

GENRE EFFECTS ON THE
GENERALIZATION INFERENCE
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ABSTRACT**THESIS:** Genre Effects on the Generalization Inference**STUDENT:** Wesley A. Stoller**DEGREE:** Master of Cognitive and Social Processes**COLLEGE:** Science and Humanities**DATE:** July, 2010**PAGES:** 50

The constructionist theory has emerged as a leading perspective in the field of reading inferences and makes the assumption that readers cannot generate inferences when text is inconsiderate or lacking coherence. The generalization inference has been documented as allowing the reader to condense multiple, consecutive propositions into a singular macroproposition. Research has shown that the genre of a text can affect the perception and the set of processes used by the reader to comprehend text. In the present study, participants read ten short narratives, eight of which contained generalization inference lexical decision tasks with genre and coherence of text manipulated. Participants were shown to be no more likely to draw the generalization inference from incoherent text when primed by genre, but were shown to be capable of drawing the generalization inference from incoherent text. These results do not support the constructionist hypothesis and suggest that further research is needed.

Genre Effects on the Generalization Inference

In our modern society, the ability to read is an early benchmark of progress, and is often a requirement for not only academic (Nippold & Sun, 2008; Rytönen, Aunola, & Nurmi, 2005) but social success (Tournaki, 2003). The underlying psychological mechanisms that allow the reader to integrate and comprehend text has been studied for many years (e.g., Kintsch & van Dijk, 1978; Mandler, 1980; Mani & Johnson-Laird, 1982; van den Broek, 1990). Of particular interest has been inference generation both during (Graesser, Singer, & Trabasso, 1994) and after reading (McKoon & Ratcliff, 1992). An inference occurs when the reader bridges the gap between the explicitly stated text and the underlying meaning or message of the text. Inferences have been studied as a major component of reading because often word meanings are ambiguous and sentence relationships are arbitrary without context. Despite these challenges successful readers quickly extrapolate the author's intended meanings through the use of inferences, often with little cognitive effort required (McKoon & Ratcliff, 1992).

Inferences in Text Comprehension

The context of the text can be viewed as a contributing factor to the processing of textual information. Comprehension of text has been shown to improve drastically when the reader is primed with a title that evokes relevant world knowledge (Bransford & Johnson, 1973 as referenced by Long, Oppy, & Seely, 1994). Past research has assumed that inference generation is highly contingent upon the coherence of the text (Graesser, et al., 1994). However, because readers' ability to integrate text is influenced by the context (Einstein, McDaniel, Owen, & Cote, 1990), inference generation may also be enhanced or diminished by contextual primes. If context can influence the processing of textual

information, then it may be possible for inference generation to occur despite textual incoherence. This study investigated the effect of context, established through text genre, on readers' inference generation.

Coherence is an important element in reading comprehension and inference generation. Coherence has been considered the foundation of the text that allows the reader to make inferences (Graesser, McNamara, & Louwerse, 2003). The definition of coherence varies drastically from study to study. One common theme within most definitions of coherences is that coherent text is ordered in a way in which ideas flow fluidly between one another. Past research has shown that coherence is actively maintained through integrating information from: the current text, information earlier in the text, and background knowledge of the reader (van den Broek, Ridsen, Fletcher, Thurlow, 1996). Kintsch and van Dijk (1978) offered a definition of coherence for text comprehension and discourse that requires sentences and propositions to be connected at a local level (i.e. readers can identify the connections between consecutive ideas) and propositions organized at a macrostructure level, or global level, where readers identify the connections between non-consecutive ideas. Kintsch and van Dijk argued that many inferences may be required by the reader in their effort to establish and maintain local and global coherence.

Before inferences can properly be examined they must first be defined. The term inference is used in at least three different contexts: cognitive science, logic, and everyday speech (Kintsch, 1993); which makes establishing an agreed upon definition a difficult task. One definition commonly used in the cognitive sciences is that inferences should be considered reading tools (i.e., cognitive processes) that are conscious and

controlled or automatic and uncontrolled (Kintsch, 1993). More specifically, some inferences are done within the awareness of the reader and can be modified to fit their motivation, and some are outside of the awareness of the reader. Depending upon the nature of the text and the motivation of the reader, inferences are either information generative or integrative. Generative inferences are those that produce new information for the reader. For example, a causal-antecedent inference enables the reader to better understand the text by generating new information regarding how something happened given past information (e.g. After reading, “The vase hit the wall. It cost a lot to replace,” a reader would generate the inference “broke,” which had not been explicitly stated). Integrative inferences do not generate new information; rather, they allow the reader to incorporate information provided by the author. For example, referential inferences are integrative because they allow the reader to understand which character the author is referring to by the given pronoun, but do not require the reader to infer any words that had not been previously stated (e.g. After reading, “Philip was a good looking and intelligent young man. Although he was quite shy he never had trouble making friends,” a reader would generate the inference that the pronoun “he” was in reference to “Philip”).

The leading perspective on how readers generate inferences is the constructionist theory (Graesser, et al., 1994; Singer, Graesser, & Trabasso, 1994). The constructionist theory makes two defining assumptions. The first assumption is that the reader's representation of text embodies the goals of the reader. The first assumption presupposes that the motivation of the reader is an important underlying mechanism for the generation of inferences. The second assumption is that both local and global coherence are necessary for comprehension (Graesser, et al., 1994). Similarly to Kintsch and van Dijk

(1978), the constructionists say that local coherence occurs when causal-antecedent relationships are present within the chronology of the text. When the reader is able to integrate all of the sequential prepositions within their' short-term memory, the text is considered locally coherent. Global coherence, as described by Graesser, et al. (1994), is the organization of local bits of information into higher-order ideas. A globally coherent narrative would be one that allows the reader to condense multiple ideas into a conceptually broader one that expresses the underlying message behind each smaller idea. By organizing multiple ideas into a more general one, readers are making a specific type of global inference called a generalization inference (van Dijk, 1980). Generalization inferences allow readers to integrate knowledge into easier to remember chunks of information that can be better accessed at a later time. Because of the important role generalization inferences have in the global comprehension of text, they were the focus of the current study.

Generalization inferences are made when multiple similar ideas are summed up with one idea that reflects every aspect of those original ideas (van Dijk, 1980). Generalization inferences have been studied as a crucial element of constructing a macrostructure of the text during reading comprehension (Kintsch & van Dijk, 1978). The macrostructure of a text is created in order to condense and organize the many individual detailed propositions of the text, but maintains both the truth and meaning of the text (Kintsch & van Dijk, 1978). Under the constructionist theory, generalization inferences are constructed online under most processing conditions (Graesser, et al., 1994). Unlike other global inferences, generalization inferences do not convey an underlying moral or theme of a narrative; rather they are the combination of multiple

concepts into one encompassing idea. More specifically, generalization inferences are rules for developing macropropositions that through abstraction allow the reader to utilize all propositions of the text while requiring less information. Generalization inferences can thus be seen as an important early step towards the development of a macrostructure of the text.

