Motivating Readers to Learn from Fictional Story Characters: Character Identification, Social Contexts, and Interest

A Literature Review

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This literature review explores how characters in fictional children's books may be able to motivate children to learn through the imitation of modeled attitudes and behaviors. First, I investigate a reader's sense of character identification. Character identification is explored by examining how perceived similarity (competence, age, and gender) and relatedness can influence a reader's motivation to learn from the characters in a book. Secondly, I question whether reading is or is not a form of communication and a social activity, including examining the interactions between author/reader and character/character. To support my claim that reading is social in nature, I also examine literature regarding children's interactions with characters from television programs and electronic games. Third, I present research studies on what makes text interesting to children and how children develop story liking. Finally, I offer suggestions for additional research opportunities.

My experience as a lifelong reader leads me to believe that reading fiction can be considered as its own particular type of social activity. Fictional books allow readers to build a relationship with characters as they slowly get to know the characters and understand their motivations and personal histories, much in the way that an individual might interact and build relationships with other people in social settings. However, unlike real life social interactions, readers are given the opportunity to eavesdrop on characters' conversations, metacognition, inner dialogues, and actions. As a social activity, reading provides various levels of social interaction, including relationships built between the author and reader, and relationships modeled between multiple characters in a book (Steinberg & Bruce, 1980). My own area of interest is in how the relationships built between author and reader, and between multiple characters in a book, can perhaps motivate readers to learn the behaviors and content presented in the book's storyline. I am particularly interested in understanding how the storylines and characters in a book can influence children's science thinking and learning.

In this literature review, I examine the current state of knowledge about how fictional book characters can motivate readers to learn. In particular, I investigate theories of achievement motivation to examine how a reader's perceptions of similarity, relatedness, and interest interact to motivate the reader to learn from book text and characters. I will also examine arguments in support and against the concept of book reading as a social activity. In order to gain a broad view of research about characters, I review a sampling of literature from the fields of achievement motivation, psychology, literacy, and mass media. I have chosen to examine my analytical question through the lenses of social cognitive theory, self-determination theory, and socio-cultural theory because these theories suggest that there is a connection between social and/or environmental contexts and people's behavior.

Character Identification

An important factor for fictional book characters' ability to motivate readers to learn is the reader's sense of identification with the characters. Social cognitive theory's concept of *perceived similarity* provides insight into a reader's sense of similarity of competence, age, and gender with a book character. Self-determination theory's concept of *relatedness* is a driver for intrinsic and extrinsic motivation for learning. In the following section, these two concepts are explored in relation to fictional book characters.

Social Cognitive Theory's Concept of "Perceived Similarity"

Bandura's social cognitive theory is concerned with social influences of human behavior, including how people learn by observing and imitating models, when motivated to do so (Pintrich & Schunk, 2002, p.143). Social cognitive theory outlines four characteristics that effective models possess: competence, credibility, enthusiasm, and perceived similarity. The characteristic of perceived similarity

is particularly relevant for analyzing the role that book characters can have on effectively motivating readers to learn modeled behaviors and content. Social cognitive theory, with its focus on social contexts, postulates that perceived similarity between an observer and a model can have positive effects on motivation. When an observer perceives that a model has similar characteristics or traits, the observer may judge the task being modeled to be important, may feel motivated to learn, and may raise his or her self-efficacy for trying the task that is being modeled (Pintrich & Schunk, 2002, p.154). Factors that influence perceived similarity include perceived competence, as well as age and gender.

Competence similarity. Pintrich and Schunk (2002, p.153) assert that the perception of a model's competence can aid observational learning "because students are more likely to attend to and pattern their actions after models who perform successfully than after those less competent." However, the authors warn that if students perceive a model to have greatly superior competence and an ability to perform complicated tasks without error, the model may actually have a negative impact on motivation, causing students to believe they can never achieve that same level of expertise (Pintrich & Schunk, 2002, p.154). This would suggest that book characters who serve as learning models should demonstrate competence in the topic being taught through the storyline of the book, but should not perform flawlessly. Instead, the character should make mistakes and show how mistakes in themselves are opportunities for learning.

Pintrich and Schunk (2002, p.154) also suggest that models are more effective when they are considered to be high status—a social construction—as well as when they demonstrate competence at a level that is "equal to or slightly more" than the student. This suggests that book characters could be created with high status characteristics, which are defined by the authors as "position, job responsibility, or social standing" (Pintrich & Schunk, 2002, p.154). However it seems important to keep in mind that

individual readers will hold their own internal judgment of what does and does not denote high status,

and that the definition of high status will also vary depending on the context of the book's storyline.

