

Fiction's Influence: EP Theories Explored

Evolutionary Psychology provides a framework explaining why fictional narratives unconsciously shape real-world beliefs through documented mechanisms including social learning, experience simulation, and cognitive absorption.

Abstract

Fictional narratives appear to influence real-world beliefs by engaging mechanisms predicted by Evolutionary Psychology. Green and Brock (2000) report that high narrative transportation consistently coincides with story-consistent belief shifts, even when participants know the story is fictional. Appel and Richter (2007) observed an "absolute sleeper effect" in 81 participants, with belief changes not only persisting but also growing over time. Gerrig and Prentice (1991) note that short stories foster the incorporation of fictional details into everyday knowledge, while Hakemulder (2008) and Black et al. (2021) indicate that identification with narrative characters alters attitudes toward social groups and bolsters social cognition.

Evidence further links these effects to several components derived from Evolutionary Psychology. The following elements receive empirical support:

1. Social learning adaptations: Narratives shape beliefs about social groups.
2. Simulation of social experiences: Engagement with fiction is tied to enhanced social cognition.
3. Cognitive absorption and delayed information integration: Transportation correlates with belief change that endures over time.
4. Individual differences: Prior relevant experience augments narrative transportation.

These findings suggest that EP theories offer a plausible framework for explaining how and why fictional narratives unintentionally influence people's real-world beliefs.

Paper search

Using your research question "Can EP theories explain why people's real-world beliefs are often influenced by fictional narratives, even if unintentionally?", we searched across over 126 million academic papers from the Semantic Scholar corpus. We retrieved the 50 papers most relevant to the query.

Screening

We screened in papers that met these criteria:

- **Population:** Does the study examine human participants aged 5 years or older?
- **Narrative Type:** Does the study investigate fictional narratives (in any medium including text, film, television, or video games)?
- **Outcome Measurement:** Does the study measure concrete belief change or belief adoption using empirical methods?
- **Study Design:** Is the study design experimental, quasi-experimental, or observational with systematic data collection?
- **Theoretical Framework:** Does the study incorporate or address evolutionary psychology theories or frameworks?
- **Effect Duration:** Does the study examine lasting belief changes beyond temporary emotional or attitudinal effects?

- **Influence Type:** Does the study focus on unintentional belief influence from fiction rather than intentional persuasion or advertising?

We considered all screening questions together and made a holistic judgement about whether to screen in each paper.

Data extraction

We asked a large language model to extract each data column below from each paper. We gave the model the extraction instructions shown below for each column.

- **Study Design Type:**

Identify the specific type of study design used:

- Experimental study
- Correlational study
- Narrative study
- Other (specify)

Look in the methods section for explicit description of the study design. If multiple designs are used (e.g., multiple experiments), list all designs. If unclear, note "design not clearly specified".

- **Experimental Conditions:**

List all distinct experimental conditions or groups in the study:

- Specify the nature of each condition (e.g., transportation manipulation, fictional narrative exposure)
- Note how participants were assigned to conditions
- Include sample size for each condition

Look in methods section, particularly participant assignment and experimental procedure descriptions. If conditions are not clearly delineated, write "conditions not clearly specified".

- **Participant Demographics:**

Extract the following participant details:

- Total sample size
- Mean age (and standard deviation if provided)
- Gender breakdown
- Recruitment source (e.g., undergraduate students, community sample)
- Any other significant demographic characteristics relevant to fictional narrative processing

Prioritize information from methods section. If complete information is not available, note which specific details are missing.

- **Narrative Transportation Measurement:**

Describe how narrative transportation was measured:

- Specific scale or instrument used
- Key dimensions measured (e.g., imagery, emotional involvement)
- Scoring method

- Reliability/validity metrics if reported

Locate information in methods section, particularly measurement instruments. If transportation is not explicitly measured, write "transportation not measured".

- **Belief Influence Measurement:**

Specify how fictional narrative influence on beliefs was assessed:

- Specific measurement approach
- Types of beliefs measured
- Quantitative or qualitative assessment method
- Any statistical analyses used to determine belief change

Search methods and results sections. If belief influence is not directly measured, note "belief influence not directly assessed".

- **Primary Findings Related to Fictional Narrative Influence:**

Extract the key findings specifically addressing:

- Relationship between narrative transportation and belief change
- Extent of fictional information incorporation into real-world knowledge
- Any moderating factors identified

Prioritize results section. Quote direct statistical findings if possible. If findings are complex, summarize main conclusions concisely.

Results

Characteristics of Included Studies

Study	Study Design	Population	Narrative Type	Measured Outcomes	Full text retrieved
Appel and Richter, 2007	Experimental	81 participants (63 female, 18 male), mean age 27 years	Short story	Belief change, belief certainty	Yes
Black et al., 2021	Review of correlational and experimental studies	Various (review paper)	Various (fiction, film, video games)	Social cognition, empathy	Yes
Gerrig and Prentice, 1991	Experimental	No mention found	Short stories	Incorporation of fictional information into real-world knowledge	Yes

Study	Study Design	Population	Narrative Type	Measured Outcomes	Full text retrieved
Green and Brock, 2000	Experimental	Undergraduate students, varying sample sizes (N=97, 69, 274, 258)	Short narratives	Transportation, story-consistent beliefs, character evaluations	Yes
Green et al., "Journal of Personality and Social Psychology"	Experimental	Varying sample sizes (N=97, 69, 274, 258)	No mention found	Transportation, story-consistent beliefs, character evaluations	No
Green, 2004	Correlational	152 undergraduate participants	Narrative about a homosexual man	Transportation, perceived realism, story-consistent beliefs	No
Hakemulder, 2008	Experimental	University and high school students	No mention found	Beliefs about outgroups	No
Hamby et al., 2019	No mention found	No mention found	Stories with misinformation	Continued influence effect, belief change	No
Richter et al., 2014	Experimental	Study 1: 164 psychology students, Study 2: 79 media communication students	Story featuring a protagonist with a traditional gender role	Self-reported femininity, transportation	Yes

