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What readers bring to the processing of fictional texts

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Research on text processing has generally focused on the types of inferences that all readers draw in common. Our research examines aspects of processing that depend on the particular relation of the reader to the text. Students read fictional stories that contained weak and unsupported assertions and that were set either at their own school or at another school. We expected that they would be prompted to process the story information thoroughly enough to reject the assertions only if they were familiar with the story setting. Consistent with this expectation, the results showed that the away-school story, but not the home-school story, had a significant impact on students' beliefs. These results support the view that readers must actively construct disbelief when processing fictional information.

In discussions of text processing, F. C. Bartlett (1932) is most often celebrated for his demonstrations that schemas affect story recall. Famously, through a process Bartlett called "rationalisation," his English readers transformed a North American folktale called "The War of the Ghosts" so that details of the story more closely fit their own cultural norms. In his original report, however, Bartlett was equally intrigued by the individual differences that arose in reproductions of the story (p. 71):

> The fact of rationalisation was illustrated in practically every reproduction or series of reproductions, but, as would be expected, the way in which it was effected varied greatly from case to case. For the particular form adopted is due directly to the functioning of individual special interests ... or to some fact of personal experience, or to some peculiarity of individual attitude which determines the salience or potency of the details in the whole material dealt with.

The goal of our research is to demonstrate how "personal experience" and the "peculiarity of individual attitude" affect the impact texts have on readers.

Bartlett's (1932) work on schemas has given rise to a large body of research that is directed toward trying to determine what types of inferences listeners draw on a regular basis (Graesser, Singer, & Trabasso, 1994; McKoon & Ratcliff, 1992). By contrast, our own work focuses on the types of noninferential responses readers emit given a particular perspective on a text—voluntary responses that may differ from one individual to the next. We call these types of responses "participatory responses" (or p-responses for short; see Allbritton & Gerrig, 1991; Gerrig, 1993). They are one of the family of cognitive responses that persuasion researchers have shown to mediate the impact of a persuasive message on attitudes (see Petty, Ostrom, & Brock, 1981). Our current focus is on the role p-responses play in adjusting the real-world impact of information from fictional texts.

As an illustration of our research question, consider a reader who encounters the following passage from Robertson Davies's (1988) novel *The Lyre of Orpheus*, in which a character named Maria recounts a lecture she was given by another character she calls Sweetness (p. 344):

> She gave me a long, confused talk about what she called the foetal alcohol syndrome; booze in pregnancy can lead to pixie-faced, pin-headed, mentally retarded children. I knew something about that; you have to drink rather a lot to be in danger. But Sweetness is a zealot, and she's deep into the squalor of pregnancy, poor wretch ...

Either Robertson Davies has gotten his facts wrong, or he has knowingly put incorrect information into Maria's mouth. Although fetal alcohol syndrome is most often associated with heavy drinking, damage can be done to the fetus when mothers drink even small amounts of alcohol during critical periods of fetal vulnerability (see, e.g., Restak, 1988). Will this passage have an impact on readers' real-world beliefs? Will they come away thinking that women can safely drink in moderation during pregnancy?

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The form of our question presupposes that there is no automatic process whereby readers are protected from fictional information. We reject the notion, in Samuel Taylor Coleridge's phrase, that readers undertake a "willing suspension of disbelief." This rejection is firmly anchored in current models of the human belief system. For example, Gilbert (1991) proposed that people involuntarily believe anything they comprehend, and reject information as false only if they are motivated and able to process it carefully. In support of this claim, he reviewed a diverse collection of findings that point to people's inherent credulity (Gilbert, 1991). In addition, Gilbert, Krull, and Malone (1990) reported three experiments that demonstrated both the primacy of belief over disbelief and the effort required to reject information as false. These and many other findings support the notion that people's belief systems operate in such a way that acceptance of information is the default.

In light of this evidence, we propose that fiction, like fact, necessitates a *willing construction* of disbelief: Readers will initially accept the assertions in a fictional work as true and will subsequently reject those assertions only if they are motivated and able to evaluate their veracity. Whether readers possess the necessary motivation and ability will depend both on what is being asserted (Gerrig & Prentice, 1991) and on the narrative context of the assertion. In the present experiments, we take our cue from Bartlett's nod to "personal experience" and the "peculiarity of individual attitude." We predict that a reader's motivation and ability to evaluate the information in a work of fiction will depend on its distance from that reader's real-world experience.