The constructionist theory adopts the perspective that readers are subject to the 'search after meaning' (SAM) principle. The SAM principle causes the reader to make commitments as to the meanings of each concept while it is read, unless the reader is unwilling (e.g., their reading goal is inconsistent with finding meaning), incapable (e.g., lacks necessary background knowledge), or unable (e.g., the text is inconsiderate; the text lacks global coherence and a coherent message; Graesser et al., 1994). The constructionist theory presupposes that referential and causal antecedent inferences are generated to maintain local coherence. Similarly, thematic inferences, a type of global inference related to the generalization inference, are generated to achieve global coherence (Graesser et al., 1994).

An alternative perspective, the minimalist theory of inference processing (McKoon, & Ratcliff, 1992), takes a different approach than the constructionist theory. This position assumes that at the most basic level readers strive only to achieve local coherence, resulting in only simple inference generation, such as pronoun resolution; which is similar to the referential inference. From this perspective, global coherence is thought to be achieved by accessing information stored in long-term memory after reading has occurred. Global coherence is achieved after reading unless the reader has a specific, cognitively-taxing goal that requires establishing global inferences during

reading. From the minimalist position, the only inferences generated automatically during reading are those needed to establish local coherence; all other inferences are explicitly done via the motivation of the reader (McKoon & Ratcliff, 1992).

The minimalist position reminds us that perhaps not all readers strive to construct a mental model of the text during the actual reading of the text. A mental model can have three levels of representation, including: the surface structure, the textbase and the situation model of the text (Zwaan, 1994). A surface structure representation of the text is the exact structure of the text; specifically, the words and syntax. A textbase is a representation of the gist meaning, outlined by propositions explicitly stated within the text. A situation model of the text is the reality a reader creates, combining the gist of the text with the reader's own past experiences, as well as the reader's concept of their own reality. The minimalist position argues that the situation model is not automatically generated during reading unless the reader is specifically motivated to do so. Because the constructionist approach assumes that inferences are not cognitively taxing, it would seem that readers who automatically generated inferences in order to maintain local and global coherence would create the fullest understanding of a text during their first read, which would imply no need to reread a text to gain additional information. The minimalist approach, on the other hand, assumes that the reader will construct their mental model of the text after information has been integrated into long-term memory, requiring few inferences to maintain local coherence unless otherwise motivated; implying that reading is subject to the limitations of the readers' memory. The current study investigated the extent to which readers construct inferences while reading, and whether that construction is influenced by the genre of the text.

Text Genre and Comprehension

The perspective of the reader has been examined as a primary factor for inference generation (Just & Carpenter, 1980; Mandler, 1984; Warren, McConnell, & Rayner, 2008; Zwaan, 1994). The question of whether readers' expectations regarding textual content influences reading processes has been explored by Zwaan. Specifically, Zwaan (1994) noted that textual variations between genres are vast enough that the reader may use different processes depending upon what genre is presented. For example, in his study, Zwaan presented the same texts as either being from a news story or a literary story and measured which levels of representation were developed (surface, textbase, or situation model). Zwaan found that readers would integrate textual information differently when primed with the genre of the text (news story as opposed to literary story), despite being of the same literature style (discourse narrative). Subjects who were primed to believe they read a news story developed more robust situation models and had faster overall reading times than subjects primed to believe they were reading a literary narrative, which had more accurate memories for surface information. Zwaan concluded that these results indicate that readers allocate different processing resources to text which are dependent upon their expectations from their past experience with other texts like it (i.e., genre).

Zwaan also noted that authors typically leave readers in the dark as to what the theme or purpose of the narrative is. This could have resulted in the development of an expectation within the reader that the most important information in a narrative will be at the end, causing readers to integrate information without drawing direct conclusions until the end of the narrative. This would imply that the most efficacious placement of

generalization inferences would be at the end of the narrative. Taking this literature a step further, Zwaan (1994) hypothesized that because entire narratives often have ambiguous meanings, readers may attempt to construct a single textbase representation containing all surface information; that is, a model of all explicitly stated information of the text (similar to the macrostructure). When the text is ambiguous or indeterminate, readers will delay constructing a situation model until enough information is provided (Zwaan, 1994). In the present study, I will expand upon Zwaan's investigation of how differences in genre influence readers' processing a text, specifically when the text's theme is ambiguous.

In addition to the reader's perspective, the reader's motivation is also thought to be an important element in inference generation during reading comprehension (McKoon & Ratcliff, 1992; Graesser, et al., 1994). The motivation of the reader influences the construction of a goal. The constructionists claim that the goal of the reader can either be underdeveloped (e.g., to read in order to be entertained or to extract general ideas), or very specific (e.g., to read in order to determine the need for a major life decision). Genres exert a direct influence upon the perceived goal of the reader (Graesser, et al., 1994). For example, readers of literature will construct the goal of being entertained; conversely, readers of expository texts will construct a goal of expanding knowledge. The constructionists recommend that any study of inference generation consider how readers' goals influence their discourse processing. By the constructionists' own recommendation, genre should be considered a primary factor influencing the processing of a text but is often ignored, particularly as an independent variable.

Expectation-driven processing cues, such as the title or writing style of the text

has been studied as a priming mechanism for reading that causes the reader to process the text in an expectation-consistent manner (material-appropriate processing framework; Einstein, et al., 1990). This material-appropriate processing framework posits that different types of texts (genres) will prime the reader to use different types of processing. When the text's genre causes readers to process items more deeply (i.e. make more relational connections), they are more likely to recall textual information and that information is more likely to persist in memory long after reading (Einstein, et al., 1990). Einstein and colleagues (1990) showed that the context of the text is a powerful tool that not only affects the motivation and goal setting of the reader but also the underlying processes that go into comprehending the text.

