This study examines whether the humor forms found in children’s picture books published within the last five years meet the cognitive needs of the preschool-age child. A review of the literature on cognitive development and the stages of humor development will shed light on what types of humor are understood and appreciated by three to seven year olds from a developmental perspective. A sample of humorous picture books was selected for analysis and coded with the types of humor present in each. The results reveal that picture books are using developmentally appropriate types of humor, although types of humor relevant for younger or older stages of development are also found in the samples.

Headings:

Humor in literature

Humor in children

Children – Books and Reading – United States

Children’s literature – History and Criticism
HUMOR IN CHILDREN’S PICTURE BOOKS

by

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A Master’s Paper submitted to the faculty of the School of Information and Library Science of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Master of Science in Library Science

Chapel Hill, North Carolina

November 2010

Approved by

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Introduction

Appreciating humor is part of human nature. The distinctions that have often been considered as defining humans as unique from other animals include language, high mental capacity and a sense of humor (McGhee, 1979). It is important to understand the differences between adult and child responses to different types of humor when evaluating humorous children’s literature. This can be done through studying the developmental process of the formation of a sense of humor and the contextual factors influencing a developing child (Kappas, 1967).

Humor can generally be defined as something that makes people laugh or smile (Bariaud, 1989). Many researchers assert that humor is based in cognitive ability rather than emotion, and is the cause of comic laughter (as opposed to laughter caused by general excitement). Humor can be visual, such as a cartoon or awkward body movement, or verbal, such as a joke or use of a nonsensical word. At times humor can be difficult to pinpoint, especially when dealing with young children with limited communication skills (Bariaud, 1989). While level of cognitive development is important in understanding what makes people laugh, humor can also be affected by cultural differences, generational differences, gender and personal preference (McGhee, 1979).

Humor can be accidental, depending on the circumstances. Someone in a playful mood may experience something to be funny, while others in a more somber mood may
take it seriously. More often, humor is intentional and produced to amuse a certain audience (Bariaud, 1989).

Most people recognize the dynamic functions of humor and laughter in modern society. Perhaps that is why comedy is actively created and sought after. Many researchers emphasize the social function of humor, although few have studied it due to the difficulty of empirically observing humor in unstructured, natural social interactions (Semrud-Clikeman & Glass, 2008). Humor serves a variety of social functions, including strengthening relationships, maintaining group cohesion, relieving stress, maintaining appearances and expressing negative emotions in a socially acceptable way. McGhee (1989) refers to humor as a social lubricant, easing otherwise tense social interactions.

Research has not overlooked the usefulness of humor in regulating and expressing emotions. The father of psychoanalysis Sigmund Freud (1905) discussed the role of humor as a means of expressing subconscious and anti-social desires such as rage, confusion or sexuality. Jane Wolfenstein (1954) describes humor as an emotional expression of negative experiences that often helps an individual to cope with and adapt to the environment in which they live.

For children, humor is also tied to cognitive development. Humor comes naturally to the growing child; an infant begins smiling a few weeks after birth and laughing around four months of age (McGhee, 1979). As children grow, they integrate richer knowledge and cognitive tools into their natural facilities, allowing them to understand and appreciate more complex forms of comedy (Semrud-Clikeman & Glass, 2008). Adults bewildered by what children find hilarious often fail to take into account the child’s perspective from their specific developmental viewpoint (Tamashiro, 1979).
Purpose of Study

The purpose of this study is to examine whether the humor forms found in children’s picture books published within the last five years meet the cognitive needs of the preschool-age child. A review of the literature on cognitive development and the stages of humor development will shed light on what types of humor are understood and appreciated by three to seven year olds from a developmental perspective. A sample of humorous picture books was selected for analysis and coded with the types of humor present in each. The results reveal whether picture books are using developmentally appropriate types of humor, or whether the humor present is more suitable for an audience of a different age.

Awareness of the developmental stages of humor provides adults that have daily contact with children, (such as parents, teachers, school and public librarians and social workers) with knowledge of the simpler forms of humor appreciated by children, and what children may attempt to communicate through humor (Bariaud, 1989). This study encourages adults to take an interest in the humor that is present in children’s picture books. Understanding how humor relates to cognitive development also improves our understanding of the complex developmental building blocks on which adult humor is based (Bariaud, 1989).

Adults must be aware that what they themselves find funny may be puzzling, confusing or fear-inducing for children (Southam, 2005). It is important for authors writing for children, or librarians, teacher and parents selecting books for children to be aware of the stages of cognitive development and choose books that are developmentally appropriate for a specific age group (Tamashiro, 1979; Southam, 2005). Accurately
selecting the appropriate types of humor will help children to develop a lifelong appreciation of reading through pleasure, intellectual stimulation and understanding of their own experiences.
**Literature Review**

The cognitive view of humor proposes that humor develops in distinct stages corresponding with other aspects of childhood development such as physical, intellectual, social and language skills. Advocates for the cognitive view such as Paul McGhee (1971, 1979) often base their work on the theoretical framework of the developmental psychologist Jean Piaget (1963). Studies such as McGhee (1971) have found a significant positive relationship between advancing cognitive development and comprehension of humor. The cognitive approach assigns stages based on the cognitive resources available to children at certain ages and correlates them to the level of humor that the child is able to comprehend (McGhee, 1971). Cognitive theorists believe the way an individual experiences the world changes as they progress through different stages of development (Tamashiro, 1979).

There is little dispute among psychologists that humor results from producing or comprehending an incongruity. Incongruity refers to the simultaneous occurrence of incompatible elements based on a normal understanding of how the world works. In order to comprehend a joke, the recipient of the joke must be able to understand relationships between elements on two levels: how they are in the joke and how they are normally (Bariaud, 1989). When an unexpected arrangement of events occurs, tension is created that causes a feeling of surprise or alarm. When the individual cognitively restructures this incongruity and perceives it as humorous, laughter releases the tension and pleasure is produced (Southam, 2005).

