

THE UNIVERSITY OF CALGARY

A Developmental Analysis of the Narrative  
of Verbally Talented Children

by

Lynn Davis

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES  
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF  
MASTER OF SCIENCE

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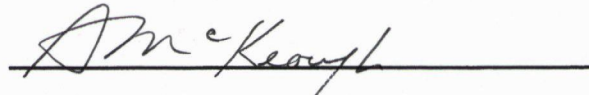
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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "A Developmental Analysis of the Narrative of Verbally Talented Children," submitted by Lynn Davis in partial fulfillment of the requirements for the degree of Master of Science.



Supervisor, Dr. Anne McKeough

Department of Educational Psychology



Dr. John Mueller

Department of Educational Psychology



Dr. Annette LaGrange

Department of Curriculum and Instruction

---

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## ABSTRACT

The present study examined the differences in the narrative productions of verbally talented children aged 4 and 6. Oral narratives that were produced in response to five task prompts were developmentally analyzed initially for plot structure and subsequently for semantic linkages and descriptive detail.

A MANOVA revealed significant developmental differences between 4- and 6-year-olds. Follow-up univariate analyses demonstrated that the task prompts produced different effects. Those that were personal in nature did not produce significant age effects, whereas significant differences were found for the nonpersonal narrative. It is suggested that the reason for this lies in the interaction between child and task variables.

## ACKNOWLEDGMENTS

Many individuals contributed to the successful completion of this thesis. Without their support, kindness, help and love this thesis would never have been possible. I would like to thank my loving husband, Peter, for understanding the time and effort that was necessary for my work and for helping with our daughter and life's daily necessities in order that I might work on my thesis. I promise that now we can spend some quality family time together-honest! I also thank my adorable sweet daughter, Brittany, who provided much laughter, light and love when I needed it the most. I want to thank my parents for understanding my need to continue with my schooling and for being supportive both emotionally and financially. I would also especially like to thank Dr. Anne McKeough whose devotion of energy and effort was truly nothing short of inspiring. I will always be extremely appreciative of her dedication and personal investment of self and time. Thank you Anne, you are the definition of a wonderful supervisor. I would like to thank all of the schools, principals, teachers and students who participated in the study and so willingly gave of their time. I also want to thank two wonderful friends for being there and being so supportive. Thank you Danna for your daily "Feel good calls." Thank you Alex, you were both a personal and an academic sounding board and provided much encouragement.

## DEDICATIONS

I dedicate this thesis to my husband, Peter, and my daughter, Brittany. These two people are the center of my life. They provide much love, happiness and encouragement. I consider myself extremely lucky to have such a wonderful and caring husband and daughter. This is for you Peter and Brittany. I love you both!



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## **Chapter I**

### **INTRODUCTION**

Since Piaget was introduced to North America, he has been criticized for underestimating the competence of young children. One consistent finding that has emerged from research conducted over the past 30 years is that young children have a high degree of cognitive competence in a wide range of tasks (Gelman, 1978). Further, a number of theories have postulated that one of the most rapid periods of change is between 4 and 6 years of age (Case, 1985, 1992; Flavell, 1985; Gelman, 1983). The present study, based on the work of McKeough (1991, 1992), examined the development of the narratives of talented children within this period of rapid change.

Narrative may be a script, or a story, either personal or non-personal. It may be used in many activities such as fictional or factual story telling, sharing of events, commentaries and explanations. It is an integral and natural part of life and society, facilitating communication of personal experiences and serving to transmit culture. Bruner (1986) regarded narrative as a story composed of events that are comprehensible and memorable. He also stated, however, that narrative is not solely a recounting of events, but additionally involves the representation of events which facilitates reflection and analysis. In this manner, narrative allows for an interpretation or "meaning making" of experience and of action.

Along with the "meaning making" aspect of narrative, its structural organization also undergoes rapid development during this

time frame. In an initial analysis of story grammar components, narrative progresses in format from the provision of scripts to that of plots (McKeough, 1992). Children move from the production of script-like narratives to those that contain a plot and a resolution, and are similar to a rudimentary form of story. McCabe and Peterson (1991) also found an age related developmental change in narrative structure from age 4 to age 6. Four-year-olds produced a range of narrative types, progressing from event descriptions or scripts and lists of actions, to ones in which the experienced events followed a temporal sequence. By 6 years of age, children's narratives included a plot in which they provided a complicating action, a climactic event, an evaluation, a resolution and sometimes a coda.

Applebee (1978) discussed the developmental change in terms of complexity. He viewed the progression of complexity as a function of an increase in the use of structure within narrative. An examination of the development of narrative has also been extended to verbally talented children. Porath (1992) found that these children were developmentally advanced and that they produced stories that contained more unusual words (i.e., words that are considered advanced for the child's age) than those of average children. Thus, as the above studies show, it has been established that the structural components of narrative increase with both age and verbal competency.

Another important aspect of narrative, the semantic linkages among the structural components, has received considerably less

attention. Some research has been done in the area of linguistic connectives (e.g., McCabe & Peterson, 1985b, 1991; Sutton-Smith, 1986), however, this work has not elaborated upon the conceptual nature of the links. The present study extended the developmental analysis of narrative to include a more semantic analysis of linkages among the structural components generated by 4- and 6-year-old children.

Verbally talented children were chosen for the study because it was thought that this group would include multiple structural components and would provide richer conceptual linkages. In comparison to their chronological age peers, this group has also been found to think more metacognitively and to perform at an advanced level in a wide range of domains (Geary & Brown, 1991; Siegler & Kotovsky, 1986; Montague, 1991; and Shore, 1986). The narratives of these verbally talented children were examined for evidence of a systematic developmental increase in structural complexity in both plot structure and semantic linkages, thereby, extending the model upon which the work was based.



## **Chapter II**

### **LITERATURE REVIEW**

#### **The Early Development of Narrative**

Although it is generally agreed that narrative is the making or telling of a story, differing views exist with respect to the specifics and purposes of narrative. According to Feldman (1986), narrative is not reality, it is a representation of what exists in the imagination. To speak of what is not is a developmentally important ability. Narrative is important to a child's cognitive development in that it encourages thinking and talking about the "non-here-and-now." This notion of the "non-here-and-now" influences both the content and the motive of narrative.

McCabe and Peterson (1983) elaborated on this notion by specifying that narrative involved the telling of stories that are both fictional and personal. They analyzed children's narratives using Labov's (1976) description of narrative structure that included the following elements: abstract functions, orientation, complicating action, evaluation, resolution, and codas. McCabe and Peterson (1991) found that there was an age-related development in narrative structure. Four-year-olds lacked many of the basic constituent units of a story and, therefore, their productions were in the form of event descriptions or scripts. At this age, children may either not yet have access to story schemas or else their schemas may still be in the process of being formed.

The conception of a script and its application within narrative

has also been found to develop with age. A script is a general representation of social understanding that may be used in social interactions. Sugarman (1982) found that 4-year-old children could respond appropriately for situations that had never been experienced. Children seem to develop an intuitive "category representation" which takes on a general status. These general representations may then be utilized and drawn upon in specific novel but related situations. Nelson and Gruendel (1981) looked at cartoon sequences with examples of narrative categories including a setting, an initiating event, a response, and an outcome. By age 4, children were able to understand how these categories were related to each other and were also able to represent these relations in an intuitive fashion. These representations then served as a standard by which the categorical relations in novel situations could be assessed and understood.

Sugarman (1982) found that by age 6, children were able to represent scripts in a reversible manner and could move backwards as well as forwards through a script. This suggested that their representations were now flexible. Flexibility or "reversibility" is discussed by Piaget (1950) as one of the developmental characteristics of this age. When the child is able to work with the events of a script in a reversible manner, the child is then able to consolidate and coordinate the script.

The development in script representation leads to development in the domain of narrative comprehension and production. The

cognitive representation of social scripts and the ability to regard these scripts in a flexible manner allows for their use in the comprehension and production of narrative. Children's social knowledge is initially represented in terms of event schemas of specific episodes that are subsequently available as a resource for analyzing or constructing novel situations in narrative form.

Hudson and Shapiro (1991) found that within the scripts of 4- and 6-year-old children, there were no age-related differences in the amount of information reported. However, with an increase in age, more types of structural elements were included. Children were more likely to sequence scripts, add more optional information, and provide clear endings as they developed in their narrative ability. Four-year-olds tended to have a looser conception of the components of a script than 6-year-olds. Four-year-old children reported mainly what they knew, perhaps adding a specifically remembered episode. Basically, the children were providing general knowledge and were not constructing a narrative. That is, they could report episodes that they knew or remembered, but could not restructure them into a story and rarely included a problem. Their scripts consisted of the use of general event knowledge without episodic information. In contrast, 6-year-olds were aware that stories are different than the mere statement of general and episodic events. They had some awareness of story characteristics and reported more problems, resolutions, and endings.