The effects of genre context on reading comprehension have been studied in an eye-tracking design by Warren and colleagues (2008). They found eye-movement disruptions when impossible literary scenarios were presented in a real-world context but not when presented in a fantasy context. The authors noted that fantasy context literature allows for the reader to eliminate a sense of 'unnaturalness' in impossible events after their first fixation. Real-world impossible events (e.g., The cat flew to the moon) lagged in processing times in gaze (of word) and go-past (particle immediately after word) segments of reading, compared to fantasy-impossible times which resulted in processing times similar to real-world and fantasy possible times. These results indicate that readers' processing times of fantasy primed impossible narratives are more similar to real-world primed possible processing times than real-world impossible narratives, suggesting that readers' expectations about the genre of the text influences their processing of the narrative. The preceding literature indicates that readers' processing of text is influenced

by their expectations, based on their concept of the narrative itself (i.e., the genre). The current study will examine how readers' expectations, primed by genre, affect inference generation.

The folk tale genre has been studied under the premise that it has a simple structure with explicitly stated action sequences (McDaniel, Hines, Waddill, & Einstein, 1994). McDaniel et al. (1994) examined this idea under the assumption that textual consistency was necessary to construct a causal-antecedent representation of a narrative. McDaniel et al. had participants either use a word-unscrambling mnemonic technique to improve readers' recall of narratives, or provided no such intervention. Additionally, McDaniel et al. primed readers with the genre of folk-tale or with the genre of a news story. Readers who were primed by the folk-tale genre recalled more information from the text, but showed no effects of the mnemonic intervention. The results of McDaniel and colleagues' study indicate that the folk-tale schema influences readers to develop a more complete representation of the content of text based on a causal-antecedent structure, allowing for a greater degree of recall. The McDaniel et al. study provides further evidence that the genre of a text provides the reader with an expectation that cues genre-specific processes within the reader. Although folk tale was used as a priming genre in this context, there is very little literature explicitly describing what researchers believe the folk-tale genre to be. In studies such as the one conducted by McDaniel and colleagues, the definition for the genre was provided by the authors and not based on past research or an established definition. For the purpose of this research I have made the following dichotomous definition of the genres that are of primary interest: a genre in which events are factual and possible (e.g., biography), and a genre in which events can

be non-factual and impossible (e.g., fairy tale).

The context that is established by a text's genre has been shown to affect the processes utilized by the reader (Zwaan, 1994) and the degree to which incoherent information will be comprehended (Warren, et al., 2008). Although inferences have been studied under the assumption that local and global coherence are prerequisites of reading comprehension (Myers, O'Brien, Albrecht, & Mason, 1994), given the research done on the effect genre has on the processes involved in reading, genre may also influence the readers' ability to draw inferences under conditions in which global coherence is not maintained. The present research investigated whether or not the genre of the text influences whether or not inferences (specifically, generalization inferences) are generated within incoherent text.

Hypotheses

Generalization inferences have been studied under conditions in which a series of related sentences are presented sequentially (Ritchey, 2001). According to the constructionist theory, when this sequence is broken, maintaining global coherence should no longer be possible, and therefore generalization inferences should no longer be made. When readers are primed by the context of a genre that allows for impossible events, not based on fact (e.g., fairy tales), readers should expect the information presented to be capable of being inconsistent with their concept of reality, allowing them to integrate information regardless of the sequential consistency of that information. This study was designed to manipulate sequential consistency by presenting readers with texts in which a series of sentences are presented in chronological order or non-chronological order. The present research was designed to question the constructionist theory in its

claim that global coherence, and therefore the construction of generalization inferences, cannot be not achieved if the text is inconsistent, choppy or pointless (Graesser et al., 1994). The present research makes the counter claim that readers will draw generalization inferences when they perceive an inconsistent text as belonging to a genre (e.g. fairy tales) that allows for events inconsistent with their concept of reality. I predicted that because readers' background knowledge of such a genre is that in which the impossible is possible, they will draw generalization inferences from incoherent text.

Similar to their predictions for generalization inferences, the constructionist theory predicts that causal inferences will be generated under most normal processing conditions (Graesser, et al., 1994). The constructionists define causal inferences as a direct linkage between current actions or events and previous contexts. That is, the reader creates a causal chain linking the present textbase information with the immediately preceding information. Previous research has shown that causal inferences are important for comprehension (Graesser, et al., 1994) and are drawn on a regular basis (van den Broek, 1990). As is predicted by the constructionist theory, causal inferences should be generated online during the reading of non-reality based narratives as well as reality based narratives. Because causal inferences have been shown to be drawn so regularly, they were assessed in the present experiment to ensure that readers were drawing inferences and therefore making an effort to comprehend the text.

For the present research I used a 2 (factual-possible genre v non-factual-impossible genre) x 2 (coherent vs incoherent) x 2 (target v non-target word) design. The constructionist perspective assumes that readers who view a text as incoherent (i.e., lacking in global coherence) will abandon inference generation (Graesser, et al., 1994).

Half of the experimental texts were designed to be incoherent by presenting sequential events required for readers to draw generalization inferences in a non-sequential order. The coherent condition was the condition in which the sequence of events was presented in order. The dependent measure of this study was the reaction times on lexical decision tasks, which are indicators of inferences generated (Long, et al., 1994; Zwaan, 1994). Additionally, I manipulated whether or not the word used within the lexical decision task was a target word (a word that would be inferred from the text) or a non-target word (a word that would not be inferred from the text). The target word manipulation was conducted in order to measure whether participants were drawing an inference or not.

For causal inferences, I predicted an effect for the lexical decision task word condition (i.e., target vs. non-target.). Because causal inferences are an integral part of reading comprehension (McDaniel, et al., 1994), participants should be faster to verify inference-related target words than control words or nonsense words in both genre conditions. I will measure reaction times to these words for causal inferences in order to assess whether or not participants are reading the text and are drawing basic inferences while they read the text. Because the coherence manipulation is implemented only for the four sentences that instantiate the generalization inference, this manipulation should have no effect on causal inferences.

For generalization inferences, I predict an interaction of genre and coherence. Participants' reaction times for inference-related target words should be equally fast in the non-factual/impossible coherent, non-factual/impossible incoherent and factual/possible coherent conditions, and these times will be faster than reaction times for inference-related target words in the factual/possible incoherent condition. Because the

non-factual/impossible genre suggests that impossible events are possible, I predict readers primed with the non-factual/impossible genre will integrate the four sentences of the generalization section regardless of their coherent (i.e., chronological) or incoherent (i.e., non-chronological) nature and will draw the intended generalization inference, resulting in faster reaction times to verify a word that represents this inference than a neutral word or non-word. Reaction times for inference-related target words in the factual/possible-coherent condition should be as fast as reading times in the other genre conditions because readers should have no difficulty constructing a generalization inference, resulting in faster reaction time to verify a word that represents this inference than a neutral word or non-word. A difference should appear for reading times of inference-related target words in the factual/possible-incoherent condition. Because the nature of a factual/possible genre is one in which readers are primed to believe that all events in the text are truthful and possible, readers encountering impossible (i.e. incoherent, non-chronological) events should abandon attempts at constructing a generalization inference. Because they will not have constructed an inference, they will not have activated the inference-related target word, and will be as slow to verify this word as the control word, which is unrelated to the story. Also, because of a lack of research on the subject, in order to determine which two genres most accurately represent this criterion and which word represents the ideas expressed in the last four sentences of each story (i.e., generalization inference target word), two pilot studies were conducted.

