What Do Readers' Mental Models Represent?
Understanding Audience Processing of Narratives
by Analyzing Mental Models Drawn by Fiction Readers in India

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This study extends the narrative-processing literature by examining mental models constructed by individuals who have read the same narrative. Sixteen adults from Chandigarh (India) read a fictional story in Hindi, drew a picture of the story, and participated in an in-depth interview. Findings showed that human characters from the story featured in a majority of these drawings and that the strength of character involvement impacted the character's size, detailing, and placement in readers' mental model drawings. Readers also constructed abstract and symbolic mental models. This study corroborates research indicating that readers empathize with multiple narrative characters and that character involvement crosses generations and genders.

Keywords: narrative processing, mental models, character identification, absorption, India

Narratives are accounts of social information and events (Slater & Rouner, 2002) and texts in the form of short stories, books, television series, and films that can influence attitudes, intentions, and behavior (Appel & Richter, 2007; Green & Brock, 2000; Hoeken & Sinkeldam, 2014; Slater, Rouner, & Long, 2006). Narratives with embedded prosocial content have been successfully used in entertainment-education messages around the world (Singhal & Rogers, 1989; Slater, 2002). In the communications literature, the process of narrative engagement has primarily been explained in terms of involvement with characters (Slater & Rouner, 2002; Zillmann, 1994) and transportation into the plot (Gerrig 1993; Green & Brock, 2000).

Cognitive psychologists, on the other hand, assert that readers construct mental representations called mental models of situations and actions represented in texts (Bower & Morrow, 1990; Johnson-Laird, 2006). Conceived of as cognitive structures, these form the basis of reasoning and decision making, and individuals construct these models based on their personal experiences and understandings of the world (Jones, Ross, Lynam, Perez, & Leitch, 2011). A mental model is an iconic, three-dimensional representation "that is akin to an actual model of the scene" (p. 36) from the text, but at the same time, it may be abstract (containing intangible symbols) and may contain a small amount of information (Johnson-Laird, 2006). Mental models are dynamic structures (Bower & Morrow, 1990) that reside in a reader's short-term, or working, memory (Jones et al., 2011).

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Mental model scholars generally study cognitive structures resulting from reading short texts (not necessarily fiction) and do not necessarily focus on text processing (Bower & Morrow, 1990). Communication theorists, on the other hand, recognize narrative persuasion effects, but little research has gone into readers' processing of fiction and associated mental models. Recent studies have tried to examine narrative engagement within a mental model's theoretical context (Busselle & Bilandzic, 2009), but this theoretical approach remains relatively unexplored.

This study extends narrative-processing literature by examining in-depth mental models constructed by individuals who have read the same fictional story. Using a diagrammatic-oral interview procedure of eliciting mental models (Jones, Ross, Lynam, & Perez, 2014), this qualitative study explores characteristics of a story that readers generate in their mental models and examines the similarity and uniqueness of these models. Given the importance of character involvement in narratives, this study explores character involvement as reflected in constructed mental models. In this article, *reading* means consuming text irrespective of media type or platform.

Narrative Engagement and the Role of Involvement with Characters

Communication scholars have recently used several models to explain narrative processing. Using Gerrig's (1993) metaphor of transporting or traveling into a story, Green and Brock (2000) developed the transportation imagery model by conceptualizing transportation into the narrative world as a distinct mental process: "an integrated melding of attention, imagery, and feelings" (p. 701). They posited that enhanced transportation into a story leads to more engagement, hence a persuasion effect. Greater transportation is systematically associated with positive evaluation of a narrative's protagonist. Slater and Rouner (2002), in proposing the extended elaboration likelihood model to explain the processing of entertainment-education contexts, noted that character identification and absorption into the storyline are required for engagement with prosocial messages. They also asserted that readers who are transported into a story world counterargue less and therefore be more likely to be persuaded. Moyer-Gusé's (2008) entertainment overcoming resistance model asserts that narratives facilitate character involvement, which should lead to story-consistent attitudes and behaviors by overcoming various forms of resistance. These different theoretical approaches share the basic premise that involvement with the characters in the story is a prerequisite for narrative engagement (Hoeken & Sinkeldam, 2014).

Identification, the basic form of involvement with a character, is a feeling of perceived similarity with that character on personal qualities and life situations or the attractiveness and social desirability of the protagonist in the story (Slater, 2002). Slater and Rouner (2002), however, noted that personal similarity to characters in a narrative may be less important than how emotionally involved readers become with the characters as a consequence of narrative absorption or transportation. For Cohen (2001), the basic dimensions of identification include emotional empathy for the character, cognitive empathy (adopting a character's point of view), and internalizing a character's goals (imagining the story as if the reader is one of the characters). Slater and Rouner (2002) posit that identification is dependent on absorption in the story and that this absorption can happen even if the reader does not feel any perceived similarity with the characters. However, absorption does occur when the reader experiences a character's

emotions. Zillmann (1994) focuses on emotional involvement with the characters to explain involvement in drama, asserting that a reader must care for character to be involved in the story.

Emotional involvement with characters thus includes not only perceived similarity with the characters but also refers to the overarching category of concepts that include wishful identification, perceived similarity, parasocial interaction, and character liking (Moyer-Gusé, 2008). Wishful identification occurs when readers want to be like, and look up to, a character (Moyer-Gusé, 2008). Parasocial interaction refers to the pseudorelationship between audience members and media figures (Giles, 2002). Liking refers to positive evaluations of a character (Cohen, 2001). This study assumes any of these types of character involvement may occur when reading a story.