Stein (1988) also found that at 5 years of age, children moved from temporally disorganized lists of actions to narratives that follow the temporal sequence of experienced events. An examination of the narratives of 5-year-olds revealed an inclusion of more episodic components such as information about the setting, initiating actions, and an attempt to develop a plot. The narratives, however, still lacked in the provision of internal goals, motivations and reactions, and tended to end prematurely at the high point, or climactic occurrence in the story. By 6 years of age, most children told personal narratives that conformed to Labov's (1972) pattern of narrative. They oriented their listeners to the who, what, when, and where in their stories. They also provided a complicating action, a climactic event, an evaluation, a resolution, and sometimes a coda.

The development of narrative has also been explored by McKeough (1992) who asked children to generate stories about characters found in children's literature. Again, a shift was noticed in the structural organization of the children's narratives between the ages of 4 and 6 years. At 4 years of age, children's stories were in the form of a script where the action sequences cohered as part of a stereotypic social situation (e.g., playing with a friend). Four-year-olds produced stories that were similar to "happily ever after" scripts. The events were predictable, and temporally and causally related in a single event sequence that had an episodic structure. The episodic structure that was provided ranged in the quality of production from what is known as a "barebones" basic story to a

more elaborate story. Regardless of the extent of the material used, all stories shared similar syntactic (i.e., setting, initiating event, response, and outcome) and semantic features. Semantically, the stories included a familiar event in which the motivations or intentions were unexplained. These scripts can be viewed as basic or consolidated units that form the building blocks for the production of more advanced stories.

By 6 years of age, children are able to combine two scripts, one centering on a problem episode and the other on a resolution episode, thereby, producing stories that took the form of simple "plots". This provides evidence of a higher order construction that is attained by coordinating one event sequence containing a problem, with a second event sequence, that provides a solution or resolution. There is a movement from the origination of story motivation from within the events to motivation from within the characters' affective response to events. Thus, the development of narrative progresses from a script-like presentation of events to the production of events including a problem that is subsequently followed by a solution or resolution.

By 8 years of age, children included complications or failed attempts at resolution and by 10 years of age story problems, complications, and resolutions were elaborated and integrated. The story scoring criteria is provided in Figure 1 and sample stories are offered in Table 1.

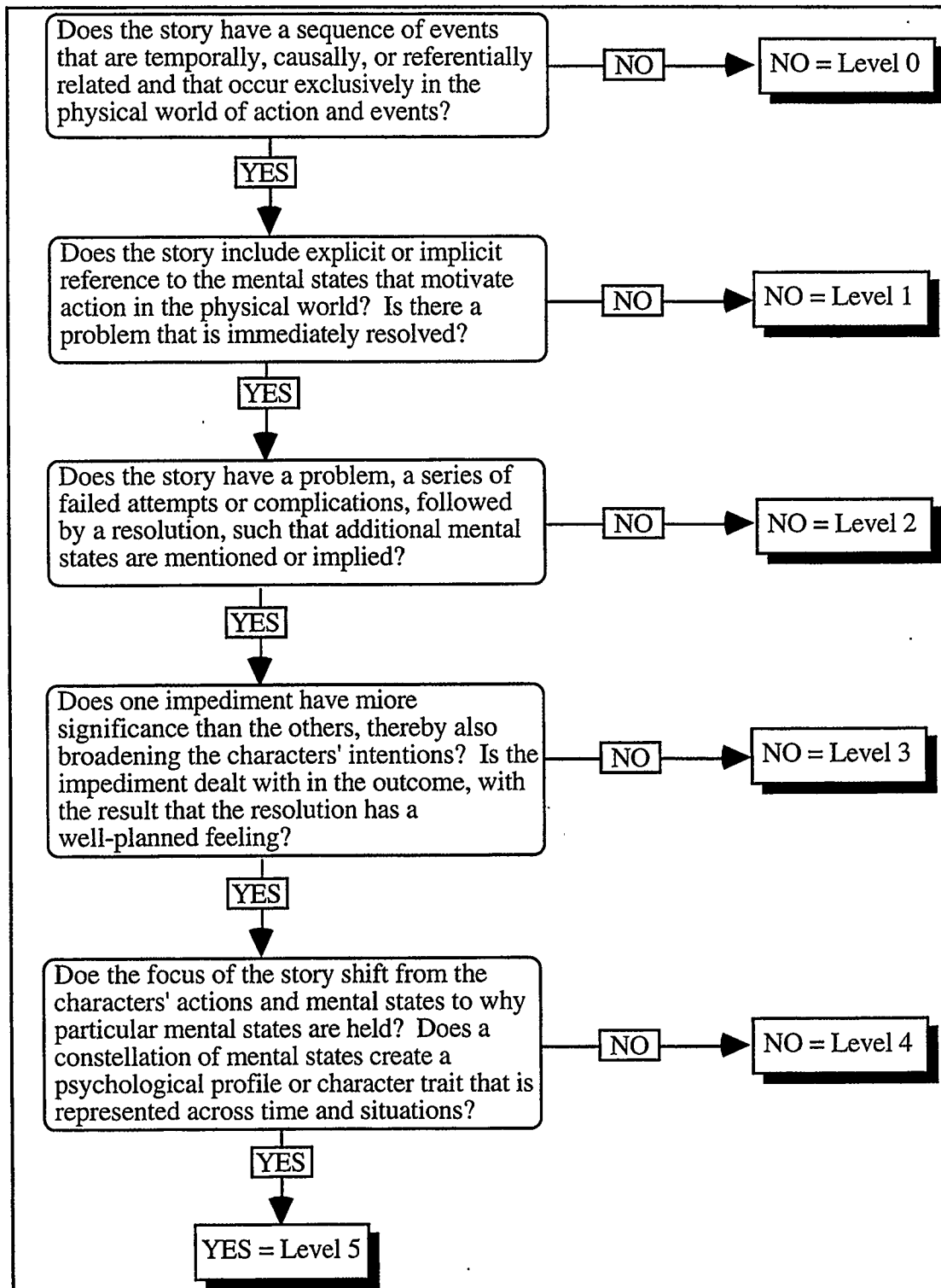


Figure 1. McKeough's structural scoring scheme.

Table 1

Sample Stories at Each of the 4 Age Levels4-year-old:

One day there -- a horsie came out to the barnyard. He was such a nice little horsie. For such long days he eated in the valley. Then some day for what -- his friend the lamb would come -- right -- to -- in -- then his friend the lamb would come to his house some time. And the lamb -- today the lamb came to his house. And they had such a good time.

6-year-old:

A horse was walking along in a field and he saw a little lamb in one of the places of the barn and it was a fence. And it was a nice little lamb and it -- it was lonely. So the horse jumped in and then the lamb jumped onto the horse and then they -- and then the lamb jumped onto the horse and then they got out. And then they went to a place where there was no one except them. And they picked some blueberries and they ate them. And the horse found some hay and he liked the hay better than the blueberries. And the lamb found some grass and he liked the grass better than the blueberries. And then they went and lived together. And they lived happily ever after.

8-year-old:

Once there was a little girl who was walking in the woods and she saw a helpless little lamb. And then she took it to her father but her father said, "No!" She can't keep it. The she built a little house in the woods for it and kept it there and brought food for her everyday. And then her father and mother found out that she was keeping the little lamb there and so, they told her that they should send her to a place where lambs live.

10-year-old:

Once upon a time there was a little girl. She was very sad because she didn't have a pet. One day one of her father's -- father's sheep had a little goat and it was going to die because she had lots of others and it couldn't get enough milk. She wanted it so badly. And then her father finally gave up and gave it to her. She was very happy. After that she always lived with it and was always happy with it. She took very good care of it and was very happy with it.

Then one day a ram came and he was -- the little girl was inside eating her supper. The ram came along and killed the little goat and ate it. She -- Finally she came out and she saw the little goat was dead -- had been taken away. She was very sad. Her father went out and bought her another little lamb and she lived happily ever after.

The "typical" development of narrative was discussed above. However, variations within the development of narrative occur. Of interest to the current research is the performance of verbally talented children. There has been little research in the study of the narrative development of talented children, however, the work of Porath (1992) is a notable exception. When children were asked to tell a story about someone who had a problem that they wanted to solve, Porath found that they produced stories that were developmentally advanced and that contained more unusual words (i.e., words that are used infrequently in children's discourse) than did average functioning children (Porath, 1988).