Method

Experimental Overview: Pilot Study #1

The nature of this study was to examine how genre-specific schemas influences

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inference generation. Data was needed in order to provide information regarding which genres readers consider being least/most factual and least/most possible.

Due to a lack of research examining the specific content of readers' perceptions of various text genres, a pilot study was designed to determine participants' expectations for seven genres: folk-tales, fairy-tales, fantasy, science fiction, biographies, true crime, and historical accounts. Specifically, this study asked the participants to rate on two 5-point scales whether they considered events within each of the seven genres to be factual and possible. Lower ratings corresponded to a belief by the participant that the genre was factual and possible, higher ratings corresponded to a belief that the genre was non-factual and impossible.

Participants. Forty-eight participants were enlisted from the Ball State University General Psychology subject pool. Participants received course credit for the completion of this experiment.

Materials. A survey was created to assess participants' perceptions of seven genres. This survey was constructed online and was administered via any computer the participant had access to. The first screen of this survey explained the task and gave a definition of genre and fiction. The rest of the survey was designed to assess the participants' perceptions based on the following criteria for each of the seven genres: The extent to which they believed the information in a text of this genre was factual, using a 1 (*completely factual*) to 5 (*completely nonfactual*) response range, and the extent to which they believed information in a text of this genre was possible (using a 1 (*completely possible*) to 5 (*completely impossible*) response range.

Procedure. The materials for this study were designed and administered online

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through InQsit, a free online program for Ball State University researchers. Participants were given a link for the survey when they signed up to participate via the Ball State University General Psychology research webpage. The survey began with an informed consent page, providing an explanation and a description of what should be expected and a definition of genre and fiction. After participants indicated that they wished to participate, they were instructed to complete the rest of the survey. When participants completed the survey, their participation was verified and research credit was awarded. Completing the survey took no more than 15 minutes.

Results for the first pilot study. The first pilot study showed that the readers perceived the fairy-tale genre to be most likely to contain events that are both non-factual and impossible ($M = 4.26$ and 3.89 on a 5-point scale, respectively). In this same study it was found that readers perceived the biography genre to be the most likely to contain event that are both factual and possible ($M = 1.4$ and 1.3 on a 5-point scale, respectively). These two genres were subsequently used for the main experiment for the genre independent variable. For a list of all means and standard deviations consult Table 1.

Experiment Overview: Pilot Study #2

A second pilot study was designed in order to obtain target words for the generalization inference lexical decision tasks. The second pilot study was designed to assess which word the readers thought most accurately summed up the last four sentences of each of the experimental texts.

Participants. Thirty participants were enlisted from the Ball State University General Psychology subject pool. Participants received course credit for the completion of this experiment.

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Materials. A survey was created that allowed participants to write in the word that they felt most accurately summed up a set of four sentences. These four sentences were taken directly from the experimental texts and written to imply one main theme, or generalization inference.

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Procedure. The materials for this study were designed and administered online through InQsit. Participants were given a link for the survey when they signed up to participate via the Ball State University General Psychology research webpage. The survey began with an informed consent page, providing an explanation and a description of what participants should expect. Participants were told that readers often consolidate multiple ideas into a singular one, expressing the same information, because it is easier to remember a smaller number of general ideas than many specific ideas. Participants were then given four sentences to practice coming up with singular ideas to represent the information conveyed within multiple sentences (See Appendix A). After participants indicated that they wished to participate, they were instructed to complete the rest of the survey. Participants were presented the four sentences comprising the generalization inference and asked to provide a word or phrase that summarized those four sentences. When participants completed the survey, their participation was verified and research credit was awarded. Completing the survey took no more than 15 minutes.

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Results for the second pilot study. The second pilot study revealed many potential target words for the generalization inference lexical decision tasks. Words were chosen to be included in the main experiment only if they reached a 40% or higher agreement between participants. Any higher of a cutoff would have not provided enough target words for the number of experimental texts designed. For a list of the words

provided by the participants with their corresponding stories and agreement percentages consult Table 2.

Experiment Overview: Primary Experiment

Participants. Participants included 126 undergraduates. Ninety-nine of the participants were recruited from the Ball State University General Psychology subject pool. Participants received course credit for the completion of this experiment. Twenty-seven additional participants were recruited from two upper-level psychology courses in which participation was exchanged for extra credit.

Materials. Ten fifteen-line stories were developed for this study (See Appendix B) using E-Prime, a software design application used for the development of psychological experiments. All of these stories were fiction and were constructed to resemble common narratives in literature with ambiguous genres. Each story was constructed in an identical format with each one containing one introduction section (2 sentences), two causal inference sections (3 sentences each with 1 filler sentence), and a generalization inference section (1 set up sentence followed by four sentences). The generalization inference section contained a sequence of events, such as a hunt in the jungle (e.g., 'Amani decided to look for a lion,' 'He carefully stalked his prey,' 'With the animal in sight, Amani pulled back his bow,' 'Amani was proud of his kill').

Inferences were measured with lexical decision tasks, which consisted of target words that represent the intended causal or generalization inferences (e.g., “hunt”, from previous example), control words that were unrelated to the intended inference (e.g., “punt”), and nonsense words (e.g., “pemd”). All words were matched on length, and target and control words were matched on frequency. It was determined that the

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generalization inference target word would not be used in the narrative at least five sentences prior to the beginning of the generalization inference sentences (i.e., before the sixth sentence of the story). This was to prevent participants from developing a sense of familiarity with the generalization inference target word and skew their reaction time.

Procedure. Experimental sessions were scheduled online via the Psychological Science department's General Psychology registration website. Two participants were run at a time, although each participant completed the experiment individually. This experiment was deemed exempt by the IRB and thus no identifying marks were collected to link the participants to their data (i.e., participants did not need to sign an informed consent document). Upon arrival to the experiment, participants gave the investigator their name, at which time the investigator awarded credit.