Social cognitive theory provides an important distinction between models' level of performance; this distinction seems to apply to book characters. *Mastery models* are models who "perform faultlessly," while *coping models* initially match the "typical fears and deficiencies" of observers, but then grow in their abilities, confidence, and performance (Pintrich & Schunk, 2002, p.155). Pintrich and Schunk (2002, p.155) suggest that "observation of coping models might raise self-efficacy more than mastery models." Along that same line of thinking, book characters who play expert roles and who because of that role are considered to be high status models, if not carefully crafted by the author, could potentially have a negative influence on readers' self-efficacy. Instead of the flawless expert, authors could consider crafting characters who serve as coping models, allowing the reader to join the character on a journey of conquering fears, building self-confidence, tackling new tasks, and increasing their performance.

Age similarity. SCT suggests that age can be a factor when children are presented with peer models or adult models. Pintrich and Schunk suggest that the effectiveness of peer models or adult models vary depending on the level of competence held by the model and the observer's self-efficacy for the task at hand. Adult models may be more effective if a peer's competence is doubted, whereas peer models may be more effective if the adult model's level of competence seems unattainable (Pintrich & Schunk, 2002, p.155). Applying these research findings to book characters, it seems that just as was suggested during the discussion concerning competence, adult-aged characters may make stronger models for young readers if rather than performing as flawless experts, they instead demonstrate the processes of learning, including learning from errors. In comparison, young readers

who have considerably more perceived competence than a child-aged character may be less likely to imitate the attitudes and behaviors that are modeled by the character.

Gender similarity. Social cognitive theory frames observational learning as something an observer learns from the models he or she encounters. Gender can be a factor in an observer's sense of perceived similarity between herself and a model when sex-role appropriateness is important to the task at hand, especially for altering "preconceived ideas on sex-role appropriateness (e.g. boys are good in math, girls are good in reading)" (Pintrich & Schunk, 2002, p.156). To extrapolate this idea to book characters, if an author hopes to counteract preconceived ideas about sex-roles, then he or she may want to consider creating characters that model knowledge or skills that contradict these kinds of preconceived ideas, such as presenting a female scientist or a male kindergarten teacher.

Self-Determination Theory's Concept of "Relatedness"

Self-determination theory (SDT), as described by Ryan and Deci (2000, p.68), focuses on the "social-contextual conditions that facilitate versus forestall the natural processes of self-motivation and healthy psychological development." The theory highlights what it calls three "innate psychological needs" that form a foundation for motivational behaviors: competence, relatedness, and autonomy (Ryan & Deci, 2000 p.68). The theory also examines intrinsic and extrinsic motivation, and the processes of internalizing and integrating regulations in both controlled and autonomous learning environments. For the purposes of this paper, I will focus on self-determination theory's thoughts on relatedness. As defined by Ryan and Deci (2000, p.73), *relatedness* is "the need to feel belongingness and connectedness with others." SDT asserts that relatedness is one of the drivers of intrinsic and extrinsic motivation.

Relatedness and intrinsic motivation. Cognitive evaluation theory (CET), a sub-theory of SDT,

postulates that relatedness—along with competence and autonomy—can influence a person's intrinsic

motivation for an activity (Ryan & Deci, 2000 p.71). The connection between relatedness and intrinsic

motivation is also supported by Vansteenkiste and his colleagues (2004, p.246), who propose that

"intrinsic goal pursuits have positive effects on well-being because they promote satisfaction of the

basic psychological needs for autonomy, competence, and relatedness. Ryan and Deci (2000, p.71),

citing studies by other researchers, report on the likeliness that "contexts characterized by a sense of

security and relatedness" have a positive impact on intrinsic motivation whereas learning environments

that feature detached strangers or "cold and uncaring teachers" can have a negative influence on

intrinsic motivation. Ryan and Deci (2000, p.71) caution that the need for relatedness may not need to

be immediate to the learning situation, but that "at least in a distal sense" relatedness may be

important for the "expression of intrinsic motivation."

Relatedness and extrinsic motivation. A second sub-theory within SDT, organismic integration

theory (OIT), provides more information about the importance of relatedness in motivation. OIT focuses

on the contexts that influence the internalization and integration of extrinsically motivated behaviors

(Ryan & Deci, 2000, p.72). The theory defines *internalization* as "people's 'taking in' a value or

regulation" and *integration* as "further transformation of that regulation into their own so that,

subsequently, it will emanate from their sense of self" (Ryan & Deci, 2000, p.71). Ryan and Deci (2000,

p.73) point out a particularly interesting component of extrinsic motivation and its links to relatedness:

"Because extrinsically motivated behaviors are not typically interesting, the primary reason people

initially perform such actions is because the behaviors are prompted, modeled, or valued by significant

others to whom they feel (or want to feel) attached or related." The authors go on to assert that

relatedness is "centrally important" for the internalization of values or regulations (Ryan & Deci, 2000, p.73).