### **How Story Elements Are Linked**

Along with plot and script aspects, the concept of the links and connections of story elements is an important consideration when analyzing the development of narrative complexity. According to Applebee (1978), in narrative there is a conceptual "whole" which is organized into a story format through the application of story structure. The development of narrative towards this "whole" is composed of several stages which are based on progressively more complex structures of centering and chaining. Chaining involves the use of links through similarity between incidents, while centering involves links through complementarity to the center of the story (Applebee, 1978). The development of structural complexity, through the processes of chaining and centering, progresses in a forward and elaborative manner. The first stage, or "heap" stage,



does not possess any links among the parts of the story. The second stage is the "sequence," in which elements are linked on the basis of similarity. The "sequence" stage is indicative of an increase in the structural complexity of the narrative, however, the increase in complexity "simultaneously simplifies the task of organizing a larger set of elements; it provides a model or set of expectations about the form that each new segment of the story will take" (p. 68). The third stage, the primitive narrative, involves both complementarity and similarity. The addition of complementarity aids the child in the organization of the expanding number of elements. Primitive narratives have "a concrete core or center--an object or event that has temporarily assumed some importance to the child which is then developed by collecting around it a set of complimentary attributes" (p. 62). The fourth step, chain narrative, involves the ability to focus on multiple rather than single aspects. These multiple aspects, however, are in the form of unfocused chains which lack structure or links. This type of narrative is similar to a more mature narrative except that there is a lack of direction, structural relatedness, and coherence. At this point, the narrative is not yet "whole." The last step is the true narrative. In the true narrative, multiple chains are focused through both processes of chaining and centering. This allows the story to become more cohesive and, therefore, more similar to that of a structured "whole."

Work has also been done in the area of the use of connectives.

Connectives, in this sense, included words such as: "then," "because," "so," and "but." McCabe and Peterson (1985b) did a study of narrative comprehensibility. A sample of children's narratives were collected and the connectives altered in three conditions. In the first condition, all of the connectives were deleted. In the second condition, all connectives were replaced by "and." Finally, in the last condition, the connectives that conveyed the best semantic link were used. In this group, words such as "so," "and," and "because" were used for causal relationships, "then" was used for temporal ones, "but" for antithetical ones, and finally, "and" was used for simple coordinate relationships. College students were then asked to rate the phrases on comprehensibility. It was found that neither the absence or presence of connectives nor the specific identity of the connectives affected comprehensibility. Therefore, according to McCabe and Peterson (1991) children use connectives in systematic ways to indicate the overall structure and progression of the narratives but in themselves connectives were not found to facilitate comprehensibility or understanding.

Sutton-Smith (1986) also looked at connectives and found that children's stories moved from an identical repetition of action and location to the use of conjunctions, also known as connectives, such as "and" and "then." These conjunctions served to bond the lines and the simple structures of the narrative. A consideration of the use of linkages, not only from a grammatical point of view (i.e., connecting words), but from a semantic point of view is clearly warranted as

semantic connectives lend meaning and flow to the story line. However, in the stories of young children, the relation between events is frequently unclear and the reader is left to infer what the child intended. An analysis of semantic linkages allows us to differentiate between stories that are comprised of structural elements that are clearly connected and those that lack this dimension. Hence, the present study addressed the following question: "What semantic linkages are present in the stories of verbally talented children and how do they change with development?"

### **How Narrative Develops**

The above discussion provides us with an understanding of the "what" of narrative development. The "what" of narrative development naturally lends itself to a discussion of the intricacies of the 'how' of narrative development.

The general development of narrative and narrative genres is facilitated by several interactive variables. These variables include working memory or processing capacity, context, and knowledge of the story topic.

### **Working Memory**

Working memory involves active processing. It is thought to differ from long term memory in two ways: first, it is limited, whereas, long term memory is generally considered limitless, and second, it involves cognitive operations in addition to storage. According to Case (1985), working memory is a major contributor to

developmental change. This theory holds that cognitive development progresses through a series of four major stages from infancy to adolescence. In each stage, working memory is thought to increase from 1 to 4 units, as a function of maturation and operational efficiency (i.e., practice), allowing the child to consider additional chunks of information (see Figure 2). For example, in the narrative domain average 4-year-olds typically generate a single scripted episode. By 6 years of age, most children produce two episodes (one focusing on the problem and the second providing a resolution). Thus, 6-year-olds coordinate two episodic chunks, whereas 4-year-olds generate only one. By 8 years of age, a third episode, that contains complications or failed attempts is included, and by 10 years of age the story components are elaborated and tied together in the resolution. McKeough (1992b) found that, even when explicitly given the components of narrative structure at an upper developmentally adjacent level, children were unable to complete the task due to processing limitations. However, when children were given either the first or second parts of a story at a higher level, they were able to generate the other half of the story. Thus, when the task demands were kept within the child's processing capacity, children performed successfully. This suggested that the inability to coordinate the story elements was due to limited working memory capacity.

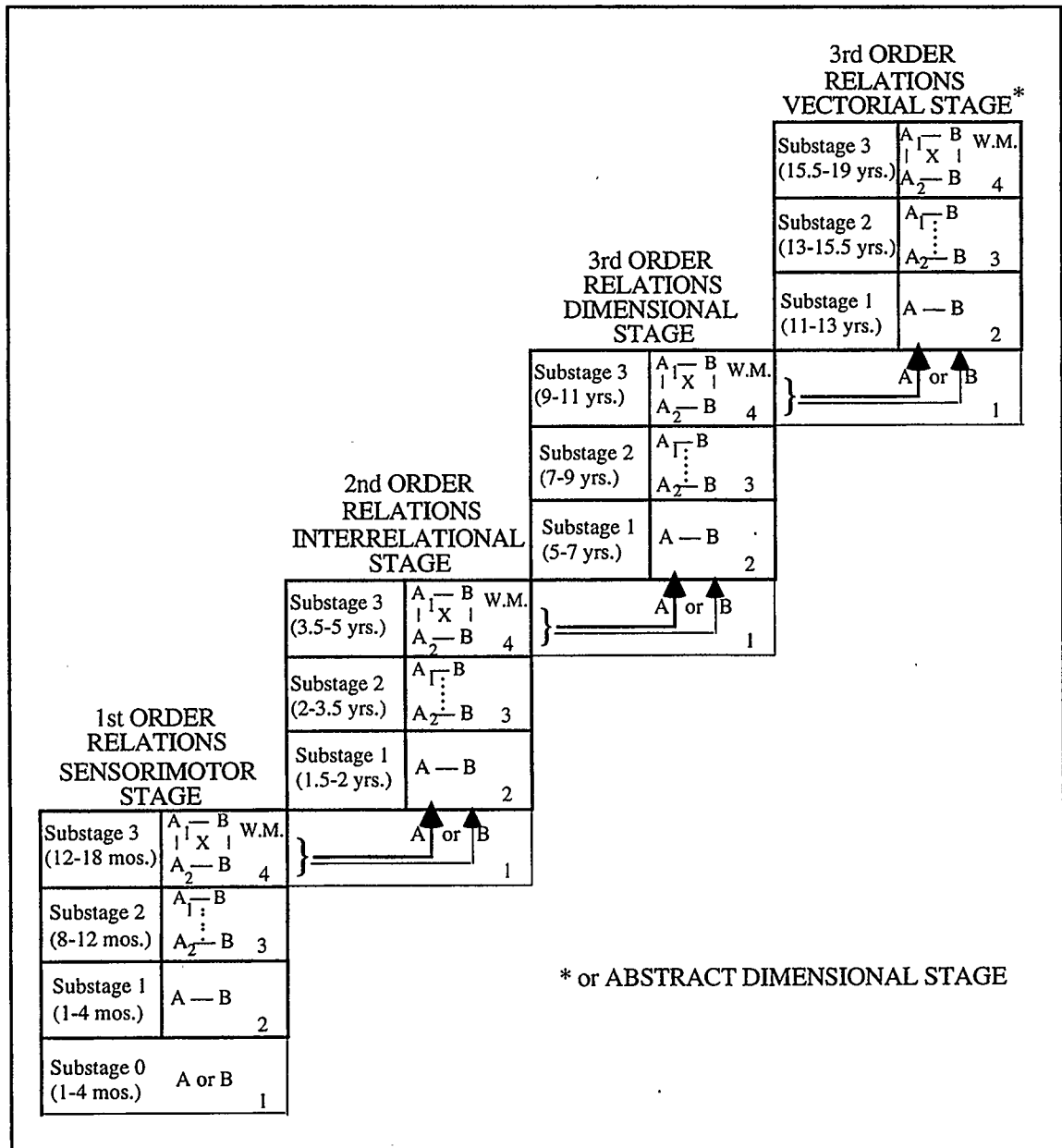


Figure 2. Case's stages and substages.

### **Context for Narrative Production**

Working memory or processing capacity is only a part of the "how" of narrative development. Also important is the specific context in which the narrative is elicited. Preece (1987) looked at natural conversational contexts versus elicited contexts. In natural spontaneous conversation, 5-year-olds included all the components of a narrative. However, in adult imposed situations in which the structure was provided, 5-year-olds produced fewer classic narratives. By age 6, children were less dependent on context and were more capable of producing relatively complex and coherent narratives, regardless of context. This suggests that when working with young children it is important to provide a meaningful context for story telling.