Participants were asked to sit at a table with a monitor in front of them, which was adjusted vertically for each participant so that the center of the screen was in their direct line of sight. Participants were read instructions informing them that they would be reading a series of short stories and that periodically during these stories they would be asked to make judgments as to whether the word that was presented on the screen was a real word or a nonsense word. Based on methods used previously (Long, et al., 1994), participants were asked to place their left index finger over the 'y' key, which they used to indicate a 'Yes' answers, or that the word presented is a real word, and to place their right index finger over the 'n' key, which they used to indicate a 'No' answers, or that the word presented is a nonsense word. After the instructions were read aloud the investigator asked each participant if he or she had any questions. Once all questions had been answered the investigator began the program. The participants were then asked to put on

a pair of headphones and instructed to begin following along with the computer program.

Participants first viewed a welcome screen which asked them to please read the instructions to the task in their entirety. The following screen included the instructions which covered the same information that was read to them but in greater detail.

Participants pressed the space bar to toggle through the individual sections of the experiment. When the participants had finished all ten narratives they were prompted by the computer program to let the investigator know, at which time they were thanked and given a debriefing statement.

Participants controlled the rate of the presentation of the stories by pressing the space bar with their thumb. The text was presented in three sections per narrative. The first section included the introduction and first causal inference. The second section included the first filler sentence and the second causal inference. The third section included the last generalization inference set up sentence and the four generalization sentences. Participants were not able to view previous sections once they pressed the space bar. The lexical decision tasks were presented as a singular word (i.e., either a target word, control word, or nonsense word), centered vertically and horizontally on the screen, in the same size and font as the story. After participants read the text and pressed the space bar a tone was presented through the headphones. The tone was presented for one second, and then the lexical decision word was displayed on the screen. Participants were instructed that this tone would cue them to get ready for a string of letter and that they needed to make a decision as to whether the string of letters were a word or not as quickly as possible.

Genre was manipulated by randomly presenting one of two genres and by having

participants acknowledge they had read and understood the presented genre. Much like the lexical decision task, the genre was presented as a singular word or phrase (i.e., biography or fairy tale) centered vertically and horizontally on the screen and in the same size and font as the story. A brief definition of each genre was provided in the experimental instructions. The biography genre was defined as a narrative written about someone based on true events. The fairy tale genre was defined as a narrative in which events are completely fictitious, often containing impossible scenarios. Participants were also instructed that in order to acknowledge that they had read and understood the genre presented, they should press the 'y' key for the biography genre and the 'n' key for fairy-tale genre.

The coherence manipulation was achieved by randomly assigning 4 narratives to contain chronologically ordered generalization sentences and by randomly assigning 4 narratives to contain non-chronologically ordered sentences. Non-chronological order was achieved by presenting the sentences (1,2,3,4) in a predetermined non-sequential order (3,1,4,2). A predetermined order was used in order to eliminate the chance that a randomization program would present the sentences in the correct order during the incoherent condition.

The target word condition was manipulated by preselecting a target word (based on pilot study data) and a non-target word for each of the eight experimental texts and randomly assigning 4 narratives to present the target word and randomly assigning 4 narratives to present the non-target word. The experiment was programmed in a way so that the software would keep track when a combination of conditions was presented and then prevent the randomization software from presenting that same combination to the

participant within future narratives. This was done in order to ensure that each participant was exposed to each of the eight conditions in a random order. Although the experiment was not designed to ensure that an equal number of participants saw an equal number of narrative-manipulation pairings (i.e., each narrative being presented within each of the eight levels of manipulation an equal number of times), it worked out that an equal number of participants saw the same number of pairings. This would have been a between-subjects manipulation. In order to make sure the participants were actually reading the lexical decision words and not simply pressing the 'y' key regardless, two additional narratives were included in the experiment which did not include real words for the generalization inference lexical-decision task. These two additional narratives were added to prevent the participants from developing an expectation of real words for the generalization lexical-decision task and thus skewing their reaction times.

Results

The causal-antecedent inference data were analyzed using a Repeated Measures ANOVA in order to determine whether participants' lexical decision reaction times for the target word and non-target word group means differed significantly. All reaction times were measures in milliseconds. The descriptive statistics were examined in order to identify all outliers present within the data. A total of 32 target reaction times and 6 non-target reaction times were eliminated from the dataset for being more than 3 standard deviations from the mean (target: $M = 794.17$, $SD = 383.39$, > 1533.56 ms; non-target: $M = 851.81$, $SD = 514.87$, > 2396.42 ms). These 38 data points were eliminated from the data, comprising 3% of the data.

The Repeated Measures ANOVA revealed that target word reaction times ($M =$

738.92, $SD = 174.03$) differed significantly ($F(1,123) = 20.41, p = .00, \eta^2 = .14$) from non-target word reaction times ($M = 829.20, SD = 287.73$).

The generalization inference data were analyzed with a repeated measures ANOVA with genre (factual-possible and non-factual-impossible), coherence (chronological and non-chronological), and task word (target or non-target) as the within-subjects variables. The descriptive statistics were also examined in this set of data, in order to identify all outliers present within the data. A total of 16 data points were found to be 3 or more standard deviations above the mean ($M = 777.54, SD = 373.44; > 1897.86$ ms). These 16 data points were eliminated from the data, comprising 1.6% of the data.

The three factors of this study were examined for any potential main effects. Of these three factors, task word showed a significant main effect; $F(1, 122) = 35.12, p = .00, \eta^2 = .22$. This indicates that readers responded faster to target words ($M = 738.92, SD = 174.03$; i.e., words that were related to the intended inferences) than non-target words ($M = 829.20, SD = 287.73$). Genre ($F(1, 122) = .004, p = .951, \eta^2 = .00$) and coherence ($F(1, 122) = .18, p = .67, \eta^2 = .00$) were not significant. This indicates that readers processed the lexical decision task equally quickly for both genres and for both coherence conditions. No significant interactions were found within the data.

Paired samples t-tests were performed to determine the pattern of reading time differences between conditions. In order to support my hypothesis, multiple paired samples t-test results would have to show that participants' reaction times for the Biography-Coherent-Target (BCT) condition were similar to the Fairy Tale-Incoherent-Target (FIT) condition and similar to the Fairy Tale-Coherent-Target (FCT) condition. Additionally, these three groups' reaction times would need to be faster than the

Biography-Incoherent-Target condition (BIT; i.e., BCT = FIT = FCT < BIT). Because 16 outlying data points were eliminated, these missing values had to be replaced in order to run paired samples t-tests with the maximum amount of data sets available. Missing values were replaced by mean values of their respective conditions. Table 3 shows the mean reaction times of the four experimental conditions. Three paired samples t-tests revealed that BCT and FIT reaction times did not differ significantly ($t(1, 122) = 1.45, p = .14, \eta^2 = .02$) and that FIT and FCT reaction times did not differ significantly ($t(1, 122) = .59, p = .55, \eta^2 = .00$), and that BCT and FCT reaction times did not differ significantly ($t(1, 122) = 1.07, p = .28, \eta^2 = .01$).

