalent in their impact. Individuals did not change their beliefs more in response to fact. Similarly, individuals did not evaluate the main characters, Katie and Joan, differently depending on story source.

Of course, the major question of interest was whether transportation affected belief change. We conducted a median split to divide participants into high and low transportation groups. See Figure 1. Higher bars indicate more story-consistent beliefs, and for this study, the results are reported as standardized scores.

There was a significant effect of transportation on the violence index, in the expected direction, with highly transported participants indicating that violence was more likely. The psychiatric patient index was also affected in the expected direction. Highly transported readers showed more story-consistent beliefs, which in this case meant a stronger belief that psychiatric patient freedoms should be restricted. Finally, highly transported participants reported just-world beliefs that were more consistent with the story than did low-transported readers, but these effects did not achieve statistical significance.

Similarly, transportation had a significant effect on the evaluations of Katie, the little girl,

with highly transported participants reporting greater positivity toward her. A similar pattern emerged for evaluations of Joan, the older sister. Again, these results were consistent with our expectations.

To summarize this first study, the data provided some initial evidence that transportation affected beliefs. Highly transported participants showed more story-consistent beliefs, as well as more positive evaluations of the story protagonists. Becoming involved in a narrative world had measurable consequences—individuals appeared to alter their real-world beliefs about social conditions, that is, the likelihood of violence occurring in the familiar venue of a shopping mall, and social groups, that is, psychiatric patients. Furthermore, individuals reacted to the people inhabiting the story-world, with more highly transported individuals showing more affinity and positivity toward characters.

Transportation Study 2: Two Were Left, Manipulated Transportation

The results presented thus far are based on measured transportation. While these results are suggestive of the idea that transportation leads to belief change, they aren't conclusive. In the next study, we wanted to manipulate transportation to more definitively establish the direction of causality.

For this experiment, we used a short story, entitled “Two Were Left”. In the tale, an Eskimo boy and his dog are stranded on an iceberg, without food or supplies. The boy, fearing starvation, makes a crude knife from a splint on his leg, and contemplates killing his dog for food. He is unable to bring himself to kill his friend, and tosses the knife away. Similarly, the dog, though hungry, does not attack the boy, and in the end, they are rescued by an airplane pilot, whose attention is attracted by the sun glinting on the knife that the boy had thrown away.

This story implies beliefs about the value of loyalty and friendship, as well as presenting a positive view of dogs. Therefore, we selected belief items relevant to these concepts. For example, the reverse-scored item “having a dog is a waste of money” was part of the dog scale, while “The hard road is usually more rewarding than the easy road” reflected the self-sacrificing values illustrated by the story.

As before, we manipulated the fact/fiction status of the story. For reasons of plausibility, we changed the fact manipulation, so that participants in the nonfiction condition were told that

they were reading about an historical event from the “Moments in History Feature.”

To manipulate transportation, participants were given instructions about how to approach the task of reading the story. These instructions were intended to alter the extent of transportation experienced. One set, which told participants to pay attention to the narrative, served as the “normal” or baseline transportation condition. The other set of instructions was intended to undermine transportation. These directions used a cover story of evaluating narratives for adult literacy programs, and asked readers to identify words that would not be understandable to a person reading at the fourth-grade level. In other words, we created a focus on the surface elements of the story. This task should not have been a distraction from the content of the narrative, yet it might plausibly reduce transportation.

We examined the effects of our manipulations on transportation. As expected, the two instruction set conditions created significantly different levels of transportation. See Figure 2. Participants instructed to focus on surface aspects of the story reported significantly less transportation into the narrative than did baseline participants. However, both groups showed high recall of facts from the story.

What about the next step in the chain? Did these two groups that differed in transportation show different beliefs? Yes, they did. Our successful manipulation of transportation was also reflected in the effect of instructions on reported beliefs and character evaluations. Participants in whom transportation had been reduced showed less story-consistent beliefs on both the attitude index and the dog index. See Figure 3. Furthermore, they reported less positivity toward the boy and toward the dog. A similar pattern emerged for the minor character of the pilot who rescued the two.

Furthermore, replicating our previous studies, there was no effect of story source (fact versus fiction) on either the beliefs or the character evaluations. Fact and fiction had equivalent persuasive impact.

This experiment demonstrated that with a moderately compelling narrative, transportation can be manipulated by external instructions. Furthermore, manipulated levels of transportation show the same effects on character evaluations and beliefs as did measured transportation in our previous experiments.

Conclusion/Discussion

In sum, these findings confirm what censors have suspected for centuries—that stories can be a powerful tool in shaping attitudes and opinions. Stories are especially influential when we become drawn into them—when our cognitive resources, our emotions, and our mental imagery faculties are engaged. The results were especially noteworthy in that the belief-change dimensions were not explicitly articulated in the story. In addition, highly transported participants routinely reported greater liking for story protagonists. Finally, even when the narrative was clearly labeled as fiction, real-world beliefs were affected by magnitude of transportation.