Mental Models and Narratives

Narratives comprise two main parts: First, an internal component that includes the characters, their occupations, and their personality traits; second, a mental map of physical settings in which all the action of the story occurs (Bower & Morrow, 1990). Research in cognitive psychology has established that readers construct mental models to process the information contained in texts (Bower & Morrow, 1990; Johnson-Laird, 2006; Langston, Kramer, & Glenberg, 1998). Johnson-Laird (2006) terms these mental representations an essence of the text that the reader has read. Therefore, mental models are representations of what a text is all about and not just of the text itself (Bower & Morrow, 1990; Langston et al., 1998). Using a mental model, a reader interprets and evaluates later statements in the text, applying incoming messages to update the elements of the model, including moving the characters from place to place and changing the state of the hypothetical story world (Bower & Morrow, 1990). Jones et al. (2011) define mental models as inconsistent representations, as these are context dependent and may change according to the situation in which they are used. Mental models, therefore, are highly dynamic structures that continuously evolve. However, unlike schemata, mental models are flexible structures and are stored in the short-term or working memory (Jones et al., 2011). Schemata may be used as building blocks for the construction of situations or mental models (Zwaan & Radvansky, 1998). Mental models differ from visual images, as an images represents a scene from a particular point of view, whereas a mental model is three-dimensional and captures an essence of the text even if it contains a small amount of information (Johnson-Laird, 2006).

Readers may progress beyond the text itself to represent the described situation and draw from their prior knowledge or experience to add to these mental models (Johnson-Laird, 2006; Zwaan & Radvansky, 1998). Graesser, Singer, and Trabasso (1994), in constructionist theory, explain that readers construct knowledge-based inferences while comprehending narrative text and generate a rich variety of inferences in the process. By using the process of narrative inference, readers also add information not present in the narrative into mental models (Neihaus & Young, 2014). This is similar to Gerrig's (1993) notion of performance of a narrative in which he argues that readers draw from their prior experiences to construct mental models of a narrative. Oatley (1996) notes that principle inferences that readers make while reading narratives explain the characters' goals and plans.

Johnson-Laird (2006), in his mental model theory, posits that readers do not capture exact images of what they read or see in their mental models. Instead, readers employ symbols or tokens while constructing these models in their working memories. Johnson-Laird concludes that in mental models' construction, everything is instantiated by a token or set of tokens during the process of interpretation. He asserts that a referent is only represented once, and the relationship between it and others are directly mirrored by relations in the model. Thus, mental models may not always contain the actual images as represented in the text but may also include symbols or abstract images as interpreted by the readers.

Mental models generated while reading thus contain various story elements, including human characters and physical story settings. However, little research exists regarding audience narrative processing and mental models. Does the presence of human characters in a reader's mental representation suggest involvement with the characters? Or does the lack of such representation suggest a lack of character involvement? If a story has multiple characters, do readers depict all the characters in their mental models or select only some characters? What is the process through which readers decide to add some characters to these mental models and leave out others? Given the impact of character involvement in narrative processing, it is important to examine any potential link between character involvement and the inclusion of character representation in mental models.

This study aims to (a) examine similarities and differences in mental models constructed by readers after they have read the same fictional story, (b) find out which elements from the narrative feature in the mental models, (c) examine whether involvement with story characters results in their depiction in the mental models, and (d) examine whether readers who are emotionally involved with the characters are also involved in the story.

Method

Sixteen adults in the city of Chandigarh, India (nine females and seven males), volunteered to participate in the study. The group was made up of nine females and seven males, ranging in age from 21–61 years old. Using convenience sampling, participants were approached at a public place and then briefed about the study, with volunteers interviewed at a mutually agreed upon place. The Institutional Review Board (IRB) at a large public university in the United States approved the project. Participants read a printed copy of a fictional story of 6,500 words that none had read before, averaging 40 minutes per reading. The story had no illustrations or pictures.

This study uses the diagrammatic-oral interview procedure of eliciting mental models (Jones et al., 2014). This procedure asks the participants to first draw and then explain their mental models in open-ended interview sessions so that participants tap into both verbal and visual modes of cognition (Jones et. al, 2014). In this study, participants were asked to draw a pictorial representation of the story immediately after reading. No cues were provided about what to draw. After participants finished the drawing, in-depth, open ended interviews were conducted in Hindi to understand the mental models. Participants were asked to explain (a) what they had drawn, (b) what they thought was the central theme of the story, (c) whether they identified with any story character, and (d) whether they were transported into the story (for the interview schedule details, see the Appendix). The interviews were audiorecorded,

translated into English, and then transcribed. After review of the interview transcripts and initial coding, repetitive and redundant themes were found. Saturation levels were determined when data became repetitive and no new insights were gained. Interviews averaged about 25 minutes, including the time spent on drawing.

Coding Procedure

This study used constant comparison (Glaser, 1965) by coding and then comparing coding incidents across participants, integrating categories and properties. Although this method is continuous—each stage after a time transforms itself into the next—previous stages remain in operation throughout the analysis and provide development to each subsequent stage until the analysis ends (Glaser, 1965). Participants' drawings were first categorized according to themes that emerged in the descriptive findings, and then these themes were coaxially coded. When coaxially coding, I examined initially coded occurring and recurring themes and then looked across thematic categories to combine them and generate new themes.

Short Story

The story titled "*Suhaginey*" ("Married Women"), authored by Hindi writer Mohan Rakesh (n.d.), was selected because it is a compelling narrative that contains multiple characters and depicts several relationships. The story is about the interdependence of two women from contrasting backgrounds whose lives intersect, at which point they realize their similarity. The lead protagonist, Manorama, is a school principal, and Kashi is a poor woman employed by Manorama to do household chores. Even though Manorama is professionally successful, her desire to be a mother remains unfulfilled because her husband does not want to start a family with her and lives separately. However, he wants her to contribute her salary toward his other financial responsibilities, including marrying off his younger sister. Her marriage and living away from her husband to save money gradually appears meaningless to Manorama, who feels a lack of marital love. Her loneliness, viewing of the nature around her, and dream of having a baby permeate the story.