Paul McGhee is one of the leading researchers in the field of cognitive development and humor, and has done several studies (1971, 1979) on humor incongruity.
and resolution throughout different developmental stages of childhood. According to McGhee (1979), humorous situations work psychologically to activate familiar schemas (verbal or mental representations) in the individual based on internalized past experiences of how things work and relate to one another. When the familiar schemas are challenged by incongruity, humorous feelings can result, along with other emotions depending on the situation, such as fear or confusion. In order for an incongruity to invoke laughter instead of more negative emotions other components, such as a sense of play, must be present (Bariaud, 1989).

Humor is often experienced as a social exchange, and the creation of a playful framework or context can decide whether an incongruity incites smiling and laughter or other negative emotions. McGhee (1979) refers to this context as the play state. Humor cues, such as the lead-in to jokes, style of drawing in comic illustrations or identification of main characters all help to communicate to a receiver that the situation is meant to be fun (Bariaud, 1989). Children need these cues even more than adults to be sure that the incongruity is playful and not threatening or bizarre, since they have less experience and understanding of the world (Bariaud, 1989). As children grow and are assimilated into the culture through television, books and pictures, they become better at decoding the cues and rules behind what is and is not humorous (Bariaud, 1989).

McGhee (1979) developed a theory of humor development in four stages, based closely on Piaget’s (1963) stages of cognitive development. For the purpose of this study, McGhee’s stages will be the basis on which all types of humor are categorized and compared. McGhee’s four stages are:

*Stage 1: Incongruous Actions Towards Objects (18-20 months)*
A child at this age will be seen engaging in lighthearted pretend play with an object and manipulating its usual functions, such as using a banana as a telephone, or a bowl as a hat. The child understands the difference between what the object is intended for in reality and how they are using it in play and finds humor in the fantasy.

Stage 2: Incongruous Labeling of Objects and Events (20-24 months)

While McGhee (1979) indicates that there is some overlap between the first and second stages, stage 2 is marked by the child using verbal statements alone to create incongruities. This can include silly rhyming or using nonsense words.

Stage 3: Conceptual Incongruity (2-7 years)

Children begin using words to refer to classes of objects or events. They recognize an object as a concept that includes multiple characteristics, such as the concept of “dog,” which implies an animal that has four legs, a tail and barks. When any aspect of the concept is disturbed, humor is the result.

Stage 4: Multiple Meanings (7-11 years)

A child in the fourth stage uses cognitive reasoning to analyze multiple aspects of a situation. Social and cultural influences strongly influence what children find funny and how they react to humor.

The four stages of McGhee’s theory reflect the cognitive progression that a child must go through in order to comprehend the complex forms of humor that adolescents and adults appreciate. This progression of humor corresponds simultaneously with physical, emotional and social developments within the child (Southam, 2005).
### Table 1

**Parallels Between Cognitive and Humor Development**

<table>
<thead>
<tr>
<th>Age</th>
<th>McGhee’s Humor Stage</th>
<th>Piaget’s Cognitive Stage</th>
</tr>
</thead>
</table>
| 18-24 months | Stage 1: Incongruous Actions Towards Objects  
Child playfully manipulates an object in a way that demonstrates knowledge of its properties, but is incongruous with usual uses | Sensorimotor Stage  
Child can use symbols, such as gestures, pictures and words, and can pretend. |
|           | Stage 2: Incongruous Labeling of Objects and Events  
Child uses language for fun and to engage others. Verbal statement along created incongruity, e.g., nonsense words and silly rhymes | Preoperational Stage  
Symbolic use and pretending becomes more sophisticated. Understands identities, cause and effect, and numbers. Able to classify and categorize. |
| 2-7 years | Stage 3: Conceptual Incongruity  
Deliberately violates expectations of objects and words to create humor. Likes to joke about areas of functioning that have mastered, e.g., coordination, toilet training | Concrete Operations  
Thinks logically and uses mental operations to solve concrete problems. Can take in multiple aspects of a situation. |
| 7-11 years | Stage 4: Multiple Meanings  
Understands words with ambiguous or double meanings. May move from pro-social jokes to antisocial jokes and teasing. |                                                                                           |


There is some debate among researchers over whether an incongruity must be resolved in order to provoke humor. Supporters of this theory such as McGhee (1979), Freud (1905) and Schultz (1972) suggest that the receiver of a joke must go through a process that explains the incongruity and justifies the incompatible elements, at which point they find new meaning which produces a feeling of amusement. Schultz’s (1972) cognitive theory of humor development includes only two stages. In the first stage the child recognizes that expectations have been violated, and in the second stage the child engages in problem solving in order to reconcile the incongruous event. McGhee (1979) believes that the need for resolution begins with the developed capacity to rationalize and understand incongruities, around the age of seven. He defines true incongruity humor as
abstract and conceptual, and asserts that humor appreciated before reaching Piaget’s concrete operational stage is simply “novelty humor” (McGhee, 1971).

Limitations of the Cognitive View

The cognitive view of humor development relies on distinct stages that all individuals must progress through. This does not account for transitional periods that occur between stages. During a transitional period, a child may display characteristics of both stages at once (McGhee, 1971). While psychologists refer to specific ages when discussing stages of development, adults working with children should be careful not to automatically assign a child to a specific stage based on age alone. Each stage can include a wide range of ages, although the earliest stages rarely occur after childhood and the later stages are rarely achievable before adolescence (Tamashiro, 1979). Children are individuals who develop physically, emotionally, and cognitively at their own pace.

Developmental Origins of Humor

The cognitive approach to humor development asserts that as the child grows intellectually their capacity to understand and appreciate more intricate forms of humor progressively increases until it reaches an adult level of complexity. Thus the development of cognitive tools is a prerequisite for humor development (Bariaud, 1989).