To test whether BCT, FIT and FCT group reaction times were faster than BIT reaction times I conducted individual paired samples t-tests between each of the previous three groups and the BIT group. These paired samples t-tests revealed that BCT and BIT reaction times did not differ significantly ($t(1, 122) = 1.20, p = .23, \eta^2 = .01$); FIT and BIT reaction times did not differ significantly ($t(1, 122) = .36, p = .71, \eta^2 = .00$); and that FCT and BIT reaction times did not differ significantly ($t(1, 122) = -.22, p = .82, \eta^2 = .00$). Because six t-tests were performed, a Bonferroni correction would have been performed if any p-values approached significance. The corrected alpha level for this experiment was .008.

Discussion

Results from the causal-antecedent inferences lexical decision tasks indicate that readers were in fact drawing causal-antecedent inferences during reading. This was not surprising because drawing causal inferences is documented in past research, but was necessary to demonstrate in this experiment in order to prove that participants were in

fact taking the time to read and comprehend the stories as they were being presented.

The results from the generalization inferences revealed only one main effect for target word. This main effect indicates that readers did in fact draw the generalization inference from the text. If the ANOVA had been insignificant this would have indicated that readers spent the same amount of time deciding whether a word that summarizes the previous four sentences was actually a word as they would a word that was unrelated to the previous four sentences. By spending less time making a decision about a word that summarized the previous four sentences (i.e., the target word) than the non-target words and non-words, we can conclude that readers had a general concept in mind that was similar to the target word, which they inferred from the text.

One potential confound to these results could be that narrative and experimental condition pairing was not controlled for, allowing for the possibility of an unbalanced number of pairings. By not controlling for this, a potential content confound could be present within the data. This could have been controlled by setting up the experiment to force an equal number of pairings of each story to each experimental condition. As it was, roughly an equal number of participants saw each combination of stories.

The results also indicate participants reading the fairy-tale genre drew the generalization inference in both coherent and incoherent texts. Unfortunately, these results do not indicate that participants required any more time to make a lexical decision when reading a biographical inconsistent text than biographical consistent, fantasy consistent, or fantasy inconsistent, thereby partially disconfirming my hypothesis.

One possible explanation for these results could be that readers do actively draw the generalization inference from incoherent text, or at least do to a greater degree than

was proposed by the constructionist theory. If readers are capable of drawing the generalization inference in incoherent text then perhaps they would not need the genre prime, as was hypothesized. Perhaps readers are motivated to maintain global coherence within narrative-based genres to the extent that they continue to draw the generalization inference, even in the presence of incoherent text. As was assumed by both theories of inference generation (i.e., constructionist and minimalist), the motivation of the reader is a primary factor contributing to whether inferences are generated or not, one that may be influenced by the nature of the text (i.e., genre).

An additional explanation could be that the experimental participants did not view the genres as dissimilar as the pilot participants viewed each genre. In the second pilot study, the participants were forced to make a decision on how factual and how possible seven genres were. By structuring the pilot study sequentially, participants may have assumed a relationship existed between the genres as a kind of demand effect. It is possible that because the experimental participants did not complete a task requiring them to assess the factuality and possibility of each genre, they did not fully activate their schemas for both biographical and fairy tale genres. If these participants did not fully activate their schemas for these genres, they may easily have abandoned the genre information when constructing their representation of the text.

Future Directions

Although these results do partially disconfirm my hypothesis they also suggest that readers are capable of drawing inferences from incoherent text, which is a violation of one of the assumptions of the constructionist theory. This study provides an avenue for future potential research to test other factors that contribute to how readers can draw

inferences within incoherent text. If readers are motivated to draw the generalization inference within all narrative texts, regardless of coherence, additional research should be conducted to determine whether this motivation is present within all genres or only within narrative-based genres. This study did not examine the effects on non-narrative genres (e.g., expository), so future research should be done to determine whether or not readers continue to draw inferences in incoherent text within non-narrative genres.

An additional concern regarding this study was that participants may not have accepted or committed to believing that the provided genre was in fact the genre of the text. Measures were taken to ensure that participants read the provided genre (i.e., forced response – ‘y’ for biographical, ‘n’ for fairy tale), but further research could have been done to study under what circumstances reader use genre priming in reading narratives during psychological experiments. Zwaan (1994) provided two printed narratives and explained to the participants where these narratives were collected from (indicating news source or fictitious source). These steps were not done for this experiment because of how many narratives were to be read and because of how complicated the randomization was. One step that could ensure that participants view each genre as dichotomous and recognize the factual-possible differences within both genres is to have the experimental participants complete the same task that the pilot study participants completed. This would also allow the researcher to throw out sets of data for participants who did not subscribe to the desired concept of each genre.

In conclusion, the partial disconfirmation of my hypothesis does not disprove that genre priming has an effect on inference generation. There is substantial evidence to suggest that genres can act as a prime for cognitive processes involved with reading

comprehension (Zwaan, 1994) and for the constructionist perspective (Graesser, et al., 1994). The conclusions drawn from this study should be that the constructionists' assumption that readers require a coherent text to construct higher-level inferences needs to be called into question, and that the extent to which genres affect reading requires further investigation.

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Appendix A

Second Pilot Study Instructions and Descriptions

Please read the following rationale and procedures carefully before deciding to continue.

After reading multiple sentences, it is common for a reader to extract a general idea or theme from those sentences. This idea is typically much shorter than the original sentences; usually it is only a word or short phrase.

For the present study, you will read sets of four sentences, which are excerpts from longer stories. After reading each set of sentences, please indicate with one word or short phrase the overall message, theme, or idea represented. It is important that you choose a word or phrase that represents the general ideas being expressed by the four sentences. You will do this for eleven sets of sentences. There are no wrong answers, but I ask you to read carefully and give the task your full effort. Research credit will be assigned at the end of each day. If you choose to withdraw your participation at any time, please do not hesitate to do so; you will not be penalized in any way.

Before you begin, please examine the following example:

John parked the car where the trail met the road.
He hiked in to the woods about a mile before setting up his tent.
Once his tent was up he searched for wood and made a fire.
John roasted hot dogs on the fire and listened to the water as he enjoyed his pleasant vacation.

Your response might be: Camping

Appendix B**Experimental Text 1**

Introduction:

Amani is a young boy living in a remote village in Africa.