References

- Gerrig, R.J. (1993). *Experiencing narrative worlds*. New Haven: Yale University Press.
- Gilbert, D.T. (1991). How mental systems believe. *American Psychologist*, *46*(2), 107-199.
- Gilbert, D.T., Tafarodi, R.W., & Malone, P.S. (1993). You can't not believe everything you read. *Journal of Personality and Social Psychology*, *65*(2), 221-233.
- Green, M.C., & Brock, T.C. (2000). The role of transportation in the persuasiveness of public narratives. *Journal of Personality and Social Psychology*, *79*(5), 701-721.
- Johnson, M.K, Hastroudi, S., & Lindsay, D.S. (1993). Source monitoring. *Psychological Bulletin*, *114*(1), 3-28.
- Prentice, D.A., Gerrig, R.J, & Bailis, D.S. (1997). What readers bring to the processing of fictional texts. *Psychonomic Bulletin and Review*, *4*(3), 416-420.
- Wheeler, S.C., Green, M.C., & Brock, T.C. (1999). Fictional narratives change beliefs: Replications of Prentice, Gerrig, & Bailis (1997) with mixed corroboration. *Psychonomic Bulletin and Review*, *6*(1), 136-141.

Figure 1: Effect of Transportation on Beliefs, Study 1

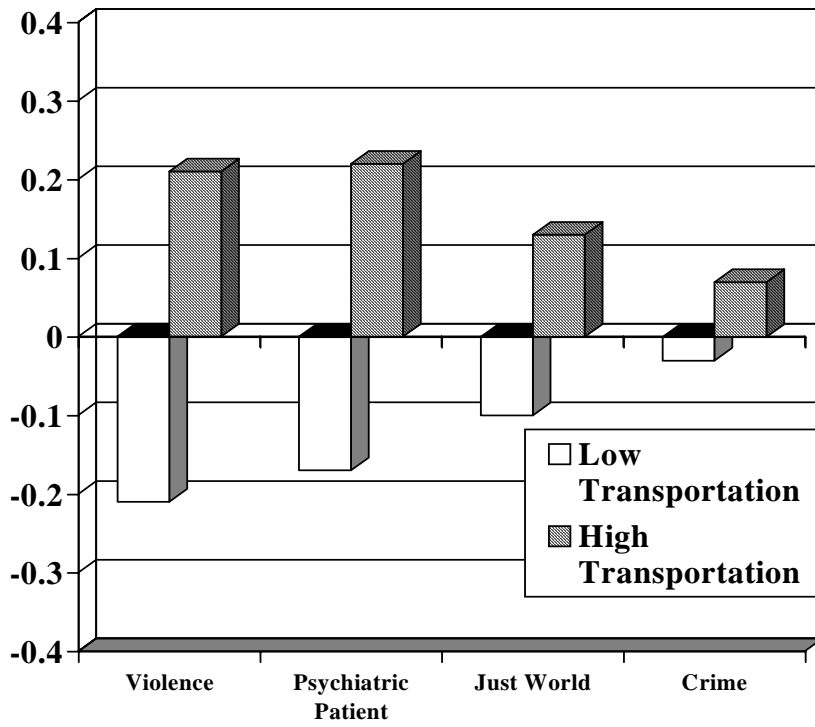


Figure 2: Effect of Transportation Manipulation on reported transportation, Study 2

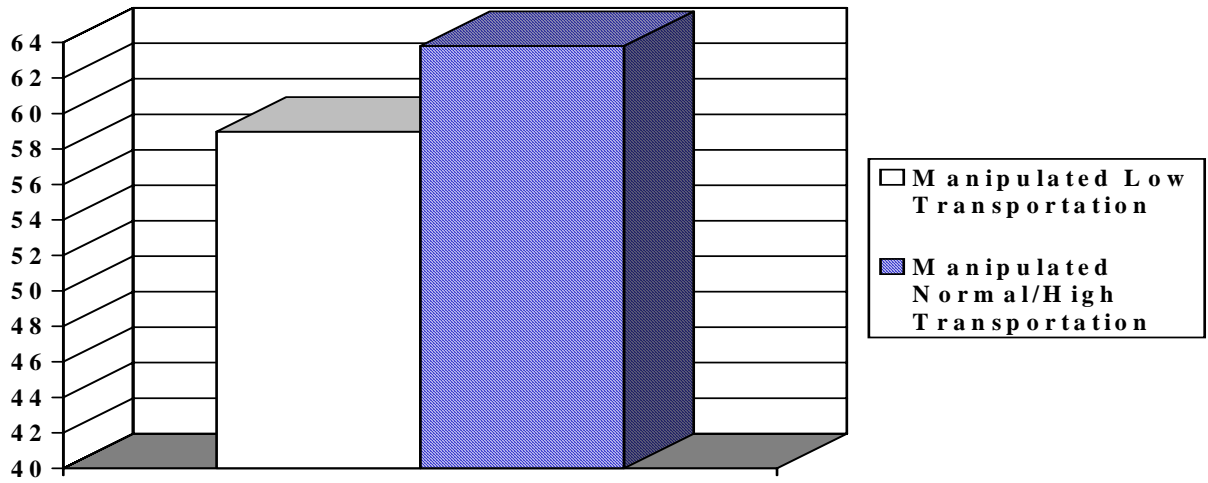


Figure 3: Effect of manipulated transportation on beliefs, Study 2