Kashi, in contrast, has three children, is pregnant for the fourth time, and is unable to support her children. Her husband, who lives with another woman, occasionally visits Kashi but does not provide for the children and beats her. Steeped in poverty, Kashi continues to be a loyal employee, with her children the focus of her life. Kashi's eldest daughter, Kunti, witnesses the domestic violence at home. Manorama wants to feel that she is in a superior position to Kashi, but in the end she finds her own emotional happiness with the maid and maid's family. The story portrays several relationships, including of husband and wife, of employee and employer, of mother and child, and of friends from different backgrounds.

Analysis of Mental Model Drawings

Participants' drawings were categorized under headings based on what was clearly discernible in them. First, to describe the images depicted in the drawings, the following elements were identified:

human characters, trees, and the surrounding environment. Some participants drew abstractions, some with more discernible representations than others.

Results

Human Characters in the Drawings

Of the 16 participants, 13 drew human characters. In some drawings, characters' facial features and other details including clothes and hair were easily discernible (Figures 1 and 2); others were less detailed.
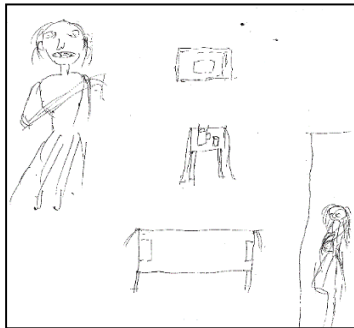

Figure 1. A woman and trees.

Figure 2. Women inside a room.

More Than One Character

Nine participants drew more than one character. The size, placement, and detailing of these characters, however, varied in some drawings. One participant drew two characters with a similar amount of detail (Figure 3).
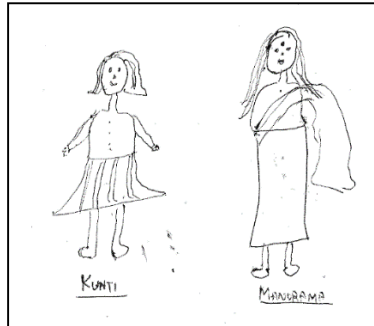
Figure 3. Kunti and Manorama.

In other drawings, the amount of detailing differed. In Figures 4, one character is facing the viewer, and the expressions and facial features are easily discernible, whereas the other character's back faces the viewer and has sparsely detailed clothing and physical features. Similarly, in Figure 5, one human character (shorter than the other) is more detailed than the taller human figure, whose face is barely visible.
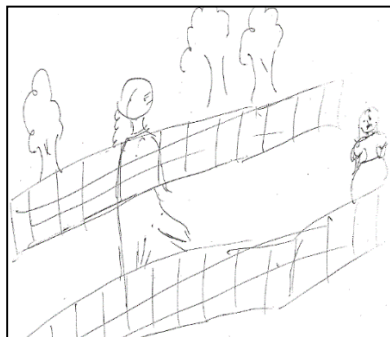

Figure 4. A girl facing a woman

Figure 5. A girl and a woman

Characters Drawn from the Story

Some drawings clearly depict the actual story characters (Figures 6 and 7), and some participants wrote the names of the characters in their drawings. One participant drew Kashi facing a mirror and wrote underneath, "Kashi applying lipstick" (Figure 6). Another participant drew characters Manorama and Kunti, writing "Manorama" and "Kunti" below the figures depicted (Figure 3). Kashi, a character from the story, is drawn along with her children, including her sick son in a corner, in Figure 7. Another participant drew various characters from the story and labeled these clearly as the headmistress, Kashi, Kunti, and Ayudhya (Figure 8).

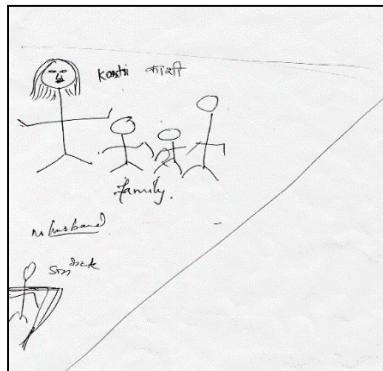
Figure 6. Kashi applying lipstick.
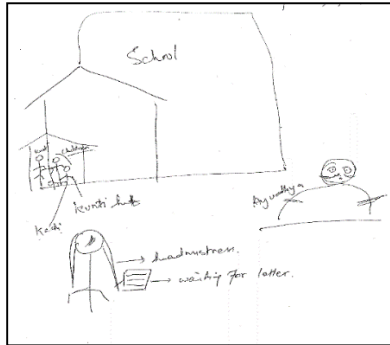

Figure 7. Kashi's family.

Figure 8. A scene from the story.

Implicit References to the Characters in the Story

Other mental model drawings provide implicit references to the story characters, including the headmistress, Manorama, and the maid's daughter Kunti, even if these characters' names do not appear in the pictures. For example, in two drawings an older woman faces a girl, and the two characters seem to be interacting (Figures 4 and 5). These characters are outside. In some drawings, the school building is in the background. Similarly, one participant drew a poor family and wrote a description of the travails of a poor woman (as shown in Figure 14), suggesting the characters are Kashi and her family. Another participant portrayed a school and three human characters in the drawing. Two characters (smaller in size) are standing together while one stands apart (Figure 9). It can be inferred that these characters are Manorama, Kashi, and Kunti.
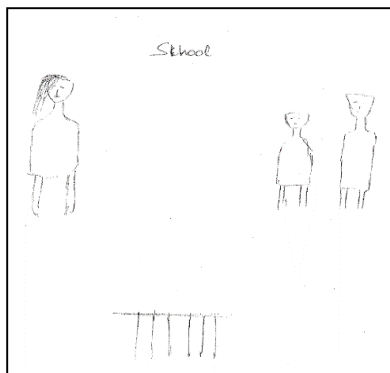

Figure 9. Human characters and school.