Taken together, both CET and OIT seem to agree that relatedness is an important driver for the internalization of values or regulations in both intrinsically and extrinsically motivated learning environments. To summarize, when an individual is intrinsically motivated to participate in an activity, then at least in a distal sense, one driver for that motivation may be the individual's overall feeling of relatedness and belonging in their social relationships. When an individual is extrinsically motivated to participate in an activity, relatedness comes into play when people with whom the learner has a positive relationship request a behavior, or model a behavior by participating in it themselves or by expressing how they hold positive value for the behavior. SDT also examines the opposite extreme, when an individual's need for relatedness, competence, and autonomy are not met or are thwarted. SDT suggests that these kinds of contexts can create "alienation and ill-being" (Ryan & Deci, 2000, p.74).

Relatedness and enthusiasm. There is some overlap between how social cognitive theory and self-determination theory suggest that models (such as teachers) can build a sense of perceived similarity or relatedness with learners. For example, enthusiasm is a characteristic that is touched on by both theories. Social cognitive theory suggests that models that show enthusiasm and present information in expressive and dynamic ways may have positive effects on observers' motivational processes, attention, perceptions of task value, and self-efficacy (Pintrich & Schunk, 2002, p.156). However, Pintrich and Schunk warn that the studies conducted by Perry and his colleagues upon which this suggestion was founded were all conducted with older students; therefore caution should be taken when generalizing these findings to younger students, adult learners, and other audiences. While more research needs to be conducted with younger children, it may be helpful for authors to consider the level of enthusiasm a book character holds for a topic area or task and how this enthusiasm is expressed

in thought, words, and actions. In comparison, Turner and her colleagues (1998, p.743) found that teachers who supported high-involvement classrooms tended to "exemplify for their students a respect for and an interest" in the subject being taught, which in this case, was mathematics. The authors suggest that one way this motivation to learn can be shared with students is by "modeling their personal interest" in the subject being taught (Turner et al., 1998, p.743).

Perceived similarity, relatedness, and book characters. The SCT concept of perceived similarity suggests that by presenting models of the same age and gender of the readers, as well as by presenting both mastery and coping models, that a book could have a positive influence on its reader's motivation to imitate modeled attitudes and behaviors. The SDT concept of relatedness suggests that readers may develop a sense of relatedness for a book character who models the qualities of warmth, caring, and inclusiveness in his or her relationships with other characters in the story, and in particular, with the character in the story who is most similar to the readers (perhaps due to similarities in age, gender, and competence). A sense of relatedness may increase an individual's internalization of modeled characteristics, attitudes, or behaviors (Ryan & Deci, 2000, p.73). Both theories suppose that modeled enthusiasm can also be a positive influence on motivation.

The discussion of a reader's sense of perceived similarity and relatedness with book characters stems from a framework of viewing book reading as a social activity that occurs within the reader's social contexts, and the social contexts created by the book characters. The following section presents both support for and against the concept of reading as a social context.

Reading: Is it a Social Activity?

What does social cognitive theory's concept of perceived similarity and self-determination theory's concept of relatedness have to offer an examination of book characters and their influence on reader's motivation to learn the behaviors and actions they model? Both theories provide evidence that social contexts, relationships between models and observers, and the learner's sense of relatedness can all influence a learner's motivation. This question will be approached in four ways: first, by investigating the relationship that a reader develops with the author of a book; second, by examining the relationships that develop between characters and how these relationships are portrayed in a book; third, by examining criticism of the text-as-communication framework which argues that fictional narratives in particular are not social in nature; and fourth by identifying areas for comparison with research on children's electronic games and television programs.

Reading as a Social Activity

Steinberg and Bruce's (1980) article "Higher-Level Features in Children's Stories" summarizes Bruce's social interaction model of reading, which was further developed in his book, *A Social Interaction Model of Reading,* which was in press at the time of the article's publication. The book and the model have been cited by many other authors since its publication in 1981. Bruce's social interaction model of reading frames the activity of reading as a form of communication, which therefore, is a type of social interaction. In this theory, the activity of reading includes the "author-to-reader" level of interaction and the "character-to-character" level of interaction (Steinberg & Bruce, 1980). Steinberg and Bruce's two types of social interactions are described in more detail below.

Author-to-reader relationships. Social cognitive theory's concept of perceived similarity and self-determination theory's concept of relatedness may both provide insight into how an author builds a

relationship with her readers, and through the techniques that the author employs, how readers build

relationships with the characters in books. Steinberg and Bruce (1980, p.5) wrote that their concept of

the "author-reader relationship" is one feature of texts "that may have important influences on

comprehension and motivation." Steinberg and Bruce (1980, p.6) point out that readers cannot know

the true, or historical, author of a text but rather that readers are presented with an implied author.

Similarly, Steinberg and Bruce (1980, p.6) suggest that authors cannot truly know their readers, and

therefore, there is a communication between the implied author and the implied reader.