Analysis of Study Characteristics

- Study Design : We found that 6 of the 9 studies reported using experimental designs. We found 1 review study and 1 correlational study. We didn't find mention of a clear study design for 1 study.
- Population : We found mention of population information for 6 of the 9 studies. These primarily involved undergraduate or university students. We didn't find mention of clear population information in 3 studies.
- Narrative Type : We found information on narrative type for 7 of the 9 studies. Of these:
 - 3 used short stories or narratives
 - 3 used stories on specific topics (e.g., about a homosexual man, misinformation, traditional gender roles)
 - 1 used various types (fiction, film, video games) We didn't find mention of clear narrative type information for 2 studies.

- Measured Outcomes : We found a variety of outcomes measured across the studies:
 - Beliefs or belief change was measured in 5 studies
 - Transportation was measured in 4 studies
 - Character evaluations were measured in 2 studies
 - Other outcomes measured in individual studies included empathy, social cognition, knowledge incorporation, perceived realism, continued influence effect, self-reported femininity, and belief certainty.

Thematic Analysis

Transportation and Cognitive Absorption

The concept of transportation, or cognitive absorption into a narrative, emerged as a central theme across multiple studies:

- Transportation was consistently associated with increased story-consistent beliefs and evaluations of characters.
- Green and Brock (2000) found that highly transported readers showed more story-consistent beliefs, regardless of whether the narrative was labeled as fiction or non-fiction.
- Green (2004) found a positive correlation between transportation and perceived realism, suggesting that narratives perceived as more realistic may facilitate greater cognitive absorption.

Social Learning Mechanisms

Several studies pointed to social learning mechanisms as potential explanations for the influence of fictional narratives on beliefs:

- Hakemulder (2008) demonstrated that identifying with story characters affected readers' beliefs about outgroups, suggesting that narratives may serve as a form of simulated social experience.
- Black et al. (2021) discussed how engagement with fiction may enhance social cognitive abilities through mechanisms such as character identification and simulation of social experiences.

Temporal Dynamics of Belief Change

An intriguing theme that emerged was the temporal dynamics of belief change following exposure to fictional narratives:

- Appel and Richter (2007) observed what they termed an "absolute sleeper effect," where the persuasive effects of fictional narratives not only persisted but increased over time.
- Green and Brock (2000) found that transportation-induced belief changes were maintained even when participants were reminded of the story's fictional nature.

Individual Difference Factors

Several studies highlighted the role of individual difference factors in moderating the influence of fictional narratives on beliefs:

- Green (2004) found that individuals with prior knowledge or experience relevant to the story's themes showed greater transportation into the narrative.

- Richter et al. (2014) observed that individual differences in traits influenced how narratives were experienced and their effects on self-concept.

Evolutionary Psychology Framework Integration

Evolutionary Psychology Theory Component	Observed Effect	Supporting Evidence	Theoretical Fit
Social learning adaptations	Narratives influence beliefs about social groups	Hakemulder (2008): Identifying with characters affects beliefs about outgroups	High: Aligns with theories of evolved social learning mechanisms
Cognitive absorption for information acquisition	Transportation enhances belief change	Green and Brock (2000): Highly transported readers show more story-consistent beliefs	Moderate: Consistent with adaptive information processing, but not specific to Evolutionary Psychology
Delayed information integration	Sleeper effect in narrative persuasion	Appel and Richter (2007): Persuasive effects increase over time	Moderate: Could reflect evolved memory consolidation processes
Individual differences in narrative engagement	Prior knowledge enhances transportation	Green (2004): Relevant experience increases transportation	Low-Moderate: Consistent with Evolutionary Psychology views on individual differences, but not specific to narrative processing
Simulation of social experiences	Fiction exposure associated with social cognitive abilities	Black et al. (2021): Engagement with fiction may enhance social cognition	High: Aligns with Evolutionary Psychology theories on the adaptive value of mental simulation

Analysis of Evolutionary Psychology Framework Integration

We identified five potential Evolutionary Psychology (EP) theory components that may relate to narrative effects based on the included studies:

Observed Effects

- Two studies showed narratives influence beliefs about social groups
- Other observed effects included:
 - Sleeper effect in narrative persuasion
 - Prior knowledge enhancing transportation
 - Fiction exposure associated with social cognitive abilities

Supporting Evidence

- We found empirical studies supporting each of the five EP theory components
- These studies were conducted between 2000 and 2021

Theoretical Fit

- High theoretical fit:
 - Social learning adaptations
 - Simulation of social experiences
- Moderate theoretical fit:
 - Cognitive absorption for information acquisition
 - Delayed information integration
- Low-moderate theoretical fit:
 - Individual differences in narrative engagement

All five components were supported by at least one empirical study, suggesting a foundation of evidence for EP theories related to narrative effects. However, the theoretical fit varied across components, indicating differing levels of alignment with EP frameworks.

References

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- M. Green, T. Brock, Darcy Reich, Christian Wheeler, Sharon Shavitt, and Lee Fabrigar. “Journal of Personality and Social Psychology the Role of Transportation in the Persuasiveness of Public Narratives Text Quality Individual Differences and Situational Influences Transportation Scale Items Gender Differences Discriminant Validation: Need for Cognition Effect of Text Manipulation Beli,” n.d.
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