Elements Other Than Human Beings

Elements other than human featured in many drawings. Only three drawings did not contain any surrounding natural or manmade elements. Trees, flowers, buildings, gates, tables, and other objects were commonly featured (Figures 9 and 10). Some participants used a building as a background image (Figures 3 and 8), and one participant drew a small a table with objects on it to create the story setting (Figure 2).
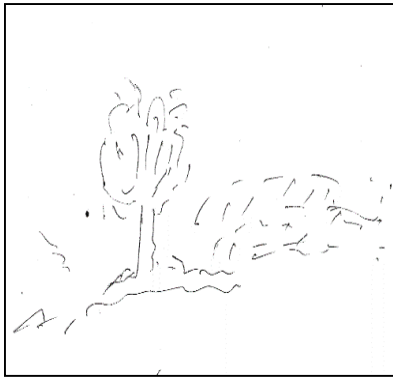

Figure 10. A tree.

Labels and Written Description

Eight participants clearly labeled their drawings after the characters from the story. Some participants instead wrote a short description of the story in their drawings. Labeling of other elements from the story, including the natural surroundings, physical settings, and characters' actions, also occurred (Figures 6, 7, 8, 15, and 16).

Abstract and Symbolic Drawings

Participants' drawings included abstract images and symbols to represent the story's meaning. One participant drew a long bell-like image with human facial features, including an eye and hair on one side (Figure 11), with a tree to one side with leaves falling from it and perhaps a locked door with a cross over it to the other. Another drawing shows a tree and fallen leaves but no character or other story element included (Figure 10). Another participant drew a human figure emerging from a structure (Figure 12). Abstract elements and symbols in the drawings suggest that participants have gone beyond the text and have added elements from their own experiences and backgrounds to their mental models.
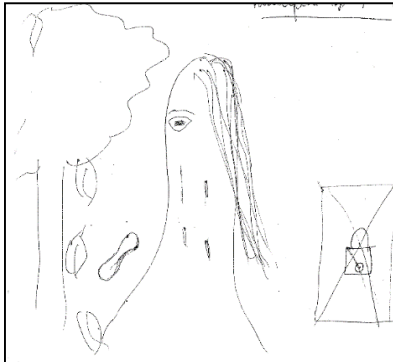
Figure 11. Abstract human face and nature.
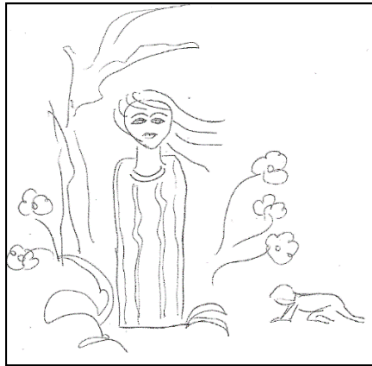
Figure 12. A woman, a child, and flowers

Referencing of Self or Society

Two participants depicted social conditions in their drawings. One of these participants titled his drawing "Helplessness of an Unfortunate Destiny" (Figure 13), and the other participant wrote the essence of the story on the picture she drew (Figure 14): "A poor woman is only to suffer whose individual life is nothing. She gets beaten but still she gets happy when her husband visits her."
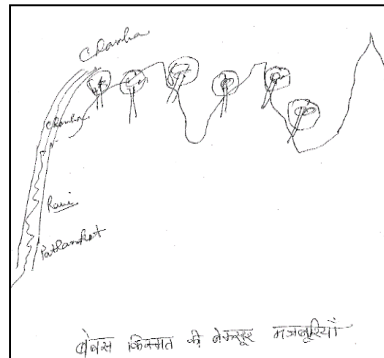
Figure 13. Mountain, trees, and a river.
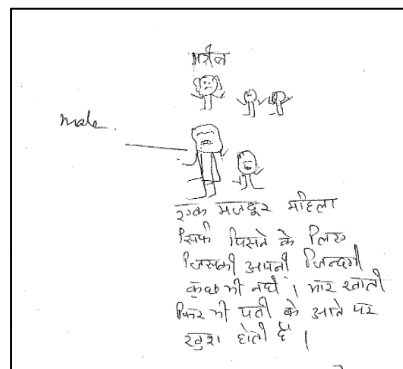
Figure 14. Kashi and her family.

Affect

Affective dispositions of readers determine their emotional involvement with dramas or stories, Zillmann (1994) asserts. Thus affective responses are indicative of how involved the participants are in the story. Affect was discernible in drawings of characters, with expressions of sadness, happiness, fear, and anger clearly visible in the facial expressions. Characters in one drawing look sad, and sadness was visible in the manner mouths were drawn, mostly with an inverted U (Figure 14). Similarly, in another drawing tears flow from one eye (Figure 11). Another shows a human character with wide eyes expressing fear (Figure 8). A few participants drew happy and cheerful faces (Figures 3 and 15), and another drew anger on the face of the lead character (Figure 2). Several figures in other drawings have neutral expressions and are difficult to read.

Figure 15. A mother, a baby, and a door.