Steinberg and Bruce (1980, p. 8) suggest that authors may employ techniques—such as choosing

a particular point of view and sharing characters' metacognitive processes and inner speech, a

technique they call "inside view of characters"—to influence the social interactions between the implied

author, the characters, and the implied reader. The concept of "inside view of characters" is an

important component of the author-to-reader relationship because it allows the reader to peer inside

the brain of a character in a way not possible in real life social interactions. This inside view allows a

character's intimate "thoughts and feelings" as well as "perceptions, emotions, ideas, and so on" to be

revealed to the readers (Steinberg & Bruce, 1980, p. 10).

Character-to-character relationships. Book characters may be able to model relationships in the

kinds of ways that real people conduct their relationships, including: showing a sense of security and

relatedness or a sense of coldness and uncaring; supporting autonomous or controlled learning

environments; or demonstrating differences in social status or levels of mastery.

In their social interaction model of reading, Steinberg and Bruce (1980) are largely interested in

the role of conflict in influencing readers' comprehension and motivation for texts. Steinberg and Bruce

(1980, p. 8) suggest that authors may employ techniques—such as "types of conflict, the response of

characters to conflict, and the resolution of conflict"—to influence the social interactions between

characters, as well as the effects these modeled interactions have on the book's readers. However, an important component of a story's conflict is how the resolution of a conflict relates to the readers' "concern for the characters we have come to care about in a story" (Steinberg & Bruce, 1980, p.12). Therefore, conflict is an important rhetorical device in story writing only when the characters' conflicts "are important to them [characters], hence for us [reader]" and when the conflict resolution is somehow related to the character's goals (Steinberg & Bruce, 1980, p.12-13).

How might character-to-character relationships model different types of real life social interactions and influence a reader's motivation for learning? As mentioned previously, self-determination theory suggests that learning environments that feature "cold and uncaring teachers" can have a negative influence on intrinsic motivation (Ryan & Deci, 2000, p.71). As an opposite example, self-determination theory suggests that people who feel a sense of relatedness from relationships that are warm and caring can have a greater motivation for learning, both in intrinsic and extrinsic learning environments. In their research study of children's involvement in mathematics, Turner and her colleagues did not specifically examine children's sense of relatedness to their teachers. However, by examining the teacher discourse that was collected as part of this study, some connections do seem to emerge between teachers that supported relatedness and the high involvement of their students (Turner, 1998). For example, the three teachers in the study who supported high-functioning classrooms showed evidence of the following practices, which could be argued to create a sense of relatedness among teacher and students: discussions with students, scaffolding instruction, positive feedback ("Right!", "You are very quick today," "That is just great," etc.), humor ("What are you? King of the decimal point?!", etc.), and enthusiasm ("That's just great, I love that," "These are kinda cool," etc.) (Turner, 1998).

Criticism of the Text-as-Communication Framework

Dixon and Bortolussi (2001) offer a view of text that somewhat challenges Steinberg and Bruce's concept of text as communication, and therefore as a social interaction. Dixon and Bortolussi (2001, p.1) point out that the fields of discourse processing and literary analysis often rely on the conception that text is communication; however the authors assert that this "is an unproductive and misleading way to think about text and text processing" and especially, fictional narratives. A major tenant of Dixon and Bortolussi's argument is that communication requires a feedback loop, as is experienced in conversations between a speaker and a listener. However, the authors argue that most written discourse does not provide any opportunity for feedback between the author and the reader, as shown in Figure 1.

**Figure 1: An Analogy between Conversational and Textual Communication**
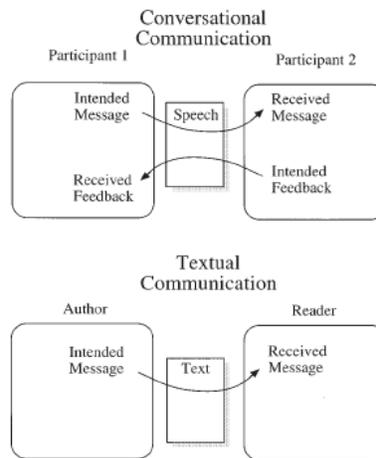
(Dixon & Bortolussi, 2001).

Dixon and Bortolussi present three major problems with the text-as-communication framework. First, the absent-author problem means that "interaction cannot occur because the author is not physically present" and that there is no cooperation between the author and reader (Dixon & Bortolussi,

2001, p.6). Second, the narrator-identity problem means that the narrator most often has an identity

that is separate from that of the author, and therefore, the reader cannot make assumptions or

inferences about the author's intent based on the narrator. Also, the narrator-identity problem points

out that the reader is making inferences not about the true or historical author, but about the narrator,

or perhaps, about the implied author, both of which are constructs created by the true author (Dixon &

Bortolussi, 2001, p.8). Third, the unreliable-intention problem concerns the reader's inability to decode

and infer the true author's original intentions (Dixon & Bortolussi, 2001, p.12).