Suppose, for example, a fictional story includes the claim that most forms of mental illness are contagious. Readers know that mental illness is not contagious in their experience and can reject the assertion out of hand if it is applied to their real world. But how are they to evaluate the contagiousness of mental illness in a fictional world? And why, for that matter, should they undertake such an evaluation? We predict that readers will be unlikely to evaluate, and therefore will be likely to accept, a story's assertions to the extent that the fictional world of the story is removed from their own. Substantial overlap between the fictional world and the real world, on the other hand, should promote critical scrutiny and thus eliminate the influence of unsupported fictional claims. This prediction has considerable precedent in the persuasion literature: Numerous studies have shown that both prior knowledge (Wood, 1982) and personal relevance (Petty & Cacioppo, 1984) enhance people's motivation and ability to process what they believe to be factual information (see Eagly & Chaiken, 1993; Petty & Cacioppo, 1986, for reviews). We expect these variables to operate similarly in a fictional context. Specifically, when readers encounter a claim about a world with which they are familiar in a work of fiction, they will evaluate the informaton given what they know to be true. They will perform no such evaluation of claims about unfamiliar fictional worlds.

This article reports two experiments that were designed to test this hypothesis. We wrote two versions of a short story that contained mild unsupported assertions concerning well-known facts about the real world. None of the assertions included enough supporting information to withstand critical scrutiny. One version of the story was set at Yale University, and the other version was set at Princeton University. In Experiment 1, we asked Yale students to rate their agreement with statements about the real world after reading one of the two stories. In Experiment 2, we conducted the same experiment using Princeton students. Thus, we manipulated the distance of the fictional world from the real world by having one story set at the home school of our readers and one story set at another school. We expected that readers would be persuaded more by the assertions presented in the story set at an "away" school (i.e., Princeton for Yale participants and Yale for Princeton participants), than by the assertions presented in a story set at the "home" school.

EXPERIMENT 1

Method

Participants. Twenty-nine Yale undergraduates participated in the experiment to fulfill a course requirement. Ten participants read each of the experimental stories, and 9 participants read the control story.

Design. We wrote two versions of a short story that contained both true and false assertions about the real world. (The stories were adapted directly from stories we had used in previous research; see Gerrig & Prentice, 1991.) One version of the story was set at Yale University, and the other was set at Princeton University. The plot (which was identical in both versions) involved the kidnapping of a professor and several students. Along the way, the characters discussed 16 topics that provided assertions about the world (see Table 1 for an example). Eight of the assertions in each story were true in the real world, and eight were false in the real world. Topics discussed with true assertions in one story were discussed with false assertions in the other, and vice versa. Aside from the eight false assertions in each story, all other information was true. Each story version was about 20 single-spaced pages long and took about 20–25 min to read.

The data of interest were collected on a seven-page questionnaire (with pages reordered for each participant). The questionnaire contained 32 statements, each with an appropriately labeled rating scale. Sixteen of the statements were relevant to the assertions presented in the story. Half of these statements were consistent with the story assertion, and half were inconsistent. For example, if participants had read in the fictional story, "Aerobic exercise weakens your heart and lungs" (false in the real world), half of the time they would be asked to assess their agreement with that statement and half of the time with the real-world assertion, "Aerobic exercise strengthens your heart and lungs." Similarly, half of the statements were true in the real world and half were false. Thus, the statements were equally distributed among the four cells of a 2 × 2 design that consisted of crossing the status of the story assertions (true or false) and the status of the test statement (true or false). There were two versions of the questionnaire, which differed only in the presentation of the 16 target statements: Statements that were true in one version of the questionnaire were false in the other, and vice versa. Sample target and filler statements are given in Table 2.

As a control, we used a story of approximately equal length obtained from *Ellery Queen's Mystery Magazine*, written by Robert Twohy, entitled "The Raven." Because the story contained no information relevant to the assertions made in the experimental stories, we could use control participants' responses as baseline ratings.