Spatial Settings
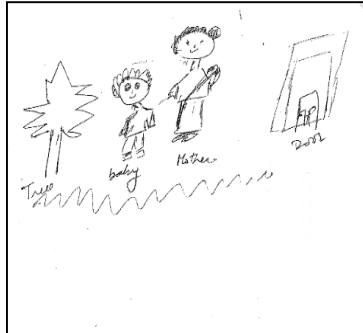
Mental models are perceived as spatial representations readers construct while trying to understand what they read in relation to the spaces where it occurs (Zwaan & Radvansky, 1998). With the narrative describing the inside environment within the house and the natural environment in equal detail, readers constructed mental models using either of the two settings. Most participants chose outdoor settings for their drawings, with trees as a predominant element. These tie in well with the descriptions of trees and nature in the story. The school building where the characters resided formed the background of several drawings. In many cases, the participants drew components of the drawings in proportions that corresponded to story depictions (Figures 1, 4, and 5).

Placement of Details

The intricacy and placement of details in these drawings varied widely. Some participants drew detailed human characters (Figure 3), whereas others drew detailed natural, physical environments surrounding these characters (Figure 13). Drawings with the detailed characters usually showed these characters facing the viewer with clear facial features, expressions, and other physical details (Figures 2 and 3). The drawings with detailed surrounding environments featured trees, buildings, foliage, and natural elements prominently (Figures 9 and 13).

Several participants' drawings included more than one detailed element. For instance, the human character emerging from a structure in one drawing has detailed facial features, and the surrounding natural environment is likewise detailed and prominent (Figure 12). Similarly, another shows a long human-like face with tears flowing from one eye in the center of the picture, but the surrounding trees, leaves, and door are not less prominent (Figure 11). In two other pictures, the trees in the background are prominent along with the human characters (Figures 1 and 5).

Plot or Action Portrayed

Of the 16 drawings, five show the story's plot or action. Arrays of characters depict the story in Figures 7 and 8. One participant drew a flowchart of all the characters in the story, explaining their relationships with connecting arrows (Figure 16). Another participant clearly labeled the scene he drew (Figure 6).
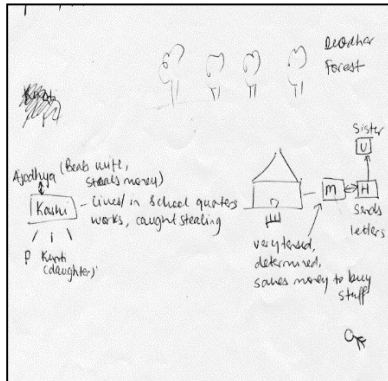

Figure 16. Relationships between different characters.

Coaxial Analysis

Representation of Human Characters and Labels in the Drawings

Participants often included in the drawings a clearly discernible label identifying the human character. In some cases, these labels, such as "Manorama" and "Kunti" in Figure 3, were underlined for more emphasis. One participant drew arrows to clearly depict who was represented by stick figures (Figure 8). One participant labeled a scene from the story "Kashi applying lipstick" (Figure 6).

More Nature, Fewer Humans

Juxtaposing these drawings, it is clear that when the readers drew natural surroundings, human characters were either missing or few compared to other pictures (Figures 9 and 13). In drawings with more human characters, trees and natural surroundings were either missing or were not as prominent as in other pictures (Figures 7 and 14).

Depiction of Actual Story Characters and Level of Detail

Participants who drew actual story characters used great detail. One participant drew characters labeled "Manorama" and "Kunti" both facing front with discernible facial expressions (Figure 3). In fact, the characters are the only feature in the drawing. Another drawing features Kashi prominently, with a mirror the only other element included. It is an action picture, and the participant has captured the scene

of Kashi facing the mirror (Figure 6). In another drawing, the stick figure of a character identified as Kashi is more detailed than the other stick drawings identified as her family members (Figure 7). Kashi has clearly visible facial features and expressions, but the other stick figures in this drawing do not have such details. The finding also holds true for some of the drawings that contained implicit characters from the story (Figure 4).

Participants' Interpretations of the Drawings

Interview data were analyzed to understand the meaning participants lent to their drawings. The interviews yielded information about why participants drew certain human characters from the story and how they associated themselves with these characters. Size, placement, and details drawn on these characters denote meanings about the story's characters and participant involvement with those characters.

Involvement with Characters and Their Representations in Mental Models

Constant comparison analysis of the interviews revealed that participants drew pictures of the characters they were involved with in the story. Explaining this involvement, participants pointed to perceived similarity, empathy for the characters, wishful identification, and admiration for the characters, or a combination of these. Participants empathized with more than one story character but found the character with whom they identified as being mostly positive in attitude, even if they did not like everything about the character.

Participants did not always identify with the main protagonist, Manorama, as she does not appear in the pictures drawn by five participants, including two who did not draw any human figures (Figures 6, 7, 9, 12, and 13). Furthermore, the main protagonist is facing away from the viewer, is less detailed, and is less prominent than another character in two other drawings (Figures 4 and 5). Three characters from the story—Manorama, Kashi, and Kunti—figured repeatedly in these drawings. Participants explained that they identified with these characters. The following sections explain how participants depicted their involvement with characters in their drawings.

Size, Degree of Detail, and Placement of the Characters

The strength of character involvement appeared to impact the size, detailing, and placement of characters in the drawings. In drawings featuring more than one character, the degree of detailing and the placement of the characters revealed varying degrees of involvement with these characters.

For example, a male participant, 26, who identified with Kashi's character, drew only her character in the drawing and labeled it. He tried to draw a specific scene from the story and wrote on his drawing about the scene (Figure 6). He explained:

> Kashi is misinterpreted several times. At the beginning of the story, when she is applying lipstick, Manorama is angry at her. But Manorama does not know that Kashi's

husband is coming. Then later in the story, when Kashi is pregnant and eating from Manorama's kitchen, Manorama scolds her for stealing. I can relate to these incidents. Because many times, people misinterpret me as well. So, I can identify with Kashi.