As an alternative to the text-as-communication framework, Dixon and Bortolussi (2001) present

their feature-construction framework. This framework casts text as a stimulus, rather than as a form of

communication, and omits any analysis of the author or the author's intentions (Dixon & Bortolussi,

2001, p.15). The feature-construction framework for text processing, as shown in Figure 2, examines

text features (such as word meanings, grammatical clues, and metaphors) and how these features lead

to the reader's construction of meaning.

Figure 2: Feature-Construction Framework for Text Processing
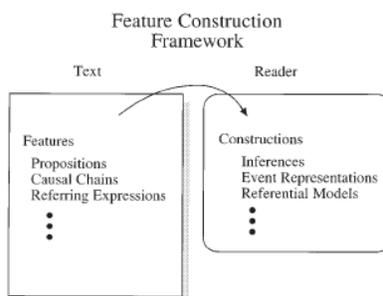
(Dixon & Bortolussi, 2001).

Although Dixon and Bortolussi (2001, p. 22) present their feature-construction framework as

having advantages over the more commonly used text-as-communication framework, the authors do

note that "readers generally process text, including literature, as if it were communication." The authors reference Bruce's social interaction model of reading, and in particular, Bruce's concept of the interaction between the implied author and the implied reader. However, Dixon and Bortolussi classify Bruce's implied author to implied reader interaction as a reader construction. The authors go on to acknowledge Bruce's description of communication between the historical author and the actual reader, but offer their opinion that "this additional layer is neither necessary nor useful" (Dixon & Bortolussi, 2001, p.22). The authors assert their view by stating "because a real communicative feedback loop between the reader and the author does not exist, it is not useful to analyze the text as communication in this objective sense" (Dixon & Bortolussi, 2001, p.22).

Dixon and Bortolussi are concerned with discourse analysis, rather than the actual experience of a reader. The authors do not provide insight into the interactions that occur between characters in a story or the development of a reader's sense of character identification. They do mention, however, that most readers process text as a form of communication, which is generally considered to be social in nature.

The Social Nature of Electronic Game Playing and Television Viewing

The research literature on the social nature of children's reading is minimal compared to the amount of research available on the social nature of children's television viewing and electronic (video and computer) game playing. Book reading, television watching, and electronic game playing are obviously distinct activities that involve the reader/viewer in different ways and in different levels of interaction. However, there are similarities in the ways that these forms of media provide narrative-based storylines, evoke reader/viewer emotions, present a cast of characters (either life-like or

fantastical), and model different types of relationships between characters. Therefore, the literature on television viewing and electronic game playing is of interest to this paper's focus; while at the same time, it is important to exercise caution in extrapolating findings regarding television viewing and game playing to the activity of book reading.

Characters in electronic games. In their investigation of how electronic game characters can be role models for children's development of their self-concept and personality, McDonald and Kim (2001) examined past research studies for evidence of the social nature of electronic game playing. Books, television, electronic games, and films are all types of media that some researchers believe are social in nature. McDonald and Kim (2001, p.243) described a series of case studies presented by Caughey, who conceptualized this type of media use "as a kind of social interaction" where the viewer/reader/player interacts with "characters and people and, by providing additional examples of possible selves, have a major impact on how we perceive ourselves." Caughey developed a process to describe the social interaction between a viewer/reader/player and their chosen media, which "begins with liking a character, gradually changes to identification, then to modeling or imitating one, and finally onto deeper feelings, including love or hate" (McDonald and Kim, 2001, p.243). Caughey's concept of character identification and imitation is supported by empirical studies. Schreiber showed that perceived similarity of age and gender between television characters and viewers increases character identification (McDonald and Kim, 2001, p.243). Reeves and Nass found that "people attribute personality to media and media characters and make explicit comparisons with those personalities and their own" (McDonald and Kim, 2001, p.244). Many other researchers (Cantril, Allport, Charters, Schramm, Lyle, Parker, Mahood, Oliver, and McGrath) have shown that children imitate characteristics of characters from radio, television, film, and electronic games.

Caughey's process of media social interaction, as described above, was supported by McDonald and Kim's 2001 study of children's concept of self and of electronic game characters. In questionnaires and interviews with children ranging in age from Kindergarten through high school, the researchers collected data about the subjects' descriptions of self and ideal self, descriptions of their favorite game characters, and instances of imitation of game characters. While the researchers caution that their results are "tentative," they do believe that their study provides evidence that "children identify quite closely with electronic characters of all sorts, and that these identifications may have important implications for their emotional well-being as well as for the development of their personality" (McDonald & Kim, 2001, p.254). Similar to Caughey's process, the researchers found that their subjects underwent a process where "liking a character is likely to lead to identification with that character, and then to modeling or imitation" (McDonald & Kim, 2001, p.254). These findings suggest that techniques that create media characters with traits that lead to strong character identification, such as perceived similarity and relatedness, may be an important factor in children's concept of characters as role models. In turn, a sense of strong character identification may motivate children to learn—through the process of imitation and modeling—from fictional characters that are presented in various forms of media, including books.