### **Knowledge of Topic**

Also of importance is the choice of topic for the narrative. According to Hudson and Nelson (1986), if the topic of the narrative is a familiar one, the child has more general knowledge which leads to stories that are based upon distilled experiences of a particular type rather than stories that are bound to a specific incident. In a spontaneous personal narrative, the child is usually narrating on a topic of familiarity, whereas in elicited narratives, where the topic is researcher chosen, the child may have a low level of familiarity and hence produce more episodic events.

### **Social Understanding and Narrative Development**

Thus far, the effect of developmental change in story

structure, context, and topic on narrative competency has been discussed. However, another area of development, namely social understanding, also impacts on children's ability to compose narratives. This is not surprising since narratives are accounts of social interactions. The aspects of social understanding that have been found to make an impact on narrative competence include (a) a differentiation of action from an individual's consciousness of action, (b) knowledge of conflicts and imbalances, and (c) an understanding of social roles.

### **Action-consciousness    Differentiation**

In narrative, a dual pattern of action-motivation has been identified. According to Bruner (1987) narrative is composed of a landscape of action (i.e., states, actions, and events) and a landscape of consciousness (i.e., how the states and events are perceived or felt by characters). Most modern expertly crafted narratives use both landscapes. In narrative thinking, consciousness is organized in a temporal pattern around the psychological state of the protagonist. Nonconscious states (e.g., actions and events or states occurring outside of a character's awareness) are organized in a static pattern around the literary form (i.e., the structural and grammatical components of narrative). Actions are given causal organization and the reader must interpret causality in terms of explanations. Consciousness involves processes of interpretation which help to understand intentionality and provides explanations. In narrative composed by experts, these two landscapes are often put into

ambiguous relation with each other and the reader must interpret both sides.

McKeough (1991, 1992) noted that the narratives of average-functioning 4-year-old children typically include only the landscape of action. In contrast, in the stories of 6-year-olds we begin to see evidence of the landscape of consciousness. That is, character's actions are motivated by their intentional and mental states (e.g., want, feel, and know). Although the underlying intentional states are sometimes explicitly named, often times they are simply implied. Thus, 6-year-olds begin to coordinate two systems of organization, namely the structural organization (or literary) form and the intentional (or conscious) form. In other words, whereas the stories of 4-year-olds were action oriented, those of 6-year-olds had an intentional orientation.

Britton and Pellegrini (1990) investigated the effects of the two landscapes on understanding. They read stories to young children that contained either a landscape of action or a landscape of consciousness. The children were then asked to retell the stories. Results indicated that the version presented did not affect the understanding of the basic story line. However, in the conscious version children tended to reorder events and provide additional and detailed information that was psychological in nature. Ability to make sense of the story and to retain its meaning was greater for the conscious version. This points to the advantages of the ability to integrate both landscapes. Utilization of both landscapes



provides for a greater understanding of actions and consciousness. Therefore, dually patterned narratives are important in that they allow for a more complex narrative in young children, and hence a greater exploration, reflection, and understanding of self and others.

### **Conflicts or Imbalances**

Narrative competency also involves the comprehension of imbalance in events. Bruner and Lucariello (1989) investigated the development of the elaboration of actions in terms of a landscape of consciousness. It was felt that an imbalance may trigger narrative elaboration because it requires an explanation. This prediction was supported and they found that the explanation usually involved explanations of the character's consciousness of actions. Therefore, it is likely that there is an interaction between the existence of imbalances and narrative structure. Imbalance may elicit the attribution of consciousness to story characters while balance may suppress such attributions.

In order to assess the existence of an imbalance in a story, the child must first understand its nature. Comprehension of a story with an imbalance requires real-life experience and knowledge of imbalances that occur between events and situations. Through experience, the child acquires a representation of standard occurrences and learns to identify existing imbalances (Pellegrini & Galda, 1982). According to Nelson (1986), very young children appear to have knowledge of the order of relations within events. These relations may be among agents, actions, goals, scenes, and

instruments. Preschoolers show an understanding of the everyday order of familiar events such as birthday parties, making cookies, and the school day. Therefore, they are able to identify breaches or irregularities in these well known events.

Bruner and Lucariello (1989) also found similar knowledge at a young age. Their examination of a preschooler's pre-sleep monologues about daily routine events suggested that knowledge of the relations among agent, action, goal, instrument, and scene in ordinary events is a prerequisite for the development of an understanding of noncanonical (or nonstandard) events and subsequently of narrative thought.

McNamee (1988) also studied the effects of imbalances or breaches on narrative production. He told kindergarten children stories about a birthday party and a visit from cousins. The children were then asked to add information about the actions and events to the stories. A breach among the elements of agent, action, scene, instrument, and goal was found to lead to narrative thinking (i.e., caused the children to create a context (or episode) that made the event probable). In other words, the imbalance encouraged a transformation of story so that it followed a more typical format. However, not all breaches appeared to be equivalent. A breach in the actions of characters induced more advanced narrative thinking than did breaches in character state. Action in comparison to character state, may be more overt and, therefore, violations in actions may be more easily detected.

## **Conceptions of Social Roles**

The above results indicate that knowledge of social conflicts and imbalances impacts on children's narrative competence. It is the child's understanding of life events that enables an understanding of imbalance and allows the child to function narratively in both landscapes. Therefore, social knowledge is essential to narrative thinking.

Goldberg-Reitman (1992) examined young girl's conception of their mother's role. Stories with accompanying pictures were developed which exhibited various mother-daughter interactive situations. The children were questioned as to their understanding of how the mother would act and her motivation for acting thus. Goldberg-Reitman found that at age 4, the role of the mother was typically viewed in terms of scripted actions. Children of this age were able to make appropriate predictions about a mother's behaviour toward them and explained the actions by reference to the immediately preceding situation (e.g., "The mom would catch the girl." (who's sliding off the roof) "Because she's falling down.") In other words, 4- year-olds and explanations were simple and tended to focus on only the predicted maternal action or the situation. At the 6-year-old level, maternal roles were viewed as internally motivated action sequences (e.g., The mom would catch the girl, "because her mom didn't want her to get hurt.") . Children saw mothers as having the potential for acting from their own wishes for their daughters' well-being rather than in response to the

demands of the situation. By 10 years of age, children explained the mother's actions in terms of general social roles (e.g., "Because moms take care of their kids.").

Fischer and Hand (1984) also looked at children's understanding of roles. They examined children's understanding of the roles of "father" and "doctor". Results indicated that 4-year-olds held a "behavioural conception" similar to a generalized action script. Whereas, 6-year-olds held a "true" role conception which involved a more complex script and included internal motivational components.

In summary, the development of knowledge of social roles and the ability to relate and coordinate aspects of motivation and action facilitates narrative production.

There appears to be a dialectic between narrative development and the development of an understanding of action-motivation differentiation, conflicts and imbalances, and social roles. Newly constructed social knowledge helps to shape the development of narrative. Narrative in turn may help to express the new or unfamiliar in comparison with the known or familiar in order to facilitate the formation of meaning and the understanding of events and people.

### **Summary**

The research clearly shows that narrative comprehension and production follows a general developmental trend, evolving along a specified pathway, from the production of scripts to the production

of plots. At 4 years of age, the child is able to construct a story that is comprised of a scripted sequence of events that are temporally related. By age 6, the child is able to integrate two scripts, including a problem and a resolution. Progression can thus be viewed as a move from a consolidated elementary structure (i.e., the social script) to a new and qualitatively different coordinated unit. Changes also occur in the way events are related in that children develop the ability to impose coherence, through the use of links and connections, among story elements.

There are several interacting variables associated with narrative development. The first variable is working memory or processing capacity. Narrative development hinges on the ability to hierarchically coordinate, integrate, and consolidate social scripts. This ability is thought to be dependent, at least in part, on the processing capacity of the child. Secondly, narrative development requires an understanding of the domain of social interaction. Narrative is closely linked to children's expanding knowledge of social and representational worlds. The social realm is composed of a variety of aspects including an understanding of action-consciousness differentiation, imbalances, social roles, and intentions. Developmental progression, within each of these areas, is parallel in that it reflects a shift from an action orientation to an intentional one. These interacting variables help to propel narrative development in both a general and an individual manner.

### **Hypotheses**

This study extends narrative research to the realm of verbally talented 4- and 6-year-olds, mapping out the developmental cognitive structure of narrative. Based on previous research in the area of narrative two hypotheses were put forward.

Hypothesis 1:

It was predicted that a significant difference would exist between the narratives of the 4- and 6-year-old groups, with the six year-olds producing narratives at a level above the 4 year-olds.

Hypothesis 2:

It was predicted that no significant differences would exist among the children's responses to the task prompts.

### **Chapter III**

#### **RESEARCH DESIGN AND METHODOLOGY**

This study was designed to examine the developmental changes in the production of oral narratives of verbally talented 4 and 6-year olds. Five task prompts were used to elicit narratives from the children. These tasks were used to determine narrative ability along a developmental spectrum in the area of plot structure, including structural components and linkages among them.

