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A Structural and Content Analysis of Stories Told by

Aggressive and Normal Boys

by

Maureen Howard

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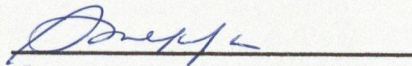
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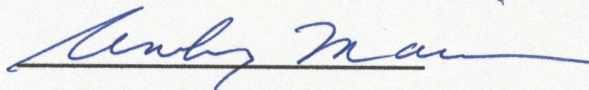Psychométrie 0632

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Supervisor, Dr. Anne McKeough
Department of Educational Psychology

Dr. Anthony Marini
Department of Teacher Education
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Department of Psychology

March 30, 1994
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ABSTRACT

This exploratory study investigated the structure and content of aggressive boys' stories in comparison to a group of normally functioning boys. The study's predictions regarding the structure of their narratives were based on previous research conducted by McKeough, Yates and Marini (in press) where evidence of a cognitive delay was found in the responses of the aggressive group in comparison to the responses of the normal group. The study's predictions regarding content themes were based on a review of literature related to the characteristics of behaviourally aggressive children and an analysis of the protocols from the original study.

The subjects completed two narrative tasks designed to assess 1) story structure, 2) themes of violence and conflict, 3) character depiction, 4) problem resolution and 5) ability to generate alternative story endings. Analysis of the stories from the original study as well as of the two narrative tasks indicated that the aggressive boys are developing in their narrative skills over time although they continue to tell less structurally complex stories than their normal peers. Additionally, their development appears to be along a qualitatively different pathway. The social environment they portrayed in their stories was considerably less adaptive than that of the comparison group.

ACKNOWLEDGEMENTS

DEDICATION

This thesis is dedicated first and foremost to Herky Cutler. Without his constant faith in me and his unerring sense of what's important and what's not, I am not convinced I would have reached my academic goals. His seemingly unending patience, unfailing ability to listen and insightful thinking are qualities of which I have taken more than unfair advantage.

I would also like to dedicate this thesis to my parents, Lois and Angus McLean. They taught me to persist with determination in the face of obstacles and challenges and for that I am very grateful.

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Chapter I

INTRODUCTION

Application of a cognitive-developmental perspective to the field of psychopathology has propelled inquiries in each discipline in new and important directions. Traditionally, research in cognitive-developmental psychology has focused on normally functioning populations to describe how cognitive capacities are displayed at different ages and in different domains. This focus has led to a "higher is better" perspective with maladaptation often viewed as a lack of age-appropriate cognitive development (Kohlberg, 1978; Selman, 1980). When applied to the field of psychopathology, the limitations of this approach become apparent. Psychopathology is clearly more than just a lag in cognitive development; psychological dysfunctions attributable to the interaction of social context and life history have been soundly documented by clinical researchers (Abidin, Jenkins & McGaughey, 1992; Garbarino & Sherman, 1980; Schneider-Rosen & Cicchetti, 1984). Until recently, these factors were often considered "surface" and not likely to contribute to our understanding of the structure of the mind (Noam, 1988). In a similar vein, clinical psychologists have rarely considered developmental factors, particularly cognitive factors, in the etiology of mental disorders.

With the focus on psychopathology, developmentalists have developed research methods that can take into account both structure and content. One of these methods involves the analysis of personal narratives. Because story making and story telling are common throughout time and across cultures, it is a fruitful area for investigation. As Joseph Campbell (1986) stated, "the story is the plot we assign to life and the universe, our basic assumptions and fundamental beliefs about how things work" (p. 138). On an individual level, people construct personalized life stories which allow them to make sense of their experiences, to negotiate meaning from what would otherwise be an unconnected series of events (Bruner, 1990, 1992). These stories become individually internalized and organized with "modifications, distortions and reorganizations" that become central reference points throughout life (Noam, 1988, p. 237).