Characters in television programs. In her book, *Children's Learning from Educational Television*, Shalom Fisch (2004, p.178) examined current research literature in order to understand "the social factors that are likely to mediate learning from educational television." Fisch (2004, p.178) guided her investigation into these social factors with the assumption that "the processing that children use to understand social interactions on television is likely to be highly similar to (if not the same as) the processing that allows them to understand live social interactions." Fisch (2004, p.180) cited a variety of studies that supported her assumption that "children attribute personality traits to television characters

along the same dimensions as they use for real people." For example, the researchers Rogoff, Lave,

Wanger, Brownell, and Carriger investigated the ways that children learn from live interactions with real

people, which occurs when children "actively observ[e] adults or peers who are engaged in an activity"

(Fisch, 2004, p.181). Other researchers, including social cognitive theorist Bandura, investigated how

observational learning of social behaviors, including aggression, occurs when children "[observe] the

behaviors of on-screen characters and [listen] to their conversations" (Fisch, 2004, p.180; Bandura, Ross

& Ross, 1963).

A key characteristic of social cognitive theory is the assertion that "people learn much by

observing models, but the knowledge and skills they acquire may not be demonstrated at the time of

learning," rather people must be motivated to demonstrate these newly acquired knowledge and skills

(Pintrich & Schunk, 2002, p.149). The theory has much to offer my exploration of the role of models in

learning, since much of the theory focuses on the ways that people can learn skills and behaviors by

observing models, and the ways that people are then motivated to demonstrate those skills and

behaviors.

Bandura has found that his theory of modeling can apply to television characters; his research

has shown that children learn and imitate aggressive behaviors that are modeled by television

characters (Fisch, 2004, p.184; Bandura, Ross & Ross, 1963). In their often-cited 1963 study, Bandura,

Ross, and Ross studied young children's vicarious learning and use of imitative behaviors when

presented with models who demonstrated aggressive behaviors toward a blow-up Bobo doll. The study

presented three types of models: real-life adult models encountered in-person, real-life adult models

portrayed on a film, and cartoonish characters portrayed on a film (Bandura, Ross & Ross, 1963, p.4).

The researchers found that children that watched any of the three models (including even the cartoon

characters) demonstrated "nearly twice as much aggression than did subjects in the control room who

were not exposed to the aggressive film content" (Bandura, Ross & Ross, 1963, p.9). The authors suggested that "pictorial mass media, particularly television, may serve as an important source of social behavior for young children" (Bandura, Ross & Ross, 1963, p.9). An interesting opportunity for further research would be including a fourth type of model into this type of study: an adult model portrayed through story text.

In her investigation of the social nature of educational television, Fisch presented a series of features that may make some television characters more "appealing or attractive" to viewers, which can be compared to the concept of character identification. In fact, the concept of perceived similarity is included in Fisch's list. These character features include:

- Character's physical attractiveness.

- Character's behavior (especially smart and helpful behaviors).

- Character's role as protagonist in the story (this relates to Bandura's concepts of observational and vicarious learning, as the reader tends to take on the perspective of the protagonist character).

- Character's similarity with the viewer, specifically gender, ethnicity, and age (it is interesting to note that children seem to prefer characters that are slightly older).

(Fisch, 2004, p.184-5).

Similar to McDonald and Kim's findings regarding children's identification with characters in electronic games, Fisch proposes that certain features can create characters with whom children can identify with and from whom they may observe and imitate. McDonald, Kim and Fisch seem to agree that children's interactions with media (including radio, television, film, electronic games, and books) are social in nature, and that these social interactions depend on children's sense of liking and identifying with a character.

Interest

What is it about a fictional book that makes a child like it or dislike it? Perhaps the child sense similarities between himself and a character. Perhaps the child values the relationship built between himself and the characters in the story. Maybe there is something in particular about the story that captures the child's interest and because of that interest, motivates the child to continue reading and learning from the book. Within the field of achievement motivation, socio-cultural theory provides some insight into this question by examining the role of interest in motivation.