#### **Subjects**

Forty-two subjects were selected from a sample of verbally gifted and talented children. Subjects were drawn from seven middle and upper middle socio-economic status neighbourhood schools in a large urban centre in Western Canada including; Catholic and Public schools and Community Pre-schools, and Daycares. The study's sample was comprised of one group of 20 (including 12 boys and 8 girls) with a mean age of 4 years and 4 months), and one group of 22 children (including 11 boys and 11 girls) with a mean age of 6 years and 2 months. These age levels were chosen because of their correspondence with developmental changes in the cognitive structure as predicted by the general theory guiding the study (Case, 1985). Verbally talented youngsters were selected because they were considered the most likely to produce narratives that had integrated, rich structures.

Several procedures were used to identify this population including: teacher and parent nomination and standardized

assessment. Teachers and parents were asked to nominate participants on the basis of previous verbal performance, matching the following description: "Those children who, in your opinion, exhibit advanced verbal capabilities and vocabulary beyond that typical for their age." Following subject identification, the nominees were formally assessed using the vocabulary test of the Stanford Binet Intelligence Scale (1986). Students who scored at or above the 85th percentile (or top 15% of the population) participated in the study.

### **Consent**

The specific details of the study were provided to the participating schools in the form of a brief written research proposal. The proposal was subsequently discussed with the principal. Teachers were invited to participate by the school principal and were approached upon expressing an interest. The teachers, subjects, and their parents were informed of the aims of the research, the procedures, and the nature of student involvement. Written consent was required from the teacher and a parent/guardian. Letters of consent are presented in Appendices A and B.

### **Task Prompts and Rationale**

Five narrative task prompts were used. They were as follows: 1) "Tell me a story about someone who has a problem that they have to fix or make better." This prompt was taken from McKeough (1991). It was found to be an effective way of eliciting



problem-resolution story structures.

2) "Tell me a story about something exciting that happened to you."

This prompt was based on the work of McCabe and Peterson (1983) that examined children's stories about personal experiences. An age-related progression was noted in an analysis of both the key or "high points" and story grammar. The prompt, in the current study, asked for a personal story about something that has already happened.

3) "Tell me a story about someone who really wants or hopes for something." This prompt was also based on the personal narrative study of McCabe and Peterson (1983). However, it specifically asks for a story about something that is hoped for in the future.

4) "Tell me a story about a big wolf and a little lamb." This prompt was based on the work of Stein (1979) that showed that five-year-olds produced stories that were longer and more complex when the prompt included characters with conflicting traits rather than when no conflict was present. In the current study, however, instead of having conflict between the character trait and the goal (e.g., a mean bear wants to share), the conflict is between the two characters.

5) "Sometimes stories are about someone who's mean and someone who's scared. Can you tell me a story about a meanie and someone scared." This prompt was also an adaptation of Stein's (1979) prompt in which conflict between character trait and goal was used. In this prompt, however, the conflict is between characters.

### **Procedure**

Initially, the researcher familiarized the students with her presence by reading stories to the children in a designated "story corner." This took place once a week over a three week period prior to the commencement of the study. The researcher then worked with the participants in small groups of 3 to 5 children.

Stories were generated orally during a series of 3 or 4, 30 to 40 minute story composition sessions held over a three week period. The goal was to have each subject generate a narrative for each of the five prompts listed above. The stories were generated in a group context in order to provide the children with an audience for their narratives, thereby more closely simulating a natural story-telling context. Children picked one of the story prompts, which were written on separate strips of paper, from a hat and the researcher read it aloud. If the child could not or did not want to tell a story on the selected topic another prompt was picked. The researcher provided encouragement and non-substantive feedback (e.g., "wow" and "is that the end of your story"). Following each narrative composition, the other children in the group served as story-helpers. The story-helpers were invited to add to or change each narrative. The original story-teller could then choose to change, add to, or leave their story unchanged (this later data was not analyzed in the current study). The children's narratives were audio-taped and subsequently transcribed. The names were removed and replaced with I.D. numbers.

### **Analysis**

The analysis of the story protocols was based on McKeough's (1986, 1992) structural model of narrative. Each narrative was scored as to the developmental level (see Figure 1). Additionally, the linkages among the structural components were examined and a scoring scheme developed. This later analysis is discussed in the results chapter.

### **Summary**

The current study presented 5 narrative tasks to two groups of verbally talented children aged 4 and 6 years. The children were required to produce one oral narrative for each of the five prompts. The narratives were initially analyzed for plot structure, according to McKeough's (1986) model of narrative development and the model was then extended to include semantic linkages, described in Chapter 4.

## **Chapter IV**

### **RESULTS**

#### **Introduction**

The purpose of the study was to investigate developmental changes in the narrative productions of verbally talented children, aged 4 and 6. The first hypothesis was that a developmental progression would be found, with the six year-olds producing narratives at a substage above the 4 year-olds. The second hypothesis was that the five narrative task prompts would produce narratives of an equivalent developmental level.

A scoring system was developed that captured the changes in the development of plot, linkages, and detail. In what follows a description of the adapted scoring criteria for the narratives will be outlined. Secondly, the results of the statistical analysis will be presented.

#### **Scoring Criteria**

The analysis of the story protocols used an adaptation and extension of McKeough's (1992) narrative model of plot analysis. The new scoring system included the analysis of both plot and linkage structures. Each narrative was scored as to the developmental level (Level 1, 2, 3 or 4) and sub-level (Low, Average and High) in accordance with the following criteria.

##### **Level 1**

Level 1 stories consist of action events, experiences or

occurrences that are either simply reported or are temporally organized in terms of the order of occurrence.

Scripts (i.e., chronologically sequenced actions that describe routines) are the most common temporally organized story format. Within Level 1, there are three substages (Low, Average and High).

Low:

Low (Level 1) stories are composed of action events, experiences, or occurrences which are poorly sequenced in that it is not clear how one event follows from the other. This is because the linkages between the action events or occurrences are frequently unstated, or inexplicit and unclear, and fail to follow a social norm. This results in weak story connections. Low (Level 1) stories were assigned a score of 1. The following story serves as an illustration.

Story Example: 4 year-old

"Once I went to birthday party and that was um...I went on the best plane that was...that was leading the way of all the planes and that's the Toronto ones and then, you know what? we just got there from London and then we went. This is true. And a jelly beans and smarties and that's the end of the story. And I have something to add. I have fifty-six things to add to my story. And they went "boooh!" and cause he wasn't watching out for a hole anyway, anyway "Yaaaaaah" and went "Dooooogh" right on his head.

As can be seen, this story is composed of a series of occurrences and experiences (e.g., a birthday party, a plane ride, jelly beans and smarties, and the hole). However, the linkages

between the experiences are neither explicit nor socially evident (i.e., they do not seem to be based on a discernible social script).

Average:

As with Low (Level 1) stories, Average (Level 1) stories consist of a sequence of action events, experiences or occurrences. However, typically these sequences are more clearly connected, in that they are organized either temporally or within social scripts that describe common routines, familiar experiences, or occurrences. Although the linkages between the action events or occurrences are not explicitly stated, the flow of actions or occurrences are easily followed because the connections are socially known. Average (Level 1) stories were assigned a score of 2.

Story Example: 4 year-old

"Once when I went to swimming and I got to play with the rainbow bars and you put them under your armpit. Someone lost one so I put, I got two to float on the water."

The linkages within the story are socially known. The listener is able to understand the connections between swimming, rainbow bars (which are long Styrofoam tubes), and floating. Even if unaware of the specific nature of rainbow bars, the listener is able to understand the story progression by inferring.

High:

High (Level 1) stories are structurally similar to that of Average (Level 1) stories, however, also contain rich detail that

includes descriptive adjectives, adverbs or descriptive phrases. High (Level 1) stories were assigned a score of 3. The following story is offered as an example.

Story Example: 4 year-old

"Once upon a time, there was a little lamb that was as soft as a little cloud as soft as a little cloud. And then a wolf came along and he scared it away."

The above story contains descriptive adjectives which provide the story with rich detail (e.g., 'a little lamb was as soft as a little cloud as soft as a little cloud').

## **Level 2**

Unlike the event sequence or script structure of the Level 1 stories, Level 2 stories have a plot-resolution format.

Low:

Low (Level 2) stories are in a plot-resolution format, however, the linkage between the problem and resolution is either unstated or inexplicit and unclear resulting in weak story connections. Low (Level 2) stories were assigned a score of 4. The following story serves as an example.

Story Example: 4 year-old

"Once I, we have, uum. uum. Oh dear I have to think. I can't remember, I can't remember. I have a special story I wanted to tell you but I can't remember what it was called. Once there was a little girl, walking down the street and she met, and she met a mean person and it was a witch. She said...and it went...and she went and

she screamed really loud and she went down back to her house. And there she was nice and safe with her mom."