A female participant, 62, drew Manorama but no other characters, although she drew trees and elements of nature, including a moon in the sky (Figure 1). She explained, "Headmistress is just like how I used to be in my working days. I always had a full-time maid because I was working. Manorama has a lot of sympathy for her maid. That is what we should do."

Another female participant, 63, who identified with Kashi's character, drew Kashi and her family. She labeled the stick figures and wrote her assessment of the story on the drawing (Figure 14). She viewed the story as a projection of male-dominated society, the women playing a subordinate role and always being submissive. Her stick figures followed that hierarchy, varying in size depending on their status the participant perceived it. The male character, Ayudhya, was the biggest character in her drawing even though he had a relatively minor role in the story, followed by Kashi, , and then the three children in the family, who are tiny in the drawing. The participant explained:

Kashi bears everything for her children. She gets scolded by her employer. But she still continues. Because she is poor she has to tolerate everything. Men do whatever they want to; woman tolerate and suffer. All women go through the same things, whether they are rich or poor. It does not matter what they do . . . no one listens to the women.

A 21-year-old male participant drew Manorama's character as the tallest human figure in his drawing and Kunti and Kashi in a corner (Figure 9). He explained:

[I could identify with Manorama.] Had I been in that situation, I would have acted in a similar manner. I think any person would be like her, if put in the same situation as hers. If you are so alone, this is how you would be. I drew Kunti because I feel she is mentally burdened. And I drew Kashi to show her relationship with Manorama; how much Manorama is dependent upon Kashi.

A 21-year-old female participant drew Kunti and Manorama (Figure 4) with Kunti facing the viewer and more detailed than Manorama, who is facing away from the viewer. The participant explained that she strongly related with Kunti but also sympathized with Manorama.

Similarly, another female participant, 30, drew Kunti and Manorama, but Kunti is more detailed (Figure 5). In her interview, this participant described Kunti's character more vividly, indicating she felt strongly for her.

Two participants who did not have a strong association with any characters in the story drew abstract drawings. A male, 66, chose to draw a map of the geographical location rather than portray characters or a specific scene (Figure 13). He explained:

While reading the story I was thinking about the location, where would this school be. So, I drew the location. Like a map. These are the mountains in the drawings. Cool breeze blows here. This is the river. I could not identify with any character; everyone is just suffering.

Another male, 67, drew an abstract depiction of the story, without any character or scene. After finishing his drawing of a tree with falling leaves (Figure 10), he explained, "No, no identification. There is only one male character that I could not identify with. These circumstances are not relatable. My life is different."

Empathy with the Characters

Empathy with characters is a more appropriate way to conceptualize relatedness to narrative protagonists than a definition of identification that depends on external similarities (Slater & Rouner, 2002). Zillmann (1994) defines empathy as "construed by respondents as feeling with or feeling for another individual" (p. 40). Empathy, thus, is taking the perspective of the character in the story and understanding the character's affect. Most participants used the words "I can feel for her" or "I can understand her" while describing why they identified with a particular character even when they did not find similarity with the characters. Participants also empathized with more than one character and, in many cases, drew the images of multiple characters with whom they empathized. In this study, empathy particularly explains why adult participants were able to identify with a child character, Kunti.

A female participant, 30, who identified with Kunti, and also liked Manorama, drew both characters but drew Kunti's character with more detail and facing the viewer (Figure 5). She explained:

I can relate with this little girl, Kunti, because I can understand what this child is going through; how she feels and suffers in the situation. She is not so mature to understand, yet she has to undergo all these sufferings. She is innocent, but she has to go through so much even before she is ready for it. This can happen in childhood.

[Manorama] is a positive character, like her. I can see myself in her character. I think any person will behave like her if put in a similar situation.

Another 21-year-old female participant explained her strong association with Kunti's character and her liking for Manorama's character (Figure 4):

I feel for the little girl, Kunti. She never received any love from her father. She does not get to eat good food. She works but she also gets scolded and shouted at by her mother's employer. She is deprived. She does not have anything similar with me, but I liked her and had pity for her. She was suffering for no fault of her own. Manorama is lonely and is a complicated character. I have sympathy for her too.

A 33-year-old female participant could relate with both Manorama and Kunti equally and drew their images with equal detail (Figure 3). She explained:

> I can understand Manorama because I am also seeking for a baby. Also I was a young child once and I can relate with how Kunti feels. Children do not know how to communicate—that feeling has been portrayed in a subtle manner.

Another female participant, 35, who drew a front-facing image of Manorama in her drawing, explained: "Whatever Manorama is going through, I too have experienced. I can understand her troubles."

A female participant, 60, identified with Manorama's character and drew a detailed picture of her. The other characters—the maid and her family—were relegated to a corner and were devoid of all details. She explained: "Yes, I can relate with the headmistress. She helped the poor. This is what we should do. We should be good to our servant then only will they work for us."

Wishful Identification

Moyer-Gusé (2008) considers wishful identification with characters a part of character involvement where readers admire characters and want to be like them. In this study, some participants admired the character drawn despite a failure to find commonality with them. A male participant, 65, who drew Kashi and her family, admired Kashi's character (Figure 7). He explained:

> These characters are different from me. Difficult to say if I can identify with anyone! But yes, the maid, Kashi. There are some virtues in her that I admire. She has a lot of tolerance, is loyal to her employer. She suffers a lot. But she is devoted to her family. She is responsible and takes care of her children.

For some participants in the study, perceived similarity and wishful identification occur together. For instance, a female participant, 60, who related to the lead character and also wished she could acquire some of Manorama's good traits. She explained: "I can relate with the headmistress. She helped the poor. This is what we should do. We should be good to our servants, and then only will they work for us."