Socio-Cultural Theory's Concept of "Interest"

Socio-cultural theory is concerned "with the internalization of social phenomena by the developing child" where the "origins of motivation are social but the outcome is individual" (Nolen & Ward, 2008, p.429). The theory examines the concept of interest through two lenses: situational and individual. Pressick-Kilborn and Walker (2002, p. 159) define *situational interest* as: being triggered by a situational stimulus which triggers an emotional state; being short-lived and rather superficial; and incorporating catch factors that initially trigger interest and hold factors that maintain interest. The authors define *individual interest* as being a somewhat stable and enduring orientation toward an activity, topic, event, or idea that holds personal significance for the individual (Pressick-Kilborn & Walker, 2002, p.160). Socio-cultural theorist Renninger proposes that person-environment transactions are crucial for the development of individual interest. As quoted by Pressick-Kilborn and Walker, Renninger wrote that "well-developed individual interest cannot develop without the continued challenges that stem from modeling, opportunities to apprentice, and interaction with others and text" (Pressick-Kilborn & Walker, 2002, p.162). Pressick-Kilborn and Walker (2002, p.162), in reviewing the

work of other researchers, suggest that situational interest may develop into individual interest, and that "it is evident that situational and individual interest interact with, and are influenced by, each other."

The following sections will investigate the characteristics of text that make it interesting to readers and the process by which readers develop story liking.

Interestingness of Text

What makes text interesting to its reader? Anderson, Shirey, Wilson, and Fielding (1987, p.287) define *interest* as "the capacity of material to evoke an emotional response in children." In investigating what makes text comprehensible, some literacy researchers examine *topic interest*, which is defined as personal preference for a topic (Wade, 1992, p.256). In a review of other researchers' findings, Wade (1992) discusses the concepts of personal relatedness, character identification, and emotional interest as factors that can increase a reader's topic interest.

Interest and personal relatedness. Wade (1992, p.258) discusses Schank's idea that topic interest can be influenced by personal relatedness to characters. Schank's concept of personal relatedness to story characters can be compared to self-determination's theory of relatedness as an influence on learning motivation. Wade (1992, p.259) provides the following example that illustrates this point: "whether people experience personal relatedness is dependent on the people they know [as defined by self-determination theory] and the kinds of characters and events they identify with."

Interest and character identification. Wade (1992, p.259) discusses the work of Anderson, Shirey, Wilson, and Fielding by focusing on their concept of *character identification*, which she notes is "similar to Schank's notion of personal relatedness." As she puts it simply, "people are likely to be interested in characters with whom they can identify" (Wade, 1992, p.259). As described by Anderson et

al. and elsewhere in this paper, character identification is most likely to occur when there is perceived similarity between the reader and the character, so that "the character matches the reader in sex, age, lifestyle, and values" (Wade, 1992, p.259).

Emotional interest. Wade (1992, p. 259) also draws connections between personal relatedness, character identification, and Kintsch's idea of *emotional interest*, which is defined as being "aroused when events have a direct emotional impact...and when stories invite a vicarious experience in the reader."

Development of story liking

Jose and Brewer (1984) studied children's development of story liking by examining the effects of three variables: character identification (as measured by perceived similarity of age and gender); character valence (which is described as whether the character is good or bad); and the story's overall sense of moral justice (described as Lerner's "just world hypothesis" where good characters prevail over bad characters and the story ends with a good outcome). The researchers worked with second-, fourth-, and sixth-grade students, and focused exclusively on stories that were written in the style of the suspense genre. The subjects were given packets, each which contained four different stories for them to read (the second-grade students had the stories read aloud to them due to their difficulty with reading level). Each of the four stories varied in regards to the main character's gender (male or female), age (adult or child), valence (good or bad), as well as the story's outcome valence (positive or negative). After reading the four stories, the subjects were given a set of ten affective scales that were designed to elicit their thoughts about perceived similarity, character liking, care for the character, imagining becoming the character, story suspense, story outcome, and if the story plot was exciting, surprising, and/or sad.

Jose and Brewer created a structural model of story liking to predict the effects of character

identification, character valence, and the just world hypothesis. Their initial model is presented below in

Figure 3.

Figure 3: Predicted Path Model of Story Liking

DEVELOPMENT OF STORY LIKING
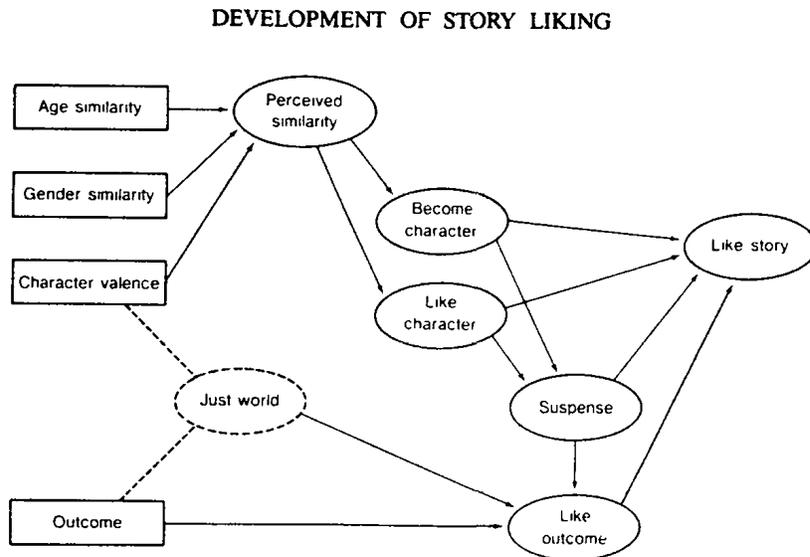
Figure 1 Predicted path model of story liking. (Independent variables are signified by rectangular boxes
and dependent variables by ovals The just world variable is an orthogonal interaction term of character
valence and outcome valence and is represented by a dotted oval Solid arrows represent predicted paths.)