Procedure. Participants began the experimental session by reading one of the three stories. After finishing the story, they completed a cover task that required them to give ratings of the interestingness of the story,

the quality of the prose, and their perceptions of the characters. Participants then spent roughly 5–10 min completing an irrelevant filler task. Finally, they completed a questionnaire in which they rated their agreement with 32 statements, 16 of which were relevant to the assertions they had read in the stories. Participants indicated their agreement with each of the statements on a 9-point scale (1 = *strongly disagree*; 9 = *strongly agree*).

Results and Discussion

We expected that participants who read the story set at Princeton (the away-school story) would yield to its assertions, whereas participants who read the story set at Yale (the home-school story) would show no such influence. For each of the critical test items, we subtracted the mean agreement rating given by participants who read the control story from the agreement rating of each of the experimental participants (thus eliminating the difference between true and false target statements). We then averaged the differences for the four items of each type for each participant. Analyses were carried out on these average difference scores. Means are presented in the top half of Table 3. (Positive numbers mean that the experimental participants gave higher agreement ratings to the statements than did the control participants.)

If participants were persuaded by the arguments presented in our stories, we should find an interaction between the status of the information that participants read (true or false in the real world) and the status of the information in the test statements (true or false in the real world): Reading a true assertion should lead to greater agreement with a true test statement and less agreement with a false test statement, relative to reading a false assertion. As the means indicate, this pattern describes very well the data from participants who read the Princeton story, but much less well the data from participants who read the Yale story.

Inferential statistics supported these observations. An analysis of variance (ANOVA) revealed a marginally significant three-way interaction [$F(1,16) = 3.90$, $p < .07$]: The pattern of interaction between the truth of the story assertion and the truth of the test statement varied as a function of story. The two-way interaction for the Princeton story was reliable [$F(1,16) = 10.14$, $p < .01$]. Participants agreed more with true statements when the story assertion was true than when it was false [$MS = 0.69$ and -0.56, respectively; $F(1,16) = 6.57$, $p < .05$] and agreed more with false statements when the story assertion was false than when it was true [$MS = 0.10$ and -1.04, respectively; $F(1,16) = 3.77$, $p < .10$]. The two-way interaction for the Yale story was negligible ($F < 1$).

Thus, only the Princeton story influenced the beliefs of our Yale readers. This result is consistent with our claim that students did not closely evaluate the assertions in the away-school story and thus uncritically accepted them as true. However, other differences between the stories could have produced the present results. If our account is correct, we should obtain exactly the opposite pattern of results using Princeton students as participants. That is, whereas Yale students were more persuaded by the Princeton story, Princeton students should be more persuaded by the Yale story. Experiment 2 tested this prediction.

Table 1
Sample Story Excerpts

Topic: The Effects of Sunlight on Skin

True in the real world

"Did you ever get that term paper back from last semester?" Brad asked.

Dane thought for a moment and then asked, "You mean the one on sunshine?" Brad nodded. "I thought I told you. The professor actually asked me if he could xerox a copy and keep it for himself. I was really proud of it since I thought I did a good job of outlining the effects of sunlight on skin."

"You should let me read it. I should probably know more about the different sorts of cancer and stuff."

"Well, I'll pull it out for you later," Dane said. "It was really just a more scientific version of the findings that have been reported in the paper: Skin cancer is on the rise because people are spending too much time in the sun without protection. It's sort of depressing, but sunlight is just not good for your skin."

False in the real world

"Did you ever get that term paper back from last semester?" Brad asked.

"You mean the one on sunshine?" Brad nodded. "I thought I told you. The professor actually asked me if he could xerox a copy and keep it for himself. I was really pretty proud of it. I thought I did a good job of debunking the myths about the ill effects of sunlight."

"You should let me read it. I would like to see how you made your case. I thought people were pretty sure that lots of sunshine was bad for your skin."

"Well, they were for a while," Dane said, "but science marches on, and there have been some new findings. It's the sort of thing where it's the lesser of evils. Sure, if you stay out of the sun you'll decrease your chance of getting skin cancer, but, on the other hand, it makes it much more likely that you'll get a bunch of other things. It turns out that getting lots of direct sun on your skin keeps the body's immune system working efficiently, and that wards off all kinds of other skin diseases. So, really, large amounts of sunlight are good for your skin."