Examination of these stories, along with their distortions and reorganizations, can yield a wealth of information about both an individual's psychological realities and their cognitive functioning. Of particular interest in this study are the narratives generated by behaviourally aggressive children. By undertaking both a structural and a thematic analysis of their stories, a more

complete picture can potentially be obtained of how aggressive children understand the world around them.

The present structural analysis is based on results of a study conducted by McKeough, Yates and Marini (in press). They found that on measures of social reasoning, behaviourally aggressive children's responses were significantly lower on a developmental scale than a group of behaviourally normal subjects matched for age, sex, intellectual ability, and socioeconomic status. The quality of their thinking showed less sophisticated structure than that of the normal group. Since this study was cross-sectional in design, there is a question as to whether those observed differences would remain stable over time. One of the main purposes of the current study therefore, was to follow-up on the original sample and obtain data which would address this issue.

Because an analysis of this type is concerned with the general structure of thinking, referred to as "stages" or "levels" of cognitive development, the specific content within these stages is not examined. However, other researchers investigating narratives of emotionally and behaviourally disturbed children have found significant differences in content areas (McGrew & Teglasi, 1990; Yule, 1985). Therefore, a second purpose of the current study was to expand on the original research by analysing the story

themes of each groups' narratives. Clinically, these issues are relevant as problems often manifest themselves over the course of development. Noam (1988) refers to "problem pathways" to explain how children may continue to progress through developmental stages while still being less adapted. By analyzing both structure and content, patterns may emerge that allow us to further understand the way these children represent their worlds.

Statement of Purpose

This exploratory study was designed to follow-up and expand on research originally conducted in 1990 by McKeough and Yates (McKeough, Yates, & Marini, in press). More specifically, the present research was undertaken to investigate the following questions:

1. Structure:

   Will a sub-sample of the boys diagnosed as aggressive in the original study continue to show evidence of a cognitive delay in the structure of their responses on a story telling task, and

2. Content:

   Will there be differences in story content themes between the aggressive and comparison groups?

Scoring criteria from previous studies were utilized to delineate whether cognitive delays were in evidence

(McKeough, 1984, 1992) and new scoring criteria were developed to examine the content differences.

Organization of Thesis

In the following chapter, the theory of development that provides the focus for the structural analysis is presented followed by a review of research related to the content analysis. Chapter III presents an overview of the methodology of the original study and a detailed accounting of the methodology of the current study. First, subjects are described, then procedures for task administration and scoring are outlined. Chapter IV presents the results of the structural and thematic analyses of the responses of 14 aggressive and 16 normally functioning boys. The final chapter discusses the results of the analyses, drawing some conclusions as to the relationships between structure and content. As well, methodological issues unique to the particular target population are discussed. Limitations and implications of this approach are outlined and recommendations made for future research.

Chapter II

REVIEW OF THE LITERATURE

This exploratory investigation of the narratives of aggressive children draws from a wide range of multidimensional research. The present chapter begins with a discussion of the cognitive developmental theory that underlies the structural analysis. The general theory is outlined and its relationship to narrative generally, and aggressive children specifically, is presented (Case, 1985, 1992; Case & Edelstein, 1993; Case & McKeough, 1990). In the second part of the chapter, research related to the content analysis is reviewed. Although a complete examination of this area is beyond the scope of the current study, selected findings are presented from projective story analysis. Finally, research regarding the characterics of antisocial children is reviewed. Following these discussions, hypotheses are formulated as to the level of cognitive development and the thematic content that may be exhibited in the narratives of the behaviourally aggressive group in comparison to their normally functioning peers.