(Jose & Brewer, 1984).

As a result of their study, Jose and Brewer (1984) found that in general, a young reader's sense

of perceived similarity with a story character increased character identification, which in turn, increased

the reader's sense of suspense from the story plot. This sense of perceived similarity was strongest

among characters that were the same sex as the reader and that were portrayed as being good,

whereas age did not seem to affect perceived similarity (Jose & Brewer, 1984, p.915). Jose and Brewer

(1984, p.915) also found that good characters were better liked, that stories that featured good

characters were also better liked, and that readers were more likely to imagine becoming a good

character than a bad character. While the researchers did report overall findings that were applicable

across age groups, they also reported noticeable developmental differences among the age groups.

Developmental differences in story liking. Jose and Brewer (1984, p. 918) found several

differences in how children of different ages developed story liking and empathic identification with

characters, which may be related to their developmental stages. The authors described three

developmental trends in the readers' story liking:

> First, the second graders' path model includes a path from perceived similarity directly to like story. By fourth grade the more mature form is evident; similarity exerts an indirect influence on story liking through character identification. Thus, older children are better able to integrate the processes of perceiving similarity between themselves and characters, identifying with the characters, and liking the story (Jose & Brewer, 1984, p.919).

The authors note that it is not until sixth grade that empathic identification with a story character (when

a child imagines becoming a character) becomes part of the process of developing story liking, which the

authors attribute to young children's less developed metacognition skills (Jose & Brewer, 1984, p.920).

Jose and Brewer also found that children from the different age groups seemed to be differently

affected by the variables of age similarity, gender similarity, and character valence. In second grade

children, character valence, but not age or gender similarity, affected the readers' sense of perceived

similarity with the story character. In fourth grade children, character valence and gender similarity, but

not age similarity, affected perceived similarity. However, in sixth grade children, all three variables,

including age similarity, had an affect on the readers' sense of perceived similarity. These findings

suggest that depending on the age of the readers, a story character's personality traits and physical

features may have a stronger or lesser impact on the readers' development of character identification.

Younger children tend to identify more with good characters, while older children identify more with

characters that are also similar to them in age and gender. These findings may provide implications for how book authors choose to develop the personalities and physical traits of their fictional characters.

Implications

My interest in examining how book characters can motivate readers to learn is triggered by my desire as a writer to create characters that can effectively motivate young children to learn science. I am interested in developing a character development framework that can help guide my own process of creating and using fictional characters that effectively model positive attitudes and behaviors toward science.

In her book, *Children's Learning from Educational Television*, Shalom Fisch (2004) presented a list of characteristics for effective educational children's television programs that teach science concepts, which is applicable to my own interest of authoring books. Fisch examined the findings from a variety of research studies on children's learning of science content from educational television shows such as *3-2-1 Contact*, *The Magic School Bus*, *Cro*, and *Bill Nye the Science Guy*. From that research, she developed a list of characteristics for effective science television programs. From Fisch's list, I have chosen several of these characteristics that are applicable to the discussion of children's science learning from television characters and from book characters. Note the mentions of interest and perceived similarity in these characteristics:

- "Choosing topics that are inherently interesting to children and relevant to their lives.
- Including characters whom viewers see as competent and intelligent, and with whom they can identify—particularly characters who are slightly older than the target audience.
- Embedding science content in a dramatic narrative.
- Embedding content in a context of problem solving in which characters continually revisit and refine their solutions to make them more effective.
- Presenting experiments in ways that children can replicate at home."

(Fisch, 2004, p93-4).

Through the process of reviewing existing literature on book characters, motivation, and interest, I have discovered a general lack of research on fictional book characters in comparison to the research on fictional characters in television programs or electronic games. I see an opportunity for researchers to conduct more research that is specific to the effects of text-based characters on children's motivation to learn, on the ability of text-based characters to serve as role models, and on creating a framework for effective character development. In addition, I believe there is an opportunity to take some of the studies that have been conducted on television viewing and electronic game playing and to attempt to replicate these studies with text-based narratives. For example, the study on children modeling aggressive television characters conducted by Bandura, Ross, and Ross could be replicated and expanded by adding two more models: an adult model and a child model, both presented in the form of a text-based story. The results of this type of replication will provide researchers with an understanding of whether or not research on television and electronic games is at all relevant to children's interactions with text-based book characters.

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