Action/goal establishment of character:

Amani's father, who loves to hunt, has promised that he will take Amani on his first hunting trip for his birthday.

Because of his first trip, he does not know what to pack.

First causal action set up:

Amani decides to take many things, just in case.

He stuffs as much as he can into his pack and pulls the string tightly to tie it shut.

First causal outcome:

He stared in dismay at the piece of string on the ground (broken/woken/foken)

Resolution/filler information:

Amani's brother lent him his pack for the big day.

Second causal action set up:

It had been raining all morning.

As Amani ran outside to join his father, he decided to jump over a large puddle.

Second causal outcome:

Amani wiped off his wet face. (splash/squash/smish)

Generalization set up:

He and his father hiked to the jungle.

Generalization sentences:

Amani decided to look for a lion.

He carefully stalked his prey.

With the animal in sight, Amani pulled back his bow.

Amani was proud of his kill.

(hunt/hump/domd)

Experimental Text 2

Introduction:

Chetan is an eighteen year old Sioux Native American.

Action/goal establishment of character:

Chetan's family is very powerful within their tribe

Because of his family's status, Chetan is expected to marry Winona, the first daughter of a tribe elder.

First causal action set up:

One day, Chetan asked Winona to go on a walk with him by the river.

The two of them were having such a good time they didn't realize how close they were to the water.

First causal outcome:

Chetan and Winona sat down on a rock before realizing was splashing over it.

(wet/bet/ved)

Resolution/filler information:

Despite the rough first date, Chetan and Winona continued seeing each other.

Second causal action set up:

One day, Chetan and Winona were walking together through the village.

Comment [karitchey14]: Add periods to these sentences.

Winona's father confronted the two and gave them both a hug.

Second causal outcome:

Chetan and Winona looked at each other happily. (smile/while/zmile)

Generalization set up:

Chetan was in love, so he asked Winona's father for permission to marry her.

Generalization sentences:

On Winona's birthday, Chetan asked her to be his bride.

They had a beautiful wedding and Chetan was named future chief.

They had a wonderful honeymoon together.

Their love lasted the rest of their lives.

(marriage/carriage/neqqaija)

Experimental Text 3

Introduction:

Jasmine is a little girl from the Middle East.

Action/goal establishment of character:

Jasmine's mother is a belly-dancer and is known for her beauty.

When Jasmine grows up, she wants to be as beautiful as her mother.

First causal action set up:

One day, Jasmine asked her mother how she could become as beautiful as her.

Her mother replied, 'Oh my dear, you are beautiful, just the way you are.'

First causal outcome:

Jasmine looked at her reflection and said, 'but I don't see it.' (mirror/terror/nerrup)

Resolution/filler information:

Jasmine's mother left the room and Jasmine continued to dream about being a belly-dancer.

Second causal action set up:

Jasmine began to follow her mother around, doing exactly what she did.

When her mother began putting on her make-up for work, Jasmine grabbed her mother's powder, but dropped it on the floor,

Second causal outcome:

Jasmine's mother tried to use what was left, but there wasn't enough.

(empty/grumpy/inbdy)

Generalization set up:

Jasmine's mother soon left for work and Jasmine followed closely behind.

Generalization sentences:

When they arrived, Jasmine's mother got her costume on.

When the music started everyone stopped what they were doing to watch

Jasmine's mother.

Jasmine stared at her mother and knew what she wanted to be when she grew up.

Jasmine's was proud of what her mother's did.

(dancer/cancer/temzaq)

Experimental Text 4

Introduction:

Jimmy lived on a farm with his wife and children.

Action/goal establishment of character:

Jimmy grows wheat on his farm and has for many years.

Jimmy has lived on his farm his entire life, it has been passed down through his family for many generations.

First causal action set up:

Jimmy's crops were normally regarded as the best in the whole county.

He prided himself as being a very intuitive farmer and always irrigated his crops when needed.

First causal outcome:

One year, there just wasn't enough water for the farm and the crops failed (drought/gout/tpuod)

Resolution/filler information:

Fortunately Jimmy was smart enough to have saved up enough from previous years to keep farming.

Second causal action set up:

The next year the weather was much more cooperative.

Jimmy and his sons worked hard throughout the summer.

Second causal outcome:

At the end of summer, Jimmy and his sons were proud and happy to be done (harvest/farthest/fepwazd).

Generalization set up:

Jimmy was pretty old and was getting tired of farming, his oldest son wanted to take over for him.

Generalization sentences:

Jimmy was reluctant at first but agreed to let his oldest son take over after the next

season.

Jimmy wanted to make his last season his best!

Late in the summer, Jimmy knew his time as a farmer was almost up, but was happy to hand over the farm to his son.

When it was time to let go of the farm, Jimmy knew his son would do great.

(retire/expire/qidepe)

Experimental Text 5

Introduction:

Margaret is a psychologist.

Action/goal establishment of character:

Margaret is married to a professor, who teaches biology.

Her and her husband live in a large city and enjoy spending their time together.

First causal action set up:

Margaret and her husband had wanted a child ever since they got married, years before.

They went to a couple of specialists to find out what was wrong.

First causal outcome:

One week before her 31st birthday, Margaret's wish came true!

(pregnant/fragrant/bpakmemd)

Resolution/filler information:

Margaret was so happy!

Second causal action set up:

Margaret and her husband wanted to be prepared for their baby.

They spent a lot of time searching for the perfect things for their child.

Second causal outcome:

The last thing they bought was the most important, they brought home a perfect little place for their baby to sleep at night. (crib/bib/gpyp)

Generalization set up:

After nine months of waiting, Margaret and her husband knew they were ready.

Generalization sentences:

When the time finally came, the two rushed to the hospital.

After they were checked in, the doctor said everything was on track.

Margaret was so excited during the delivery.

When it was all over, she held her baby and couldn't believe how happy she was.

(birth/girth/peqdg)

Experimental Text 6

Introduction:

Che is a rancher living in Argentina.

Action/goal establishment of character:

All Che's life he wanted to get out and travel.

One day, Che decided that his time had come, so he left on a backpacking trip across South America.

First causal action set up:

Che owned a small car, that his father had passed down to him.

The car was old and unreliable and started smoking as soon as he left town.

First causal outcome:

Che quickly pulled over and put water in the radiator (overheated/over-needed/uwop-faedat)

Resolution/filler information:

The car started easily and Che continued on his way.

Second causal action set up:

Che was excited to see the beauty of the countryside.

Carelessly, Che left his camera on a rock as he admired a mountain.