Case's Stage Theory of Cognitive Development

Case (1985, 1992) proposed that children construct knowledge about the world in an increasingly complex fashion as they move from one stage of cognitive development to the

Figure 2.1

Case's stage theory of development
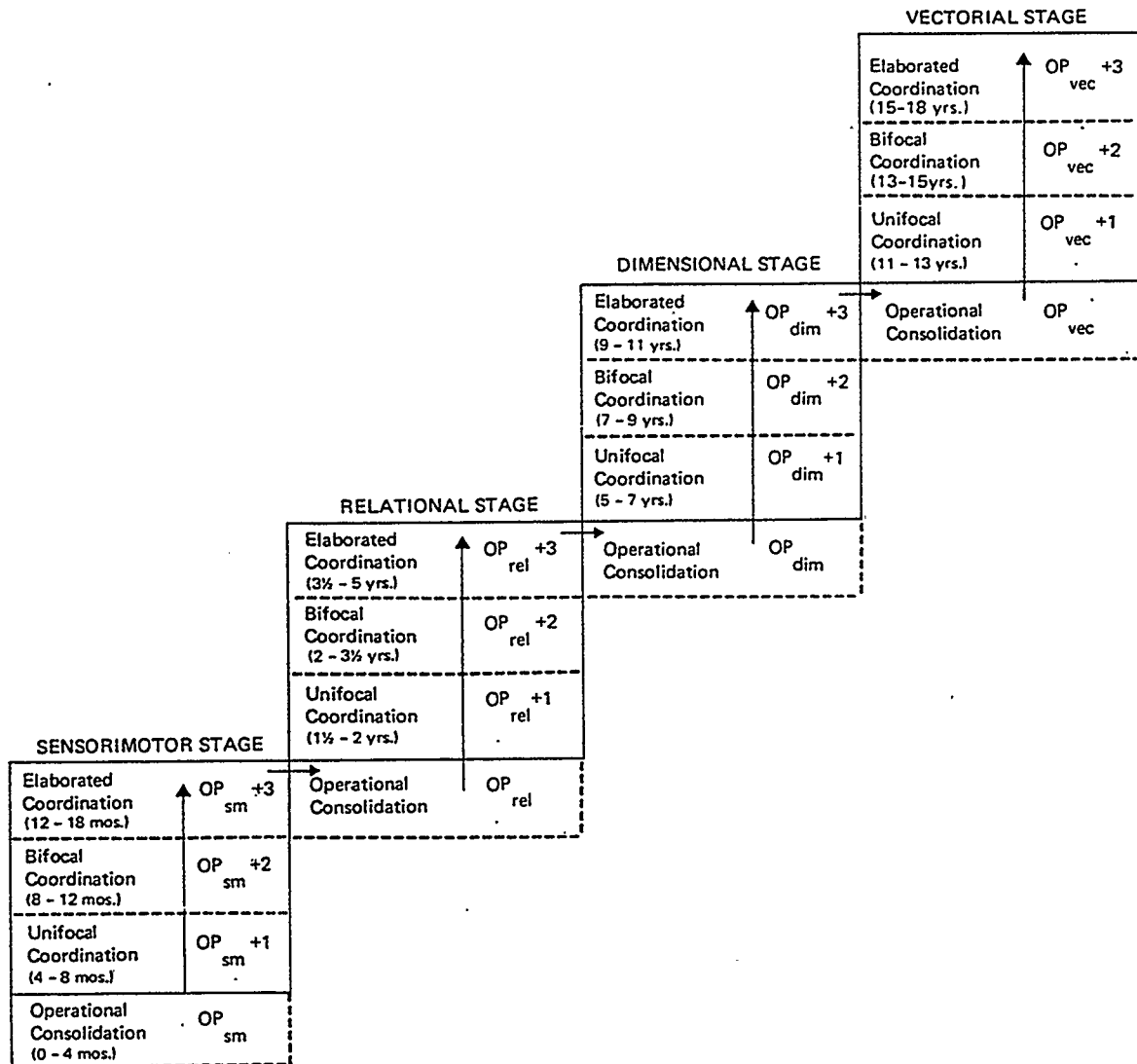
next. He hypothesized four stages of reasoning: sensorimotor (1-2 years), relational (2-5 years), dimensional (5-11 years), and vectorial (11-18 years) (see Figure 2.1). Within each of these four stages are three recurring substages through which the child develops as a result of experience and maturation. Individual differences in rates of development across various content areas can be explained in terms of experience with specific concepts. However, the whole system is generally constrained by maturational factors which set an "upper limit" to cognitive processing abilities. An example from the social domain, specifically narrative development, is presented to illustrate the process.