Table 2
Sample Target and Filler Statements

Experimental Items
Aerobic exercise strengthens your heart and lungs.
Aerobic exercise weakens your heart and lungs.
Sunlight is bad for your skin.
Sunlight is good for your skin.
Children of alumni have an easier time getting into a college.
Children of alumni have a harder time getting into a college.
Most forms of mental illness are not contagious.
Most forms of mental illness are contagious.
Filler Statements
Standing near a microwave oven can lead to radiation poisoning.
Astrology allows us to predict the future.
People who talk about committing suicide won't actually do it.
Eating carrots will improve your eyesight.

EXPERIMENT 2

Method

Participants. Thirty Princeton undergraduates participated in this experiment for pay. Ten participants read each of the experimental and control stories.

Design and Procedure. The materials and procedure of the experiment were identical to those of Experiment 1.

Results and Discussion

We expected Princeton students to yield to fictional assertions if those assertions appeared in a story set at

Yale but not if they appeared in a story set at Princeton. Again, for each of the critical items, we subtracted the mean agreement rating of control participants from the agreement rating of each experimental participant and then averaged the difference scores for the four items of each type. Means are presented in the bottom half of Table 3.

Again, we found a significant three-way interaction: As in Experiment 1, the pattern of interaction between the truth of the story assertion and the truth of the test statement varied as a function of story [$F(1,16) = 33.60$, $p < .001$]. But, in contrast to Experiment 1, it was participants who read the Yale story who were influenced by the fictional arguments. The two-way interaction for the Yale story was reliable [$F(1,16) = 23.59$, $p < .005$]. Participants agreed more with true statements when the story assertion was true than when it was false [$MS = 0.63$ and -1.03, respectively; $F(1,16) = 20.06$, $p < .05$] and agreed more with false statements when the story assertion was false than when it was true [$MS = 0.13$ and -0.17, respectively; $F(1,16) = 5.65$, $p < .05$]. The two-way interaction for the Princeton story was also reliable [$F(1,16) = 10.82$, $p < .01$]. Here, however, the interaction did not reflect yielding to the story assertions, but rather resisting them. Participants agreed less with true statements when the story assertion was true than when it was false [$MS = -1.31$ and -0.09, respectively; $F(1,16) = 21.30$, $p < .005$]. There was no effect of story assertion on agreement with false statements ($F < 1$).

To test the overarching hypothesis of Experiments 1 and 2 that persuasion would vary as a function of the relation between the participant population and the story setting, we combined the data from the two experiments and analyzed them as a single data set. An ANOVA revealed the predicted four-way interaction [$F(1,32) = 20.45$, $p < .0001$]. Students at both schools were more influenced by the assertions embedded in the away-school story than by those embedded in the home-school story. This effect is presented more simply in Figure 1, which plots average persuasion in the direction of the story assertions for Yale and Princeton participants reading Yale and Princeton stories. From this figure, it is clear that the away-school story had a greater impact on real-world beliefs than did the home-school story.

Table 3
Agreement Ratings for Target Statements Relative to the Control

Test Statement	Asserted in the Story: True	Asserted in the Story: False
Experiment 1 (Yale Participants)		
Yale story		
True	−0.16	−0.26
False	−0.35	−0.18
Princeton story		
True	0.69	−0.56
False	−1.04	−0.10
Experiment 2 (Princeton Participants)		
Yale story		
True	0.63	−1.03
False	−0.17	0.13
Princeton story		
True	−1.31	−0.09
False	0.28	0.27

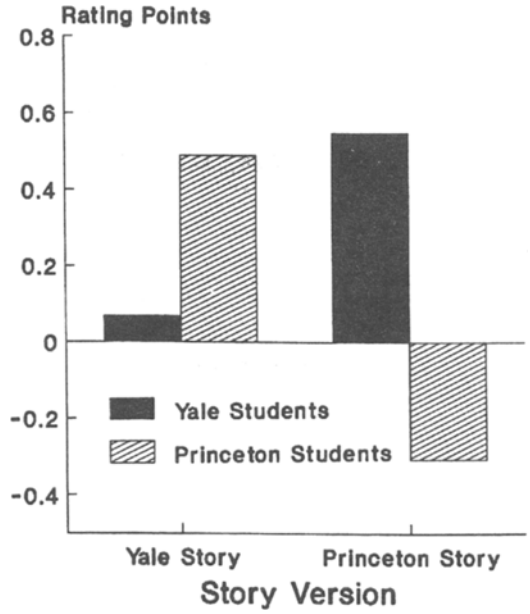

Figure 1. Average persuasion in the direction of the story by participant population and story setting.