Some researchers (Zigler et al., 1966) argue that the appreciation of comical material increases when the individual is cognitively challenged by comprehending “the point” of a joke. While adults and children can still find pleasure in jokes that fall beneath their level of cognitive ability, they find more enjoyment in the exercising of a recently mastered cognitive skill. This research suggests that adults who attempt to use humor with children (such as authors writing children’s picture books) will be more
effective if they understand and match their material to the developmental level of the intended audience (Bariaud, 1989).

**McGhee’s Stage 1 and Stage 2**

McGhee (1979) argues that humor originates at about 18 months of age when the child begins to engage in pretend play. This marks the beginning of the first stage of McGhee’s (1979) theory of humor development: *incongruous actions towards objects*. At this age and developmental stage individuals develop capacities for symbolic thought through which objects, people and events can be mentally represented. During pretend play, an object is utilized in a way that differs from how it is normally used. The child understands how the object is normally used and chooses to utilize it in an incongruous manner that does not change the schemas that the child has already created around the object. McGhee refers to this process of incongruous pretend play as *fantasy assimilation*. As adults, we participate in fantasy assimilation when we momentarily free ourselves from reality and accept incongruities in order to have a laugh (Bariaud, 1989).

**McGhee’s Stage 3**

McGhee (1979) asserts that the emergence of conceptual thought around the age of three brings about new advances in humor. At this age children begin to understand that a single word does not refer to just a single object, but a category of objects with similar features (Bariaud, 1989). For example, the word “cow” refers to the concept of a class of cows that have four legs, eat grass, and produce milk.

Preschool age children, (or children between three and seven years of age) are the audience of the picture books analyzed in this study. McGhee’s (1979) theory of the
development of conceptual categories during the preschool years (or Piaget’s preoperational stage) insists that children between the ages of three and seven are particularly amused by categorical incongruities. An example of this is a monkey brushing its teeth, or a dog that whistles while taking a bath (Bariaud, 1989).

There are certain comical incongruities that appeal more to preschoolers than other age groups due to the preschooler’s newly acquired understanding of categorical concepts. Visual humor through pictures aimed at this age group would include the physical alteration of objects, people and animals (Bariaud, 1989). This could include the addition or removal of elements or deformations, such as a man with only one eye or a three-legged bird. Distortion of sizes, such as making someone very tall, very small or wearing gigantic shoes is also likely to insight laughter in the preschooler. Another visual humor device is the transfer of features from one category to another, such as a duck wearing a hat or a man with dog ears. Disguises, such as masks, clowns, false mustaches and carnival characters invoke a fun, festive atmosphere that adds comic value to an image (Bariaud, 1989).

Comical behaviors and situations are also enjoyed by preschoolers, although the incongruous elements used are often based on multiple components and require a higher degree of intellectual complexity (Bariaud, 1989). Absurd or abnormal situations include social incongruities, such as a girl pushing an old man in a stroller or a man riding a dog. Pranks and mishaps can be enjoyed by some three to seven year olds, such as a man falling into a bucket or a boy ringing a doorbell and running away (Bariaud, 1989). McGhee (1971) states that children in Piaget’s preoperational stage also find humor in
pretend activities, with objects or people acting as if they were something or someone else.

Language also lends itself well to humorous situations through the implicit violation of linguistic rules (Bariaud, 1989). The verbal expression of categorical incongruities through nonsense words, rhymed sequences or hearing words with unexpected pronunciations is alluring to the preschooler. At this stage, the humor is more about the distortion of the sound of a word rather than the meaning created through the distorted word play (Bariaud, 1989). The twisting of normal sounds and appearances amuse the three to seven year old, such as a person mooing like a cow or speaking in a high pitched voice. Non-language sounds can also get a laugh out of children in the preoperational stage (McGhee, 1971). The nonsensical stringing together of words (such as “flooty-floo” or “ring-a-ling-ding”) falls under this category of word play. Use of homonyms, or words that are pronounced the same but have different meanings (“she ate eight dates”) can amuse some children with more complex verbal abilities (Bariaud, 1989).

McGhee’s (1979) research suggests that preschoolers often do not have the cognitive abilities necessary to resolve incongruities on their own, and therefore do not need resolution to find humor in a joke. The mere presence of an abnormality is enough to produce laughter, without the desire to find meaning behind the joke. For example, a child may ask a friend, “What do cows do on the weekends?” When the friend does not know, the child will answer, “They go to the moo-vies.” Older children will find humor in the interplay between the sound that cows make (“moo”) and the word “movies.”
Preschoolers may not be able to intellectually grasp this wordplay and will laugh at the simple absurdity of a cow going to the movies (Singer & Rummo, 1973).

**McGhee’s Stage 4 and Beyond**

After the early school years, major changes occur in an individual’s communication abilities, cognitive development and ability to regulate emotions (Bariaud, 1989). These changes are directly related to humor development and appreciation.

In McGhee’s (1979) model, the age of seven marks the fourth stage of humor development, which is related to the emergence of Piaget’s concrete operational thinking (1963). The child begins to think beyond categorical relationships and understands more logical relationships between multiple objects, people or events. More complex, abstract and implied incongruities are able to be comprehended at this stage (Bariaud, 1989). The child is also better at expressing the reason for their amusement (McGhee, 1979). Schultz (1972) also theorizes that the preference of incongruity with resolution emerges around age seven, whereas younger children are able to find humor through incongruity alone.

Social influences also become more apparent as children approach adolescence. Semrud-Clikeman and Glass’s (2008) study with both normal and learning-disabled children found that social perception goes hand in hand with cognitive development in older children. Children in stage 4 also become more adept at picking up on humor cues and understanding the implications of a humorous situation (Bariaud, 1989). The child learns what is recognized as funny in the culture in which they live and is guided to develop socially appropriate reactions and behaviors (Southam, 2005).
As the child grows past the age of seven and fully enters the concrete operational stage, abstract incongruity surrounding social norms and customs becomes more popular, as well as imitation of other’s social conduct (Bariaud, 1989). This social derision reaches full expression in the adolescent and adult years (Bariaud, 1989).