Another female, 62, wished she could embrace some of Manorama's traits. She explained:

> When reading, I felt I should also be like the headmistress. I should be more patient with them. Even if I find my maid doing something wrong, I need to be more patient. I can also be as understanding as the headmistress.

Disagreement with the Characters with Whom Participants Identified

A few participants in this study pointed out to the flaws in a character with whom they identified or expressed displeasure at the way a character that they otherwise liked acted.

A male participant, 26, who identified with lead character, Manorama, said he would do certain things differently if he were in the same situation:

> Manorama had the strongest association with me. But I did not like everything about her. I like her aggressiveness; Manorama has some authority. She is strong and takes her own decisions. But, she has a soft mind. That is where someone can hurt you. It is good to be soft but you have to be careful that you are not hurt. In her situation, I would have done some things differently.

Similarly, a female participant, 35, identified with Manorama but questioned her inability to make timely decisions affecting her married life. She explained:

> I do not agree with the way she is acting . . . she should not suffer like this. She is a headmistress. She is confident to live by herself. She is managing the entire school campus. Why is she suffering like this? One should revolt. She is waiting for the letter as if it is a big thing. Why can't she just write back?

Another male participant, 26, who identified with Kashi, explained the things he would have done differently:

> I know that Kashi is at times wrong also. She should have asked Manorama first, before using her stuff. I am not endorsing her actions or saying that Kashi is perfectly okay. But, this aspect of her personality where she is misinterpreted and judged too quickly is what I can identify with. If I were her, I would have done things differently.

A female participant, 33, who liked Manorama's character, disagreed with some of her actions. She explained:

> I do not want to be like Manorama. I would want to take a decision about my marriage a lot earlier than what Manorama did in the story. Why wait? It only causes pain. She should have taken a stand much earlier.

Character Involvement and Absorption in the Narrative

Involvement with characters and absorption in the narrative plot are interlinked, and this study found that when readers get involved with the story's characters, they get involved in the plot.

A 26-year-old male participant explained:

> I was so engaged in the story as if I had entered into the characters. I wanted to read more about them. I wish I could read some more of it. What happens after all this? What happens with these characters in the end? Some scenes were very strong. Well

described. Like, when the husband is beating his wife. I felt that something is happening around me.

A female participant, 60, explained:

The story was very absorbing. I was curious to know what happens next in their [the characters'] lives. I liked the headmistress's character and found myself agreeing with her.

A female participant, 62, described the story as "very gripping," as she explained, "I was totally enjoying it. I felt if it was happening around me. The characters are real. This is how it happens."

A female participant, 21, explained her involvement with the story:

The story is good. It shows how women have to suffer despite the differences in their backgrounds. I felt as if I was watching a film. The characters are described well; their feelings are well described. I can remember some scenes clearly.

A female participant, 33, explained her liking for the story:

I really liked the story. It was very gripping; very well-written. I felt I was a part of the story. When Manorama is standing near the window and looking outside at the trees and thinking, also when she is looking at the moonlit sky, I liked it. I do the same. I think about the same things. I was totally engrossed in it.

A 21-year-old male described his reading experience as if he were watching a film: "I felt I was watching a film and could imagine the characters and the settings. Like a movie."

Supporting Zillmann's (1994) assertions that a lack of emotional involvement with story characters can lead to an emotionally flat experience, a male participant, 66, explained his lack of admiration for any character in the story and his lack of immersion in the story. He said, "The story is lengthy and slow, and sometimes there is repetition also. The moral of the story is not very clear. This is like an old film. All characters are suffering."

Emphasis on Physical Settings in the Mental Models

Just like human characters, physical settings of story worlds influence how readers construct mental models. Participants in this study demonstrated that the story world in which the characters in the narrative reside helps to construct mental models and, thus, helps the readers connect with the narrative. As for the description of the story, natural elements (trees, moon, flowers, surrounding deodar forest) and human objects (school building, school gate, door, lock) formed a major portion of the drawings. Some participants explained in the interviews why drawing these elements was important for them.

A male participant, 21, who drew a school gate along with Manorama, Kashi, and Kunti (Figure 9), felt that the school gate had a special significance in the story. For him, the gate was another character.

> The writer mentions a gate several times, at least six or seven times. When the gate opens, Manorama wakes up. She thinks about who is entering the premises. She is aware when the gate closes . . . any movement with the gate, and Manorama takes a note of it. That is why I have drawn this gate. . . . She is curious whenever the gate opens and closes. She wants to know what is happening outside.

The participant also labeled his drawing "school" and felt that school premises were the main area of action in the story.

> I have tried to show that Manorama's entire life revolves around the school; there is not much outside this gate. There is not much mention in the story whether Manorama goes out a lot of the school premises. Her whole life is within the school compound. She is not much connected with the world outside this school. She keeps thinking about the school the whole time. All the references in the story are connected with the school.

A male participant, 40, who drew flowers and life around Manorama's lifeless character (Figure 12) explained the contradiction:

> Manorama is surrounded with these beautiful, lively things. I think there is this cosmic dance of beauty around her. She has so much life around her, engulfing her from all the corners with so much aggression. Yet, she is lifeless.

In her drawing of an incomplete woman representing Manorama (Figure 11), a female participant, 33, used the environment to explain how the character felt. She explained:

> There is symbolism. Trees, air, her whole body is affected. She feels as if her environment is stopping her from productivity. She is closed. There is a reference of a door, lock. She wants the door be locked.