Second causal outcome:

Later, when Che went to take a picture of a waterfall, he was confused as to where his camera was. (lost/frost/juzd)

Generalization set up:

Che was excited about his first night sleeping out under the stars.

Generalization sentences:

Che tried making a fire to cook dinner, but he forgot matches.

After dinner, Che laid out his sleeping bag and realized it had hole near the feet.

Che went to sleep, regardless, but was uncomfortable as he was laying on a hill.

When Che woke up he had somehow rolled all the way down the hill during the night. (unlucky/unhealthy/omdochi)

Experimental Text 7

Introduction:

Danny is the only doctor in a small rural community

Action/goal establishment of character:

Danny is a kind man who everyone in the community looks up to.

He has a wife, three kids, and loves to explore.

First causal action set up:

One day, Danny took his kids on a hike up the nearest hill.

Despite Danny keeping a close eye on his youngest son, he fell hard and cried for help.

First causal outcome:

Danny examined the wound and said that it would be ok, he just needed a band-aid. (scrape/grape/zgpeba)

Resolution/filler information:

Danny and his kids continued up the hill confidently.

Second causal action set up:

Danny's oldest, Caroline, spotted something in the brush.

She yelled to her father to come quick as there was a dog stuck in a trap.

Second causal outcome:

Danny released the dog but it could not stand on it's own
(injured/procured/emgohat)

Generalization set up:

Danny carried the dog back to town, the kids followed asking many questions along the way.

Generalization sentences:

The dog reluctantly allowed Danny to clean it's wounds.

When he was finished, Danny gave the dog something to eat.

The dog was happy to rest with Danny and his family.

Soon the dog had enough strength to get up, he licked Danny ferociously.

(heal/deal/daen)

Experimental Text 8

Introduction:

Anna is a German student who has come to study in the United States.

Action/goal establishment of character:

Anna wants to major in art but is unsure whether she has the talent to be a successful artist.

She hopes by visiting a new country she will learn some valuable skills.

First causal action set up:

One day in art class Anna decides to paint a landscape.

She twists the lid off of a jar of paint.

First causal outcome:

She sighs as she wipes the mess off of her shirt (spill/thrill/mwill)

Resolution/filler information:

The paint comes off with enough scrubbing.

Second causal action set up:

Anna moves her easel to the window to get more light.

The windows are tall and shiny

Second causal outcome:

She has to shield her eyes. (glare/stare/ptare)

Generalization set up:

Anna decides to go for a walk to get inspiration for her painting.

Generalization sentences:

Anna walks into a large building.

She chooses one corridor to explore.

She finds the exhibit she was looking for.

She stops to admire a certain painting. (museum/phantom/nozaom)

Experimental Text 9

Introduction:

Joseph is a young man who enjoys photography.

Action/goal establishment of character:

He would love to be able to take photos all over the world some day.

For now, Joseph practices taking photos of family and friends.

First causal action set up:

His young nephews love hamming it up for the camera.

When they visit, Joseph always is excited to take new pictures.

First causal outcome:

Joseph arranges his nephews for the perfect picture. (pose/froze/foze)

Resolution/filler information:

Joseph likes taking portraits, but what he really wants to do is take pictures of wildlife.

Second causal action set up:

Joseph practices on his old golden retriever.

Although his dog loves the attention, he's not as active as he used to be.

Second causal outcome:

When Joseph throws the ball in an attempt to get an action shot, his dog just licks his fingers and sits down. (fetch/hutch/putch)

Generalization set up:

Joseph wondered how he can take photos of wild animals.

Generalization sentences:

He decides to explore the woods behind his house.

He begins to follow animal sounds through the trees.

Joseph is soon surrounded by the forest.

Suddenly, Joseph realizes that he doesn't know how to get home.

(lost/frost/nuzd)

Experimental Text 10

Introduction:

Hans is a teacher at a local school.

Action/goal establishment of character:

On his birthday, Hans brings cookies for the kids because he knows that's the only way to have a peaceful day.

The kids all love Hans anyway, as he is a gentle teacher and rarely gets excited.

First causal action set up:

Hans lets his kids play outside for an extra 15 minutes because everyone is having such a good time.

Suddenly, Hans sees a ball fly towards him, hitting the ground only a few feet to his right.

First causal outcome:

The ball shoots straight up and gets lost in a tree (bounce/pounce/puonse)

Resolution/filler information:

Hans is getting tired of the kids today, but he hides it well.

Second causal action set up:

As the kids work on their schoolwork, Hans reads a book quietly to himself.

Hans loses track of time in his book, and absently forgets that the day is almost up

Second causal outcome:

When the bell rings, Hans falls out of his chair embarrassingly and quickly dismisses his class. (startled/hurdled/ptertled)

Generalization set up:

Hans skipped his normal end of day routine, as he was eager to get home for a relaxing evening alone.

Generalization sentences:

Hans arrived home from work earlier than usual.

From the outside he could see the house was dark.

He opened the door and stepped inside.

People jumped out to greet him. (surprise/supplies/zepqpeze)

Genre	Factual/Non-factual	Possible/Impossible
Folk-tale	3.64	3.19
Fairy-tale	4.26	3.89
Fantasy	3.70	3.30
Science Fiction	3.36	3.02
Biography	1.40	1.30
True Crime	1.62	1.28
Historical Account	1.53	1.19

Table 2

Percent agreement for participant-generated generalizations

Experimental text #	Most agreed upon word	Percent who agreed	Second most agreed upon word	Percent who agreed
1	Hunt	.83%	Proud	.07%
2	Marriage	.40%	Love	.17%
3	Dancer	.43%	Beautiful	.10%
4	Retire	.40%	Farm	.23%
5	Birth	.50%	Pregnant	.27%
6	Unlucky	.40%	Camping	.35%
7	Heal	.43%	Dog	.10%
8	Museum	.57%	Appreciate	.10%
9	Lost	.73%	Inexperience	.03%
10	Surprise	.83%	Party	.07%

Table 3

Reaction Times to Lexical Decision Task for Generalization Inferences

Condition	Mean	Standard Deviation
Biography, Coherent, Target word.	729.00	245.78
Biography, Coherent, Non-target word.	757.65	266.81
Biography, Incoherent, Target word.	700.79	248.20
Biography, Incoherent, Non-target word.	781.35	259.76
Fantasy, Coherent, Target word.	705.59	229.24
Fantasy, Coherent, Non-target word.	789.56	288.06
Fantasy, Incoherent, Target word.	693.16	207.80
Fantasy, Incoherent, Non-target word.	783.38	282.30

Note: N= 123 for each condition.