While individuals primarily enjoy jokes that match their current level of developmental capabilities, they may still find enjoyment in humor found at previous stages (Tamashiro, 1979).

Table 2

Types of Humor Appreciated at Different Developmental Stages

<table>
<thead>
<tr>
<th>Age</th>
<th>Corresponding Stage(s)</th>
<th>Pictorial Humor Types</th>
<th>Verbal Humor Types</th>
<th>Situational Humor Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 years</td>
<td>McGhee’s Stage 1 and Stage 2 Piaget’s Sensorimotor</td>
<td>• Non-language sounds • Nonsense words • Rhyming • Erroneous labeling of objects</td>
<td>• Pretend play with objects • Tickling and body contact</td>
<td></td>
</tr>
<tr>
<td>2-7 years</td>
<td>McGhee’s Stage 3 Piaget’s Preoperational</td>
<td>• Objects with incongruous features • Physical deformities • Caricature and exaggeration • Masks, clowns</td>
<td>• Joke telling • Repetitious rhyming • Slapstick</td>
<td>• Mastered skills • Body parts and potty humor • Pranks and mischief • Clumsiness</td>
</tr>
<tr>
<td>7+ years</td>
<td>McGhee’s Stage 4 Piaget’s Concrete Operations</td>
<td>• Puns • Knock-Knock jokes • Irony • Satire • Riddles</td>
<td>• Teasing • Social mistakes made by peers • Practical jokes</td>
<td></td>
</tr>
</tbody>
</table>
Limitations of Humor Studies with Children

The general models of cognitive development presented in this study are based on meticulous research observing children in experimental and natural environments. However, there are some methodological problems naturally occurring from humor research with children (Bariaud, 1989). Children as young as three years of age have limited expressive capabilities, which is one of the main difficulties in identifying what is humorous and what is not. Since preschoolers often find it difficult to give reasons for their reactions, the researchers must have a great deal of knowledge about each child in order to recognize a true comic response (Bariaud, 1989). While Liozou (2006) found that children as young as five are able to describe a humorous experience, McGhee (1971) asserts that the development of operational thinking around the age of seven is necessary to give interpretive responses.

The most effective way of observing humor creation and reaction is in the natural environment (Bariaud, 1989). Humor reactions are naturally easier to study than humor creation, forcing researchers to focus on formal presentations such as drawings, jokes and riddles (Bariaud, 1989). Attempting to provoke humor creation in an experimental environment creates problems of intention, since children are often asked to make others laugh in contrast to spontaneous humor in a social context (Bariaud, 1989). Laughter as a reaction to intellectual amusement must also be distinguished from the laughter related to a high state of arousal, which is also common in children (Bariaud, 1989).

Humor in Children’s Literature

Children’s literature is a relatively recent trend, with humorous books for children being an even more modern phenomenon (Alberghene, 1989). Historically children’s
books tended to be overtly moralizing and didactic, but the nineteenth century saw a surge in books published for children that focused purely on entertainment. Today, there is such variety of humorous picture books written for children that it has become necessary to develop a means of critically evaluating the quality of these books before selection.

The research on humor in children’s literature is also vague. Contemporary studies have focused mostly on scrutiny of comic books, or analysis of a single author and handful of books. Studies have also focused on the nature of children’s humor without looking in detail at specific books which produce these responses (Alberghene, 1989). Lack of research may be due to the misconception that humor is not significant or important because it is “just a joke,” or that children’s literature is a marginal area of study because it is “just a story.” Yet for many children both humor and books play a crucial role in intellectual, social, emotional and cultural development, making this an important area of study for anyone who interacts with children on a regular basis (Alberghene, 1989).

The developmental theory of humor formation can be applied to the critical evaluation of children’s literature (Kappas, 1967). Research on the topic highlights multiple considerations when evaluating humorous books aimed at specific age groups (such as picture books for preschool-aged children). When applying the central points of the reviewed research on humor development specifically to humor in children’s picture books, there are three main factors to be considered. The first is the type of humor employed in a story, and how simple or complex the form is. The second is the level of intellectual and emotional demands that the forms of humor require of the reader. What
is the conceptual level of the humor used? Does it require literal or abstract thinking to process? Thirdly, the frame of reference must be taken into account by identifying what age level the presented material would be appropriate for (Kappas, 1967).

Highly successful humorous picture books will match the types of humor used and the intellectual demands necessary to process the humor with the intended audience. The material used will be familiar to the child and will appropriately match their current stage of cognitive development (Kappas, 1967).
Method

Content Analysis

This study regarding the types of humor used in children’s picture books will take a qualitative approach to content analysis. Content analysis is the process of making reputable inferences from the reading of text, images or symbolic matter (Krippendorff, 2004). This research method has a long history in the fields of mass communications and journalism (Spurgin & Wildemuth, 2009). The use of the word “text” refers to all meaningful matter available for analysis including images, sound recordings, conversations, symbols, maps and signs. Since content analysis focuses on recorded information, it is often a useful technique in information and library science research (Spurgin & Wildemuth, 2009).

While many researchers depend on quantitative data for statistical analysis, content analysis focuses on the sensitive, systematic and reliable conclusions that can be made from qualitative data. The reading of texts is fundamentally a qualitative process, even for numerical accounts (such as the number of humor incidences in a picture book). Even in qualitative research, techniques must be reliable and results should be replicable. Researchers working at different times and in different circumstances should be able to achieve the same results (Krippendorf, 2004).

Qualitative approaches to content analysis have their roots in the social sciences and literary theory (Krippendorff, 2004). They require a detailed reading of a fairly small amount of text. The crucial difference between the coding of text and other qualitative data used in research is that researchers assume text was produced with intentional
meanings, and that to ignore those meanings violates the inherent purpose of the text (Krippendorff, 2004).