The above story is in a distinct problem-resolution format. Although the linkages between the events in the problem script clear, the linkage between meeting the witch and being safe at home is not well elaborated.

Average:

In Average (Level 2) stories, the sequence of events contains a problem or dilemma which is resolved by the end of the story. The development of the dilemma may be embedded within a script, or a script may begin after the dilemma is elaborated. The linkage between the problem and resolution is stated and explicit. Average (Level 2) stories were assigned a score of 5. The following story is an example.

Story Example: 4 year-old

"I broke, I fell off a cupboard and I landed on my wrist and then I had to go to the...and at the end of the day I went to the doctors and they wrapped warm water on my arm and then it hardened and then I had to put it around my neck and then we went to the car and when I got to the car it was already dried and then when we got home and then my sister signed it."

The story contains a problem (i.e., breaking one's wrist) which is resolved by going to the doctor's office and getting a cast. The links between the accident, the doctors visit and the cast are explicit and clear.



High:

High (Level 2) stories are structurally similar to that of Average (Level 2) stories, however, they also contain rich detail which includes descriptive adjectives, adverbs, or phrases. High (Level 2) stories were assigned a score of 6. The following example is provided.

Story Example: 4 year-old

"One day there was a little boy and he was scared at night because he saw shadows on the wall and they had green eyes and one had one green eye and one black eye and his nose was round and it was dark and red and his hair was yellow and blue and when he woke up it wasn't a shadow it was real. It was a big ugly, stinky, slimy bug and the other day he came out. This little bug came out and he said, "Little boy don't be afraid of me, I'm just a lost little bug."

In this particular problem-resolution story, the child has used descriptive adjectives and phrases to provide rich detail (e.g., "it was a big, ugly, stinky, slimy bug").

### **Level 3**

Whereas Level 2 stories contain one problem that was resolved, Level 3 stories include either additional problem-resolution pairs or one or more failed attempts. Three sublevels were identified:

Low:

Low (Level 3) stories include either additional plot-resolution pairs or one or more failed attempts at problem resolution, prior to

the final resolution. These stories also have one or more weak, inexplicit, or unstated linkages between problem and resolution, problem-resolution pairs, or problem, failed attempt, and resolution. Low (Level 3) stories were assigned a score of 7. The following story is provided as an example.

Story Example: 6 year-old

"Once upon a time there was a little sheep who lived in a meadow and there was a wolf who lived in a forest. Now that wolf climbed up a, there was one coconut tree near the meadow and he chopped down the coconut tree and made him look like a coconut, like a dead coconut tree, and when the lamb came near he he he tested the tree to see if it was a real tree and he actually kicked it with his hind, kicked the wolf in the rear with his hind legs. And then the wolf fell down and then when he was just waking up a little boy came along and called and he looked at the wolf and bounced on his stomach and then runned away and when he was getting up the sheep threw one billion, two hundred and fifty or actually infinity coconuts all over him until he was nothing but a coconut tree."

In the above story, involving three problem-resolution structures (i.e., the wolf trying to hide from the sheep by turning himself into a coconut tree, the boy and the wolf, and again one involving the wolf and the sheep). The linkages between each problem and its resolution are unclear. Also the linkages among the problem-resolution pairs are not stated.

Average:

Average (Level 3) stories also include two or more problem-resolution structures or one or more failed attempts at problem resolution. In addition, however, all of the linkages are explicit and stated between problem-resolution, problem-resolution pairs, or problem-failed attempt and resolution. Average (Level 3) stories were assigned a score of 8. The following story is representative of these stories.

Story Example: 6 year-old

"A long long time ago there was a...uum...wagon. He had no wheels, so nobody used him. His other friends had wheels. He asked his friends, "How do I get wheels?" They said, "Well you just have to go to a store and buy them. So he went to a store and they said, "No we don't have anymore wheels." So he went back and said...he went to the wizard and then he said, "how do you get wheels?" And he said, "I made a magic potion to make them, so if you...it takes a week to work, if you drink it. So he drank it and in a week he had wheels, but not the right kind. So he went back to the wizard and said, "I don't have the right kind of wheels." and he said, "Well I have another potion, so he went back to get it. He... he...There was another week done and it still wasn't the same. So, he went back to the wizard and said, "I don't have them, I'm going to the fairy." So, the fairy pumped up wheels and he lived happily ever after."

In this story, the linkages are explicitly stated. It is clear how the problem of not having any wheels is connected to each of the three failed attempts to acquire wheels and ultimately to the

successful procurement of wheels (resolution).

High:

High (Level 3) stories are structurally similar to Average Level 3), however, they also contain rich detail which includes descriptive adjectives, adverbs, or phrases. High (Level 3 ) stories were assigned a score of 9. The following story is provided as an example.

Story Example: 6 year-old

"This guy called Tim. He's called Tim the horse and Tim wanted to be out. He was a wooden horse but he wanted to be a real horse and so so one day Tim, that was the old shoe maker, ran away to the shoe maker and asked could he become a real horse in the cave of wonders, like in Aladdin. And he they both didn't know where the cave of wonders was, so they set off and walked for a long time and they got to, where was it that Aladdin went? Agrabar and Agrabar and then they found a fly. Two pieces of a fly, of a gold fly, and they they put it together and they ran after the tail and then they ran to a lump of dirt and then it turned into dirt with big eyes and then they came to a dog and then they roded a horse, it was wooden, and he galloped like this, "wack-a-dee," "wack-a-dee," "wack-a-dee," "wack-a-dee," "wack-a-dee" because he was an old wooden horse and when he went squeak along the path, "squeak," "squeak," "squeak," "squeak" and until he got to a big stairs up to a heap and he went "wap-a-lee," wap-a-lee," over the stones that went through water and between and then he got to a...and he galloped up the stairs

"wack-a-lee," wack-a-lee," "wack-a-lee" until he broke the lamp and broke a spell that had something written on it and then out came a genie and granted him his first wish. His first wish was to be a new horse. His second wish was to be a beautiful white one and the third wish was to be magical and that's the end of the story."

In the above story, containing failed attempts, rich detail is provided through the use of descriptive adjectives, adverbs and phrases (e.g., "he was an old wooden horse and when he went squeak along the path, "squeak," "squeak," "squeak," "squeak" and until he got to a big stairs up to a heap")

#### **Level 4**

Level 4 stories differ from Level 3 stories in that they also have two problem-resolutions, however, these are provided in an integrated story structure and also include a major, minor, or complicating problem.

Low:

Two problem-resolutions in an integrated story structure with a major, minor, or complicating, problem. However, there are one or more weak, inexplicit or nonstated, linkages between problem-resolution, the complicating problem, and the integration of problem-resolution. Low (Level 4) stories were assigned a score of 10. The following story is provided as an example.

Story Example: 6 year-old

"Once there was a little girl whose name was Lynn and she went for a walk and she saw a kitten which she very always wanted.

She took it home and it grew and it grew and it grew and it grew until it was a tiger. She had to throw it out of her house, but then it came back and it was so nice she even didn't eat. Told her, "I don't want anything to eat" and then he kept getting skinny and skinny; fat and fat; skinny and skinny and fat and fat, so he could stay alive forever and ever and he stayed, lived forever and ever and then once he had to die. He went up to heaven and the girl died too and then a friend of hers came and...but she thought her was dead and her name was Tara and then she came and she went to the house and she saw her sitting there. She was really fainted. She wasn't dead and then they played together and Tara, um Lynn kept playing and playing and playing until they both died and went up to heaven and they were the same age. They were ninety-nine and ninety-nine, and they went up to heaven and died and they were with God and then they still played and played and played with the angels and played with everybody there and they were so nice that God had to give them a chance that they would be an angel and then Tara went to angel and they went down and in the night and they protected all kids and the parents that slept at night. The end."

In the above story there are several linkages that are either unstated or inexplicit. The linkage between the problem-resolution of the tiger's growth and not eating and living forever is unclear. The linkage between the problem-resolution of the death of the girls and transformation to angels is also inexplicit. Finally, the linkages between the integration of the tiger problem-resolution with the

problem-resolution involving the girls is not stated.

Average:

Average Level 4 stories are composed of two problem-resolution structures, in an integrated story, with a major, minor, or complicating, problem. Both problems are resolved within the story. All of the linkages are explicit and stated.

(no examples in the study)

High:

High Level 4 stories are structurally similar to Average Level 4 stories, however, they also contain rich detail which includes descriptive adjectives adverbs, phrases.

(no examples in the study)

### **Quantitative Results**

Data from the narratives of twenty 4 year-olds and twenty-two 6 year-olds were analyzed. Some of the children either could not or would not provide a narrative in response to a chosen task prompt. In these cases group mean scores were used. These were obtained from separate one-way analysis of variance (ANOVAs) performed for each prompt for the 4 and 6 year old groups. On other occasions, children provided a story that corresponded with one of the previous prompts. In these cases, where more than one narrative was provided for a given prompt, only the first effort was scored.