GENERAL DISCUSSION

In these experiments, we have shown that the impact of a fictional story on real-world beliefs depends critically on the relation of the reader to the text. When readers were unfamiliar with the setting of a fictional story, they were vulnerable to its assertions: They became less certain of real-world truths regarding the health benefits of aerobic exercise and their safety from mental illness. When they were familiar with the story setting, they showed no such vulnerability. The perspective they brought to the text—their peculiarity of attitude, in Bartlett's (1932) term—had a significant influence on the way they processed it.

Our account for these results focuses on the mediating role of participatory responses. Students who read a story set at their own school were prompted to evaluate the story assertions in light of their own real-world experience. When they encountered an assertion that obviously violated what they knew to be true of the world, they p-responded, "That's not true!" Students who read a story set at another school were much less likely to generate such p-responses. Their uncritical stance left them vulnerable to belief by default (Gilbert, 1991). This account is consistent with a large body of research demonstrating the importance of cognitive responses in mediating persuasion effects. Our goal in future experiments will be to obtain direct evidence for the type of mediation—the *content* of the p-responses—that we have proposed here.

The results of the present experiments have clear implications for models of fictional text processing. In line with a growing body of research, they suggest that it is not disbelief that must be suspended when one reads fiction; rather, it is belief that must be overcome when one evaluates fact. Thus, models of fictional text processing need not posit special mental operations, like the willing suspension of disbelief, that are invoked specifically to deal with fiction. Instead, they need to specify how fiction's aesthetic and rhetorical qualities affect ordinary text processing.

REFERENCES

ALLBRITTON, D. W., & GERRIG, R. J. (1991). Participatory responses in prose understanding. *Journal of Memory & Language*, **30**, 603-626.

BARTLETT, F. C. (1932). *Remembering: A study in experimental and social psychology*. Cambridge: Cambridge University Press.

DAVIES, R. (1988). *The lyre of Orpheus*. New York: Penguin.

EAGLY, A. H., & CHAIKEN, S. (1993). *The psychology of attitudes*. Orlando, FL: Harcourt Brace Jovanovich.

GERRIG, R. J. (1993). *Experiencing narrative worlds: On the psychological activities of reading*. New Haven, CT: Yale University Press.

GERRIG, R. J., & PRENTICE, D. A. (1991). The representation of fictional information. *Psychological Science*, **2**, 336-340.

GILBERT, D. T. (1991). How mental systems believe. *American Psychologist*, **46**, 107-119.

GILBERT, D. T., KRULL, D. S., & MALONE, P. S. (1990). Unbelieving the unbelievable: Some problems in the rejection of false information. *Journal of Personality & Social Psychology*, **59**, 601-613.

GRAESSER, A., SINGER, M., & TRABASSO, T. (1994). Constructing inferences during narrative text comprehension. *Psychological Review*, **101**, 371-395.

MCKOON, G., & RATCLIFF, R. (1992). Inference during reading. *Psychological Review*, **99**, 440-466.

PETTY, R. E., & CACIOPPO, J. T. (1984). The effects of involvement on responses to argument quantity and quality: Central and peripheral routes to persuasion. *Journal of Personality & Social Psychology*, **46**, 69-81.

PETTY, R. E., & CACIOPPO, J. T. (1986). The elaboration likelihood model of persuasion. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 19, pp. 123-205). San Diego: Academic Press.

PETTY, R. E., OSTROM, T. M., & BROCK, T. C. (EDS.) (1981). *Cognitive responses in persuasion*. Hillsdale, NJ: Erlbaum.

RESTAK, R. M. (1988). *The mind*. New York: Bantam.

WOOD, W. (1982). Retrieval of attitude-relevant information from memory: Effects on susceptibility to persuasion and on intrinsic motivation. *Journal of Personality & Social Psychology*, **42**, 798-810.

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