Content analysis begins with the formation of a hypothesis about a body of messages (Spurgin & Wildemuth, 2009). During coding, latent content (underlying meanings) is extracted from the texts and coded. Since latent content is conceptual and cannot be directly observed, many researchers create a set of codes based on manifest (observable and countable) indicators (Spurgin & Wildemuth, 2009). The results of the manifest content analysis are then used to make assertions about the latent content in the texts.

Communications can be read in many different ways depending on the intentions of the message senders, the intentions of the receivers, and the context in which the message is sent (Krippendorff, 2004). Researchers often must construct a context that allows them to find the answers to their research questions while examining a body of text. In order to make sense of the textual messages gathered through the process of content analysis, the researcher must interpret the messages through the context in which they were sent and received (Krippendorff, 2004).

While the content analyst uses text, images and symbols as their tools, they seek a meaning that lies outside of these tools. Analysts must infer or predict phenomena that they cannot directly observe (Krippendorff, 2004). The content analyst must acknowledge that texts are meaningful to many people, not just the researchers, and that meanings may not be shared (Krippendorff, 2004). At the same time, content analysis assumes that the answers to research questions systematically extracted from texts will be
more verifiable and informed than the type of extraction done by the normal reader
(Krippendorff, 2004).

Research Methodology

The picture books chosen for this study were selected from the list of books under
the subject “Humourous Stories” in *A to Zoo* (2006). *A to Zoo* (2006) was chosen as a
reference for the study sample because of its focus on children’s picture books and also
its standing as a standard reference material for reader’s advisory and collection
development. The seventy-three books on the *A to Zoo* (2006) list were then further
narrowed down for convenience by those available in the collection at the Chapel Hill
Public Library. Four of the original 73 were excluded for unavailability at this library.
Four of the remaining 69 books available at Chapel Hill Public Library were excluded for
being in the non-circulating holiday collection. The remaining sample of books was
listed in alphabetical order by author’s last name, and a number from 1-65 was assigned
sequentially to each book on the list.

Twenty books from the remaining 65 were selected using a free research
unique numbers from the range of 1-65, and sorted them from least to greatest. The
books on the list with numbers corresponding to those selected by the randomizer were
pulled for analysis in the study. The books selected as the study sample are listed in
Appendix A.

The classification scheme of humor types created for this research study is based
exclusively on prior literature on the topic of humor development, including much of the
list given in Audrieth (1998). The humor types were organized into a hierarchy based on
McGhee’s (1979) stages of humor development and the cognitive functions associated with each stage (see Table 2). While acknowledging that there is a certain amount of overlap between the stages, the purpose of organizing the humor types in a hierarchical style was to isolate which types of humor are most appropriate for the audience of picture books (typically children three to seven years old). The humor types were each placed in one of three categories: visual, verbal or situational humor. Only types of humor discussed in the literature were included in the hierarchy used for coding. There was also an “other” category for types of humor found in the books which were not discussed in the literature. The “other” category ensures that the coding scheme was exhaustive. Appendix C shows the classification chart that was used to analyze each book.

An inter-rater reliability study was completed to ensure that the coding scheme is free from subjective judgments and bias. Three of the twenty books were chosen at random and separately analyzed by two different coders using the humor type scheme in Appendix C. Cohen’s Kappa, an index of inter-rater reliability, was run on the results. The Kappa was found to be .83, which indicated that the inter-rater reliability is satisfactory.

Each of the twenty picture books was read, and each instance of visual, verbal or situational humor was tagged. Even the types of humor deemed inappropriate for preschool-age children were included in data collection. Each humor occurrence was then categorized for the type of humor it represented based on the definitions given for each type in Appendix B. The total number of each type of instance was marked on a data collection sheet kept for each book (see Appendix C). The totals for each category of humor (visual, verbal, situational and other) were also recorded for analysis. The data
collected for each book were totaled to observe overall themes within and across books in the study sample
Results

After coding twenty children’s picture books, 488 incidences of humor were found and categorized. Table 3 shows the results of the study by humor type, humor category (visual, verbal or categorical) and developmental stage. An extended version of the results, including totals for each book, can be seen in Appendix D.

The results of the study revealed that humorous children’s picture books were using more types of humor relevant to children in McGhee’s developmental stage 3 than any other stage. Stage 3 humor, with 301 incidences, made up sixty-three percent of the total incidences of humor. Since the audience that is targeted by the picture book is children ages three to seven, these books primarily contain humor types that are appropriate for the intended audience (see Object 1).

By far, the humor type most frequently used in the picture books was conceptual incongruity, with 128 incidences (see Object 2). Conceptual incongruity is a general term used for the pairing of two or more generally accepted incompatible concepts and is usually found in pictures. This concept of conceptual absurdity is central to the cognitive advancements made in McGhee’s third stage of development. It is only in the third stage that children understand the world in conceptual packages, and will notice and appreciate when these accepted concepts are violated (McGhee, 1971). Thus, the results of this study are in accordance with previous research and expectations on the subject of humor development and appreciation.
Table 3

*Results of Coding Picture Books for Humor Types*

<table>
<thead>
<tr>
<th>Stage</th>
<th>Type of Humor</th>
<th>Total Humor Type</th>
<th>Total Category</th>
<th>Total Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1</td>
<td>Pretend play</td>
<td>8</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Surprise</td>
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### Breakdown of Humor Types by Developmental Stage

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Object 1

*Breakdown of Humor Types by Developmental Stage*
The most common form of conceptual incongruity found in the books was the personification of animals, such as animals wearing clothes or participating in human activities. An example of this is in *Dancing Larry*, which features a polar bear that lives with a human family, goes to ballet class, goes shopping and wears sunglasses. This does not fit with the common conception of polar bears as living in the arctic, walking on four legs and eating fish. This violation is one of the reasons these books are humorous to preschool-aged children.