Scoring and analysis was performed by the researcher. An interrater reliability check was performed on 25% of the stories by a second trained rater. Agreement was reached on of 87% of the

stories and differences resolved through discussion.

A one-way multivariate analysis of variance (MANOVA) was performed to analyze age effects. Performance on the five task prompts were the dependent variables (i.e., "problem," "meanie," "wolf/lamb," "exciting," and "hope for" prompts) and the age groups were the independent variables (i.e., 4-year-old and 6-year-old). The mean scores and standard deviations are reported in Table 2. The alpha level for all analyses was set at (.05). The MANOVA revealed a significant effect of age on narrative production ( $F(5,36) = 3.08, p < .05$ ).

Follow-up univariate (ANOVAs) revealed significant task effects for the "problem" prompt ( $F(1,40) = 5.35, p < .05$ ), "meanie" prompt ( $F(1,40) = 4.78, p < .05$ ), and "wolf/lamb" prompt ( $F(1,40) = 8.11, p < .01$ ). The univariate analysis of variance (ANOVAs) were not significant for either the "exciting" prompt ( $F(1,40) = .043, p > .05$ ) or the "hope for" story prompt ( $F(1,40) = 3.6, p > .05$ ).



Table 2

Means and Standard Deviations for All Prompts by Age Levels

Prompt	Four-year-olds		Six-year-olds	
	Mean	Standard Deviation	Mean	Standard Deviation
Problem	5.48	1.14	6.48	1.59
Wolf/Lamb	5.80	1.28	6.92	1.27
Meanie	5.28	1.16	6.25	1.66
Exciting	3.32	1.79	3.43	1.73
Hope for	5.14	1.16	6.16	2.13

**Summary**

Five task prompts were used to determine the narrative development of children aged 4 and 6 years. The generated narratives were examined for developmental plot and linkage structures, using an expanded scoring criteria that involved both plot and linkage components. Results of the MANOVA indicated that a significant difference existed between the stories of the 4 and 6 year old groups. Univariate ANOVA's indicated that significant differences existed between the "meanie", "wolf/lamb" and "problem" stories of the 4 and 6 year old groups. No significant differences were found between the "exciting" and "hope for" stories of the 4 and 6 year old groups.

## **Chapter V**

### **DISCUSSION**

The present study extended the analysis of narrative plot structure to include an analysis of semantic linkages among the components of the plot structure.

#### **The Scoring Model**

McKeough's (1991) plot structure scoring scheme was found to inadequately describe the developmental changes in the narratives of talented children. Further analysis of the data led to an extension and adaptation of McKeough's (1991) scoring criteria to include not only distinct "typical" levels but also transitional sublevels. The criteria for the sublevels were determined through an in-depth analysis of story differences and trends. It was discovered that stories progressed through three separate substages within each stage. These substages were labeled as Low, Average, and High.

The specific criteria for assigning substage scores involved the types of linkages children used to connect and to bind the stories, as well as in the amount of descriptive detail included in the stories. The linkages in this study are different from those which are commonly referred to as connectives. Connectives have been defined as actual, concrete words that serve to tie sequential sentences within the story (e.g., "and" or "then"). However, linkages are abstract, semantic connections, apparent in the meaning or context, rather than explicit word connections. Linkages allow the

story elements to flow in a fluid temporal manner from one to the other and make the relations explicit among the elements of a socially familiar script.

Semantic linkages develop in a progressive manner through levels 1 to 4 (see chapter IV for scoring criteria). In Level 1, linkages exist among action events, occurrences or experiences. In Level 2, linkages exist between plot and resolution. In Level 3, linkages occur between either plot and resolution structures or between plot, and failed attempt and/ or resolution. In Level 4, linkages occur between plot and resolution structures, and also within the integration of these two structures or between the complicating event, plot, and resolution structures. In addition, each of the four levels are composed of three sublevels (low, average, and high).

Three sublevels were identified within each of the four levels. These were based on the progressive use and integration of linkage structures within the narrative as well as through the addition of elaborative and rich detail. Low sublevels were those stories that had one or more of the linkages missing (unstated) or unclearly stated (inexplicit). The Average sublevel included those stories in which all the linkages were clearly and explicitly stated. The High sublevel was representative of stories which contained clearly stated linkages and also rich detail. Rich detail in this study was conceived of as the use of descriptive adjectives, adverbs or

elaborative and descriptive phrases.

As was the case with the development of the original scoring system (McKeough, 1991, 1992), the current system was based on neo-Piagetian theory (Case, 1985, 1992). Within this view, developmental change is, at least in part, governed by functional and maturational changes in children's working memory capacity. As the child develops, there is a shift at each new level as new structures are incorporated using the increased working memory capacity. Within each of the sublevels there is a further progression in development as the child builds on the existing structure and fills it out in richness and detail.

In examining performance in the narrative domain, children functioning at Level 1 are thought to have one consolidated unit of working memory available (comprised of 4 units from the previous stage) (Case, 1985; McKeough, 1992). At Level 1 (low), stories are told as a series of action events or occurrences in which the linkages are unstated. Additionally, the linkages cannot be inferred from a familiar social script. Although the child is thought to have the cognitive building blocks that are the base for the next sublevel of narrative, at this level he or she is unable to integrate them in a coherent story structure. Each separate event is coherent within itself but is not yet linked with successive events. With practice, however, the child is thought to use his or her memory capacity more efficiently. Consequently, in Level 1 (average) the child has

the available working memory capacity necessary to link the events by framing them in a familiar social script. However, at this Level, the child does not yet have the capacity to state the linkages in story form. Level 1 (high) illustrates the point at which the child has mastered the ability to coordinate the events within a familiar social script, therefore reducing the amount of memory needed. The extra memory, still within one unit, is used for the task of filling out the narrative with detail, including descriptive adjectives, adverbs and elaborative phrases.

Level 2 is thought to involve the use of two units of working memory (Case 1985; McKeough 1992) and marks the transition towards the generation of stories which include two episodes (one stating the problem and the second the resolution). In Level 2 (low), the plot structure is not yet consolidated, therefore, initially there are either no attempts or unsuccessful attempts to provide semantic linkages between the problem and resolution. There is also a drop in the use of detail in the stories because of the use of working memory capacity for the task of generating the problem-resolution components. Level 2 (average) marks the successful coordination of plot structures and clearly stated linkages. The consolidation of the plot and linkage structures frees up additional working memory which is then used to provide narrative descriptive detail in Level 2 (high).

In Level 3, three units of working memory are thought to be

available for use (Case, 1985). Therefore, a third episode, including additional problem resolutions and complications or failed attempts is added (McKeough, 1992). Level 3 (low) exhibits a drop in the production of descriptive detail to allow for the use of memory capacity in the generation of the additional episodes. There are, however, one or more weak, inexplicit or nonstated linkages between problem and resolution, problem-resolution pairs, or problem, failed attempt, and resolution. Level 3 (average) occurs following the successful coordination of both plot structures and linkages that are both stated and clear. The progression to Level 3 (high) occurs as a result of the availability of additional working memory following the consolidation of the structures. The "freed" memory is used in the addition of descriptive detail.

The final level identified was level 4 in which four units of working memory are thought to be available (Case, 1985). In Level 4 (low) the production of detail again decreased as a new structure emerged which includes two problem-resolutions in an integrated story structure with a major, minor, or complicating event. There are, however, one or more weak, inexplicit or nonstated, linkages between problem-resolution, the complicating problem, and the integration of problem-resolution. As the structures become integrated, working memory is freed up to allow for the coordination of components of the plot structure and linkages that are both stated and clear in Level 4 (average). Through further practice and consolidation of plot and linkage structures the addition of

descriptive detail emerges in Level 4 (high).

### **Summary of Quantitative Results**

Stories were scored using the above scoring scheme. A MANOVA revealed significant differences between the narratives of 4- and 6-year-old children. Follow-up univariate analyses demonstrated that the prompts did not yield similar story structures. The univariate analyses revealed that scores for the "exciting" and "hope for" stories did not differ significantly for 4 and 6 year old children. However, story scores were significant for the "problem", "wolf/lamb" and "meanie" prompts.

### **Examination of the Prompts**

This difference may be explained by the nature of the prompts and the response of the children to them. The "hope for" and "exciting" prompts involved personal events. This type of prompt tended to elicit a personal investment of emotion. Feelings of excitement were evident in the children's responses to these two prompts. The excitement that was generated seemed to override the child's knowledge of narrative structure and his or her ability to provide a story in the typical format. Instead, the narrative was in the form of a statement of fact. Notably, the "exciting" prompt produced a smaller difference than did the "hope for" prompt and had a greater drop in the level of narrative that was produced. This reduction in level may be due to the nature of the "exciting" prompt in that it is more 'real' and tangible to the child because it has

already occurred.