Trees in the background also formed an important part of the drawing for a 30-year-old female (Figure 5). The big trees in the background helped the reader connect with the scene. She explained:

> I myself observe nature a lot. That is why I have drawn tress here. Manorama feels the breeze. I like that a lot. I can see myself in the picture . . . enjoying and feeling nature.

Discussion

This study specifically contributes to the understanding of the utility of a mental models approach in studying narrative processing, and possibly to that of persuasion using entertainment-education. What

readers draw after reading, what's on the top of their minds, may correspond to thought-listing techniques used in persuasion research, which demonstrates differing levels of information processing (Petty & Cacioppo, 1996). The study demonstrates that character involvement drives the processing of a story and that identification is a complex construct that does not always include agreement with the characters (Slater & Rouner, 2002). This study demonstrates the following key findings that advance the narrative-processing research.

Involvement with More Than One Character

Depiction of more than one character in the pictures of and the one-on-one interviews with the participants clearly showed that participants can be involved with more than one character in the story. However, the degree of involvement can vary. The readers can feel empathy for more than one character and can easily understand the point of view of more than one character. Even if readers have perceived similarity with just one character, they can like, admire, and empathize with multiple characters in the story. This study demonstrates that readers of a multicharacter story, as used here, try to understand the story from multiple perspectives. This rather complex picture of how readers process characters suggests that simplistic measures of character involvement may overlook multiple identifications and variance among those identifications.

Empathy and Crossgeneration Identification

This study finds that readers can be involved with characters that do not belong to their own age groups. In this study, three participants identified with Kunti's character and were able to understand the story from her point of view. Empathy for the characters, especially crucial to understanding identification with Kunti, appears to be an important aspect of involvement with the characters. It implies that character involvement is possible in people with a considerable age difference from the character.

Crossgender Identification

This study corroborates the findings in the communication literature that readers may identify with a character of the opposite gender (Green & Brock, 2000; Slater & Rouner, 1999), as five male participants in this study were able to identify with the female character and admired her personality traits. No male participants identified with or had empathy for the male character in the story, Ayudhya, who was depicted as a bad husband. Thus, the study highlights that when identifying with a character, readers take into account the character's personality traits and actions and not necessarily gender.

Abstract and Symbolic Mental Models

This study demonstrates that when some readers construct mental models, the essence of the text can be captured in abstract or symbolic images. Some readers need not represent the story elements with exact details to capture the larger idea that narrative descriptions represent. As demonstrated in this study, readers are able to see symbolic meanings of physical elements in the story and to look beyond the human characters to relate with the story. Readers may also draw inferences and add elements from the

story to their mental models that are not originally present. Readers are involved not just with the human characters; they can be equally involved with story settings and can consider physical features as characters in the story. Sometimes, the setting and the location can be the only thing that a reader is able to relate to.

Identification and Details in the Mental Models

This study demonstrates that when readers relate with a character or a setting, they tend to capture a detailed image of it in their minds. Hence, readers in this study drew a detailed image of an element from the story with which they strongly associated. If the readers strongly identify with certain characters, they drew detailed and prominent images of these characters. In other instances, readers highlighted the physical settings described in the narrative, as these physical features, such as trees and mountains, helped them to understand the narrative better, and the readers felt that settings were an integral part of the narrative.

Recall and Recognition in Mental Models

This study also substantiates the assertion that mental models are about capturing the essence of the text and not of recalling discrete detail of what the text was all about (Bower & Morrow, 1990; Johnson-Laird, 2006). Just two participants in this study depicted all the characters in the narrative (Figures 8 and 16). All other participants chose to select portions of the narrative (either human characters or physical settings). Depictions of all the characters in the story in the mental models and depictions of the story's plot or action were rather uncommon, as readers focused more on the essence of the story rather than on all the details when they constructed mental models. Mental models, as suggested by literature and demonstrated in this study, are not about recall and recognition, and communication researchers might be cautious in examining narrative processing by looking at memory outcome variables, particularly when using a mental models approach.

Limitations

One challenge of elicitation of readers' mental models is that these models are constructed in the mind and thus are not available for direct inspection or measurement (Jones et al, 2011). Given that we assume that mental models actually occur while reading a narrative, we do not know whether the drawings represented actual mental models that existed having completed the story or mental models of something particularly salient during reading. The results in this study are compelling regardless. There may be other ways to interrupt the reading of a story at a particular time to further understand how cumulative or situational these models are to readers while in the act of reading. Also, this study focuses on just one story and its reading by a small group of individuals. Further research on different types of narratives, across cultures, and with more participants would yield even more interesting patterns of audience mental models from narratives. A time limitation also applies, as does the issue of capturing a true mental model that's truly meaningful, as a reader might generate many mental models while reading such a story. Another limitation is that I was not the only coder in this study. However, this is common in qualitative research, particularly in exploratory research where the research coder does not have a clear

bias toward the outcome of the coding. Participants' varying abilities to draw can also be another limitation of this study. Also, cause-effect conclusions are not possible to draw from the study.

Future Research

While the present study explores the mental models created by readers of a fictional text, future research should explore in depth how readers' own interpretations of the text are reflected in their mental models. Gerrig's (1993) metaphor of narrative performance could explain how readers construct mental models using symbols, abstractions, additions, and interpretations. Future studies can explore how and when readers add elements to their mental models that are not represented in the original text.

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Appendix A

Interview Guide

1. Please explain what have you drawn after reading the short story? What characters have you portrayed in the drawing? Have you drawn any specific setting?
2. What is the general theme of the story?
3. What characters did you identify with? Have you identified with more than one character?
4. Why did you like each of these characters?
5. Please explain any emotions that you had for the character?
6. Please discuss if, at any time, you felt that you as though you were in the story or you went on a journey within the story?
7. Is there anything in the drawing that tells me something about you?