In *My Cat, The Silliest Cat in the World*, conceptual incongruity is created by blending the two concepts of an elephant and a cat. While the narrator of the story talks about a cat and what cats like to do, the animal depicted is actually an elephant. Obviously the discrepancy of size and gracefulness between cats and elephants makes for some humorous situations when an elephant tries to sleep in a cat bed, play with a ball of yarn and poop in a litter box.

Another common stage three type of humor were blunders and mishaps occurring to characters within the story. In *My Life as a Chicken*, the chicken escapes the farm and has multiple humorous mishaps including falling out of a window, and smacking face-first into a hot air balloon. The mishaps that occur to certain characters in the books are humorous because the violence of the situations is ignored completely or played down. After all of her blunders, the chicken is only mildly injured and nursed back to health by a kind farmer and her animals, making the new farm her home.

Pranks and mischief were also a popular theme throughout the books. Characters playing pranks on one another or children participating in mischief behind the backs of their parents were the most common. In *Wanda and the Frogs*, Wanda sneaks frogs into
the house without telling her parents. A mishap occurs when the frogs escape and end up all over the house. *Don’t Let the Pigeon Stay Up Late* is a unique example of mischief in a picture books because the pigeon tries numerous times to trick the reader into “allowing” him to stay up late.

The use of costumes is also popular in the books studied. Costumes are humorous to children in McGhee’s stage 3 because they foster a sense of fun and amusement (Bariaud, 1989). Some examples in the books studied are people wearing large, funny hats or dressing up like pirates in a circumstance that does not make that type of attire typical.

Object 2

*Top Types of Humor Used in Children’s Picture Books*

![Graph showing the distribution of humor types](image)

Stage 4 types of humor were the second most commonly used forms of humor in the picture books, and made up eleven percent of the incidences. By far the most common type of stage 4 humor was the use of puns. Puns are jokes that use a play on
words to create humor, and can be appreciated only when a child understands the multiple meanings of words and phrases on an abstract level (McGhee, 1971). An example of a pun used in a picture book is in *A Particular Cow*. A man sees a cow inside an out-of-control wheelbarrow headed straight for him and says, “Holy cow!” Another example is in the *The Three Silly Billies*, when the troll tells the hungry bears that want to cross the bridge that all they will be eating is “dust from ‘detour du jour’ unless you start coughing up some coins.” Banter, satire and imitation of others were other types of stage 4 humor found in the books studied.

Stage 1 and stage 2 types of humor were also found in the picture books, although less frequently. These types of humor would be understood and appreciated by the age group targeted by picture books, although early stages of humor would not challenge stage 3 children cognitively and are therefore not the most appropriate (McGhee, 1971). The most common stage 1 type of humor used is characters engaging in pretend play, such as cats using plates and teacups as hats in *A Little, Little House*. Elements of surprise were also found, such as a bat popping out from under a hat in *The Quangle Wangle’s Hat*, and can be categorized as a stage 1 type of humor.

Stage 2 encompasses early verbal types of humor that were found frequently within the books included in the study. The use of non-language sounds and nonsense words were the most common. Some examples of non-language sounds in the books are “Oof!” and “Aroo!” found in *A Particular Cow*. Good examples of nonsense words come from the book *Jabberwocky*, such as “uffish,” “Jubjub” and “Bandersnatch.” Simple rhyming of words (in contrast to the more complex repetitious rhyming of stage 3) was also found in some books.
Fifteen percent of the humor incidences recorded in the study fell under the “other” category. The “other” category encompasses types of humor that were not mentioned in the literature and therefore not included in the original humor hierarchy used to code the books. Types of humor labeled “other” were discovered during the process of coding. The “other” category was created to include any elements that the coder found humorous that did not fit into any assigned humor type. Types of humor designated in the “other” category could not be assigned to a stage of humor development because they were not discussed by scholars of humor development. Further research into the process of cognitive development may be able to place these “other” types of humor into McGhee’s distinct categories. Many of the types of humor placed in the “other” category were common across multiple books in the study, creating a trend warranting further study into these types of humor and where they fall in the scheme of cognitive development.

The most common type of humor indicated in the “other” category is the use of silly or humorous facial expressions. These facial expressions, exhibited by both human and animal characters, often matched the action that was occurring in the stories, so they could not be considered incongruent with what was expected. Yet they were unusual and surprising, and invoked laughter on the part of the coder. Since humorous facial expressions were not mentioned in the reviewed literature for the study, this type of humor could not be placed in specific stage of the hierarchy. Research on the recognition of human facial expressions suggests that infants as young as two months old recognize changes in the facial expressions of their parents (Nelson, 1987). A study by Camras and Allison (1985) tested the ability of preschool, kindergarten, first grade and second grade
children in accurately labeling different facial expressions with the emotions that they represent. Results showed that preschool age children are capable of recognizing and correctly labeling different facial expressions, although the accuracy and depth of recognition continued to improve with age. Camras and Allison’s study suggests that humorous facial expressions would be something that children in McGhee’s stage 3 of humor development would be able to understand and appreciate.

Juxtaposition of opposites was another category of “other” humor that was found frequently in the books. This refers to the placement of opposing elements within a scene that intentionally draws attention to the differences between them. This visual dichotomy creates a pleasant and humorous image for the viewer. An example is in My Cat, The Silliest Cat in the World, which shows a pet elephant sitting next to his owner in the living room. While the presence of an elephant in the living room violates the concept of the elephant as being a wild animal and therefore constitutes conceptual incongruity, the comparison of the huge elephant body with the small body of his owner is visually humorous to look at. The juxtaposition of opposites is a comparison of two distinct concepts, such as a big elephant and small human, and it is in the comparison rather than the violation of the concepts that the humor arises. Therefore a child in McGhee’s stage 3 may find humor in the juxtaposition of opposites because he or she can comprehend multiple conceptual ideas.
Discussion

While this study found that the majority of humor incidences found in the selected children’s picture books fell within McGhee’s stage 3 of humor development and were therefore age appropriate, many incidences of stage 1, 2 and 4 were also found. Since children may appreciate earlier mastered forms of humor from stage 1 and 2, it makes sense for authors to include some incidences in books for preschool-aged children. While children may not get as much pleasure out of a book with many incidences of stage 1 and 2 humor, it would not be completely inappropriate for the age group.