The three remaining prompts (i.e., "problem," "meanie," and "wolf/lamb") yielded stories that were significantly different from age 4 to 6 years of age. These prompts differed, from the "exciting" and "hope for" prompts, in that there seemed to be less personal investment of emotion in that the stories were not of a personal nature and were external to the child. In these cases, the children produced narratives that were at a higher developmental level, and which conformed to a typical story format. This type of response is somewhat counter-intuitive, in light of the generally held belief that affective engagement has a positive impact on performance. In the present case, however, high levels of emotional involvement seemed to produce a sort of "override" command (i.e., namely to get directly to the episode in mind and to put aside the story aspect of the task directions). Therefore, it is important, within narrative research, to examine prompt type and also the intensity of the associated affective response. Differences in topic, appeared to affect the amount of emotional investment and ultimately the level of narrative production.

### **Instructional Application of the Model**

As the affective component appears to have an impact upon narrative production, this should be taken into consideration when designing an instructional model. The affective component confounds the narrative capabilities of the child. Therefore, in an instructional setting it would be important to ascertain



developmental level through the use of personal prompts that have associated affective levels that are conducive to narrative production. Narrative prompts which are external to the child and are concrete and tangible may also be used to ascertain developmental level. This will allow for a more realistic assessment of the child's narrative developmental level. Instruction should then allow the child to progress along the narrative developmental path.

Theories of cognitive development offer a way of organizing instruction in a manner that is consistent with the educational goals of the enhancement of learning and development of the child. The particular model outlined in the study subdivides each of the 4 levels of the model into 3 sublevels. An analysis of a child's current narrative productions would allow us to place the child along a developmental spectrum and to assess the next step in development with respect to plot structures, linkages, and elaborative detail. This provides a way of enhancing the progression of narrative through an instructional model that takes into consideration the child's current developmental level. Thus, the child may be instructed through a method called "conceptual bridging" which attempts to move the child up on the developmental scale while minimizing the processing demands of the task (McKeough, 1991).

In summary, the current model of narrative development provides an understanding of the conceptual structures and development of narrative as well as a knowledge foundation that

enables us to more effectively teach and enhance narrative skills. Awareness of the cognitive placement and progression of a child's narrative facilitates testing to establish the current level of functioning and subsequently educational bridging designed to boost the child from a spontaneous level of production to the next level of production. Therefore, it places educators in a good position to help children to produce more developmentally complex narratives. In a world in which narrative is an integral part of daily life, it is important that instruction optimize the narrative productions of children. Optimal programming is accomplished through consideration of the existing level of functioning and the potential capabilities of the child.

### **Suggestions for Future Research**

The results of this study suggest that there is a progressive development in narrative production that is closely tied to working memory capacity and social knowledge. Future areas for study include (1) a developmental extension of the study and (2) an application of the study.

1) Developmental extension. A further breakdown of the steps within the substages to include the exact developmental progression of linkages and elaborative detail would provide a more exact developmental model. The model may also be extended to include creative aspects of narrative. Creative aspects may follow a similar developmental trend and may also be composed of substages

within the levels of the model.

The inclusion of various other types of prompts may further tap differences in topic and perhaps examine confounding aspects (i.e., affective component). A developmental analysis of the types of additions that the children provided while they were story-helpers may also be of interest to see if there are developmental differences with respect to the narrative interjections and additions of children.

Also of interest is an extension of the model to both younger and older age groups and a description of applicable levels and sublevels of linkage development. Longitudinal studies could also be done to determine the pattern of narrative development within and between the stages and substages for different populations of subjects (i.e., average, learning disabled, and talented).

2) Application. The present study is applicable to the development of an instructional model based on the delineated levels and sublevels. Such a model is applicable for use in classroom instruction (i.e., regular, verbally talented and learning disabled), and in a diagnostic role of narrative development. The model may analyze narrative production and ascertain the child's learning needs in the areas of plot story structure, semantic linkages, and elaborative detail.

A further area of interest might be a comparison of the

narrative production of verbally talented children to average functioning children.

### **Delimitations**

A primary delimitation within this study is that there was no way to control for prior experience or classroom instruction in narrative. Perhaps the provision of opportunities to practice oral story telling prior to the study would help to ensure that all children had at least some minimal experience in this area. This would help to reduce confounds stemming from experience and practice effects.

A second delimitation was that there was no way to control for amount of effort expended on the task. This was somewhat offset by the provision of five tasks in order to allow for a sampling of narratives. To compensate, future research might prompt the children to tell the best story that they know how for each prompt.

A third delimitation was that the children heard the prompts in a group setting prior to their turn to tell a story to that particular prompt. Having previously heard a narrative on a particular prompt may affect subsequent narrative performance. Perhaps if enough prompts were generated so that they covered the same "type" of topic, but were somewhat varied, this would help to alleviate the problem. It would, however, be necessary to find prompts that were comparable in difficulty and understanding.

A further delimitation was that there was no control of the

particular story content that was generated to a specific prompt. There was even less control over the content for the two prompts of "exciting" and "hope for". The particular topics for these prompts were left entirely to the child.

### **Limitations**

A primary limitation of this study was the emphasis that was placed on cognitive and semantic factors in the analysis to the exclusion of linguistic factors. This was due to time constraints and the large amount of analysis that would be required. This will be addressed in further analyses of the data.

A second limitation was that sometimes children did not or could not provide a story in response to a prompt. In this case, an average score (of the prompt by age) was assigned. In order to decrease the number of missing stories, the children could be offered incentives (i.e., gold stars). Another method of increasing the success rate for the generation of stories would be to provide alternative equivalent task prompts from which to choose.

Additional limitations relate to the generalizability of the findings. The results and conclusions may not necessarily be generalizable to other populations of children (i.e., gifted, average, and learning-disabled). This study was limited to a narrow socio-economic range as well as to a small sample of subjects with little variation in cultural and ethnic background.

## **Summary**

It appears that verbally talented children follow a developmental progression in narrative from the production of scripts, to problem-resolution structures, to the inclusion of extra problem-resolution events or the addition of a failed attempt, and finally to the provision of problem-resolution structures that are in an integrated story structure with a minor, major or complicating event. To facilitate a further examination of the developmental nature of the narratives, a model was developed which extended McKeough's (1992) analysis of plot to include the dimensions of semantic linkage structures and elaborative detail. Upon examination of the narratives it was discovered that there was a significant difference in the level of production of narrative between the ages of 4 and 6. However, although the stories of verbally talented children followed the general progression of narrative development, they were more complex and advanced than expected.

Also of interest was the distinction that was discovered between personal prompts, which had a substantial affective component attached to them, and non-personal prompts, which did not have an affective component. The prompts that incorporated an affective, emotional component produced stories that were at a lower developmental level than expected. It appears that emotion overwhelms or overshadows narrative structure and competes for

available working memory. Hence the generation of narratives in response to personal prompts was below the expected level.

In conclusion, the narratives of verbally talented children develop in a progressive manner that involves the application of plot structures, linkage structure, and detail. Narrative production is also dependent on the type of story, and associated emotional components, as well as the development and availability of working memory.

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## **APPENDIX A**

### **Parental Consent**

Dear Parent(s) or Guardian(s):

Over the last several years we have been studying the ways in which students' narrative compositions improve throughout the grades. Currently, we are analyzing the compositions of talented writers in an effort to determine the dimensions along which they develop. We are requesting that your child take part in our study.

Participants will be seen both individually and in groups and asked to tell stories in a series of 3 sessions. The sessions will be 30 to 40 minutes in duration and held over a 3 week period. The orally produced stories will be tape recorded. Students may withdraw from the study at any time, if they so wish. All sessions will be conducted during class time by a researcher. The researcher can be contacted at (telephone number and name) for further information.

If you are willing to have your child participate in the study, Please sign below and return the form to the classroom teacher.

Thank you for considering our request.

Sincerely,

-----  
Lynn Davis

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Story Composition Study

I agree to permit my child \_\_\_\_\_ to take part in the story composition study conducted by Ms. Davis. I understand that my child will participate in an assessment of his or her story composition ability and that the assessment will be conducted during class time for 3 - 30 to 40 minute sessions over a 3 week period. I understand that the researcher will work with my child both individually and in a group setting. I understand that my child's orally produced stories will be audio taped and that all identification will be removed. Finally, I understand that my child may withdraw from the study, at any time without penalty.

Date: \_\_\_\_\_

Signature of parent/guardian: \_\_\_\_\_

**APPENDIX B**

## Teacher Consent

## Story Composition Study

I understand the involvement being requested of me in this study and I agree to participate. I have been offered a copy of the research proposal and its details have been explained to my satisfaction.

Date: \_\_\_\_\_

Signature of teacher: \_\_\_\_\_