Conversely, use of stage 4 humor falls outside the realm of comprehension for the picture book audience. McGhee (1979) states that while developmental comprehension of humor may vary widely from child to child, there is a certain limit as to how early a child can progress from one stage to another. For stage 4 the lower limit is at about age seven. This raises the question of why authors would use stage 4 humor at all in books for preschool age children.

Incidences of irony were found eight times in the picture books used in this study. According to accepted theories of cognitive development, irony is an abstract concept that would not be understood by children aged three to seven. One reason that irony and other forms of stage 4 humor may be used in a book for preschoolers could be that some authors are not aware of cognitive development throughout childhood and mistakenly use forms of humor that are not recommended for their target audience. Another theory relies on the idea that children age three to seven cannot read at the advanced level in which these books are written, adults read the books to children. Authors may be intentionally targeting the adults that read these books to children by using mature forms
of humor. Since adults are ultimately the ones that select and purchase picture books, there may be a payoff to using adult types of humor, such as irony and satire, in children’s books.

Frequently, books appeal to various ages and multiple levels of experience at one time (Kappas, 1967). While a child may be enjoying the humorous plotline, images and fantasies, an adult may be appreciating the underlying satire in a story. Thus a book is appropriate for different levels of cognitive development at once. Books with multiple levels of appeal must be evaluated carefully to determine if the material used is actually appropriate for the age level of the audience (Kappas, 1967).

It would be interesting to complete this study using children as coders rather than adults. Having children themselves pick out incidences of humor would give us a better look at how accurate the hierarchy of humor types is in addressing humor preferences at different cognitive stages. Seeing whether a child “gets” a humor incidence in the same way as an adult coder would shed light on the process of humor development. Yet using children has limitations, as mentioned in Bariaud (1989), since children can communicate that they find something funny yet are often unable to describe the reasons why. The “why” is as important as the “what” in the field of humor development.

It is important for anyone selecting picture books for children to understand how humor relates to human cognitive development. Selecting books that are highly stimulating and enjoyable is a crucial factor in developing a lifelong appreciation of reading at a young age. While this study showed that, on average, children’s picture books are catering their humor to the correct audience, some books in the study were far better than others. Authors need to create better books for children by educating
themselves on the stages of cognitive development and using this knowledge to shape the
types of characters, settings, humor and situations that arise in their books. Adults
selecting books for children also need this knowledge to properly appraise and choose
developmentally appropriate picture books. This will ensure that children of all ages do
not miss out on the highest level of enjoyment that reading can bring.
References


Appendix A

Study Sample


Appendix B

Definitions of Types of Humor

Anecdote
An interesting incident or striking event, published or not; often illustrates a lesson or moral point through an amusing situation

Antonymism
The contrasting of two words or phrases of opposite meaning. Example: “A girl with a future avoids a man with a past.”

Banter
The exchange of teasing or witty remarks between friends; good-natured give and take

Blendword
Blending two or three words into one. Example: “smog” for smoke and fog

Blue humor
Humor based on subjects such as sex, body parts or functions, racial-ethnic differentness or other offensive subjects

Blunder
Situations in which a character appears foolish or makes a mistake

Body contact
Physical play that involves touching. Example: tickling

Caricature
Exaggeration by means of often ludicrous distortion of parts or characteristics

Conceptual incongruity
Associating two generally accepted incompatible concepts; the lack of rational relation of objects, people, or ideas to each other or the environment. Example: A cow wearing a hat; a dog in a bathtub

Conceptually erroneous sound
Associating two incompatible concepts, one of which includes voice, noise or sound. Example: A cat saying, “Woof!”

Conundrum
A riddle or word puzzle in which the answer is impossible to solve. Example: Why does a cow wear a bell? Because it’s horns don’t work.

Costume
Attire worn in play or fantasy; not characteristic of the time and place in which it is worn
Disguise
Attire that modifies appearance in order to conceal the identity of the wearer

Epigram
A short and clever saying that often deals with the evils and follies of mankind. Example: “The best way to keep a husband is in doubt.”

Exaggeration
Making use of an obvious overstatement of such things as size, number, proportions, facts, feelings, deeds, experiences, etc.

Freudian slip
A humorous statement which seems accidental, but supposedly comes from some deep psychological disturbance.

Imitation
Coping or trying to copy the actions or someone else for comic effect

Insult
The teasing or mockery of others or oneself; finds its source in feelings of superiority or release of hostility

Irony
Use of words to express something other than and especially the opposite of the literal meaning

Joke
Short story ending with a funny climatic twist. Example: What is the fruitiest lesson? History, because it’s full of dates!

Knock-Knock joke

Mastered Skill
Humor that is based in feelings of superiority over another individual who is trying to acquire a physical, verbal or cognitive skill that they themselves have already acquired

Mislabeling
Using erroneous words to brand an object or person. Example: Calling a bird a hat.

Mistaken Identity
Comic confusion of one person for another, or one thing with another, due to similarities, common characteristics or suggestive circumstances
Non-language sounds
Spoken or written sounds that are absurd, illogical and not a part of the English language. Example: “EEEP!”

Nonsense words
Spoken or written words that are absurd, illogical and not a part of the English language. Example: “Boogiewoogie”

Parody
Comic imitation of any well-known writing.

Physical deformity
An infliction in which a part of the body is misshapen or malformed. Example: A man with one eye

Potty humor
Comic references to body parts or body functions. Example: Using phrases such as, “poopoo” or “butts cheeks” for comic effect

Practical joke
A joke put into action or practice, as opposed to a verbal joke

Prank
An antic or ludicrous act done for fun or amusement. Example: A boy ringing the neighbor’s doorbell and running away.

Pretend play
To feign or make believe with the intent to momentarily deceive. Example: Using a banana as a telephone.

Pun
Jokes involving the play of words with similar sounds or meanings. Example: “I’m reading a book about anti-gravity. It’s impossible to put down.”

Riddle
A statement or question with a veiled or double meaning, put forth as a puzzle to be solved. Example: “What animal walks on all fours in the morning, two in the afternoon and three in the evening?” Answer: “Man. He crawls as a baby, walks as an adult, and uses a cane when he’s elderly.”

Sarcasm
Verbal sneer compounded of ridicule and contempt and usually directed by one person at another.
**Satire**
Trenchant wit, irony or sarcasm used to expose and discredit vice or folly.

**Slapstick**
Humor that depends on fast, boisterous or zany physical activity and horseplay. Example: Putting a pie in someone’s face.

**Strange Voices**
People using or being depicted as using voices that are incongruent with what is expected. Example: A large man speaking in a high-pitched voice

**Surprise**
Exploiting the occurrence of the unexpected, whether fact, thought, feeling or event. Example: A clown jumping out of a birthday cake

**Understatement**
Statements about something that does not measure up to some accepted standard of size, degree, quantity or intensity. Example: Describing a lion as a “kitty-cat”

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| Coder Notes: |
| Total Visual: | Total Verbal: | Total Circumstantial: | Total Other: |
## Appendix D

### Extended Coding Results for Twenty Books

<p>| Stage         | Type of Humor                  | B1 | B2 | B3 | B4 | B5 | B6 | B7 | B8 | B9 | B10 | B11 | B12 | B13 | B14 | B15 | B16 | B17 | B18 | B19 | B20 | Total Humor | Total Stage |
|---------------|--------------------------------|----|----|----|----|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|------------|
| Stage 1       | Pretend play                   | 2  | 6  | 2  | 1  | 1  | 1  | 1  | 1  | 1  | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 12       | 12         |
|               | Surprise                       | 2  | 1  |    |    |    |    |    |    |    |     | 1   | 1   |     |     |     |     |     |     |     |     | 3        |            |
|               | Body contact                   | 1  |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     | 1        |            |
| Stage 2       | Non-language sound             | 6  | 1  | 7  | 2  |    |    |    |    |    |     | 1   | 1   |     |     |     |     |     |     |     |     |     | 5        | 21         |
|               | Nonsense word                  | 16 | 1  | 1  | 1  | 1  | 1  | 1  | 1  | 1  |     | 1   | 1   |     |     |     |     |     |     |     |     | 22       |            |
|               | Rhyming                        | 1  | 1  |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     | 2         |            |
|               | Mislabling of objects          | 1  |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     | 1        |            |
| Stage 3 Visual| Conceptual incongruity         | 16 | 5  | 3  | 4  | 4  | 9  | 4  | 3  | 14 | 9   | 9   | 1   | 8   | 9   | 9   | 18  | 18  | 9   | 9   | 128      | 301        |
|               | Physical deformity             | 1  | 3  | 1  | 3  | 1  | 6  | 2  |    |    |     |     |     |     |     |     |     |     |     |     |     | 17       |            |
|               | Caricature                     | 2  |    | 3  | 2  | 2  | 1  |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     | 8        |            |
|               | Exaggeration                   | 1  |    | 2  | 1  |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |     | 4        | 8          |
|               | Understatement                 |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     | 0        |            |
|               | Disguise or mask               | 9  | 2  |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     |    12     |            |
|               | Costume                        | 3  | 1  | 1  | 6  | 1  | 1  | 4  | 4  |    |     |     |     |     |     |     |     |     |     |     |     | 25       |            |
| Stage 3 Verbal| Nonsensical stringing of words | 1  | 4  | 1  | 1  | 1  | 1  | 3  | 7  |    |     |     |     |     |     |     |     |     |     |     |     | 18       |            |
|               | Repetitious Rhyming            |    |    | 1  | 1  | 1  | 3  | 2  | 1  | 1  |     |     |     |     |     |     |     |     |     |     | 10       | 33         |
|               | Conceptually erroneous sound    |    |    |    |    |    | 1  |    |    |    |     |     |     |     |     |     |     |     |     |     |     | 1        |            |
|               | Strange voices                 |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     | 0        |            |
|               | Blendword                      |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     | 0        |            |
|               | Joke                           |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     | 1        |            |
|               | Antonymism                     |    | 2  | 1  |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     | 3        |            |
| Stage 3 Circumstantial| Blunder or mishap            | 1  | 2  | 1  | 6  | 1  | 2  | 5  | 2  | 2  | 1   | 1   | 4   | 1   | 4   | 28  |    |    |    |    | 28       | 70         |
|               | Prank or mischief              | 1  | 3  | 2  |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     | 15       | 24         |
|               | Potty humor                    | 1  | 1  | 1  | 7  |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     | 11       |            |
|               | Slapstick                      |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     | 1        |            |
|               | Mastered skill                 | 1  |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     | 2        |            |
|               | Mistaken identity              |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     | 2        |            |
|               | Role reversal                  |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     | 4        |            |
| Stage 4 Verbal| Pun                            | 2  | 1  | 3  |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     | 22       | 39         |
|               | Knock-knock joke               |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     | 0        |            |
|               | Riddle                         |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     | 0        |            |
|               | Epigram                        |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     | 0        |            |
|               | Banter                         |    |    |    |    |    |    |    |    |    |     |     |     |     |     |     |     |     |     |     |     | 8        |            |</p>
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