McKeough (1992; McKeough & Case, 1986) has documented the progression in children' story telling abilities during the dimensional stage (ages 4-12 years). The average 4-year-old's story usually contains four elements: a setting, an initiating event, a response to the event and an outcome which together form a story unit. This consolidation of four units into one "story" is thought to be the final phase of the relational stage and the beginning of the dimensional stage. The following example illustrates the prototypic 4-year-old story where four elements are linked together, both temporally and causally, to form a connected series of events:

Once there was a lamb and a girl walking down to get home. So they saw their mother's house and they went in and they saw their mother. That's where they lived and they lived happily ever after. (McKeough, 1992, p. 174)

By the age of 6, children's stories become more sophisticated with the introduction of a simple plot line comprising two coordinated story units. The first is a representation of a problem and the second, its resolution. This move from action event scripts to simple plots represents a major shift in children's social cognitive abilities. Specifically, they can now coordinate the understanding that they, and others, experience mental states (feelings, thoughts, intentions) with the understanding that actions or events are linked in a temporal or causal way (the story schema). During the previous stage, these two concepts could be considered independently, but not in a coordinated fashion. As Bruner (1986) stated, stories may be set in either the "landscape of action" (behaviours or events) or the "landscape of consciousness" (internal mental states). By the age of 6, children begin to integrate these two landscapes to produce stories that are "intentional". That is, a character's mental state can now be related, or mapped onto the action in a way that shows evidence of the relationship between the

two: "Bobby is unhappy (feeling) because his dog is lost (action), so Bobby gets a new dog (action) and then he is happy" (feeling). Thus, a prototypical 6-year-old story uses this understanding of "intentionality" to produce a story that has a problem and a resolution as illustrated in Figure 2.2.

Figure 2.2

Components of story structure typical of 6-year-olds


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scenario {                                          } denouement


          initiating --> response -->   outcome
          event
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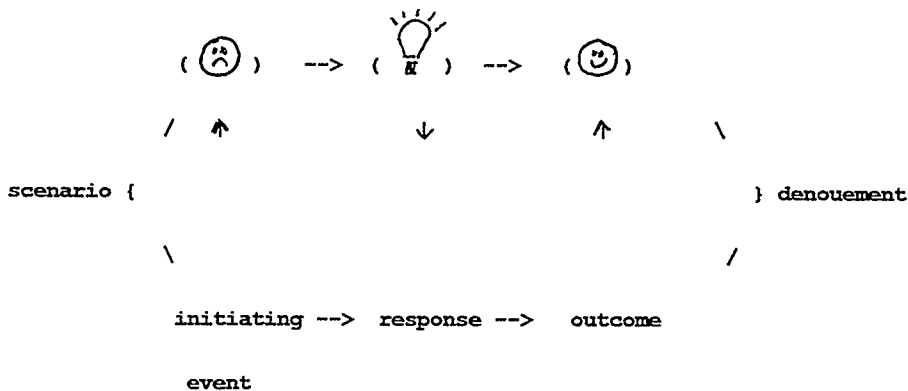
(McKeough, 1992, p. 208)

An example of a prototypic 6-year-old story follows in which the problem (a lonely lamb trapped by a fence) and its resolution (a horse rescued the lamb) form the basic plot.

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 got out. And then they went to a place where there was no one except

them. And they picked some 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 (McKeough, 1992, p. 174).

By 8 years, children can consider two such episodes and produce stories with subplots or both successful and unsuccessful resolutions. The following story illustrates how the problem (child wants to rescue a helpless lamb) is complicated by another event (parents block her efforts) to eventually become resolved (she sends it to "a place where lambs live").

> 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." Then she built a house in the woods for it and kept it there and brought food for her every day. And 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. (McKeough, 1992, p. 176)

By 10 years, children's stories include an increasing number of complicating events. These events become integrated within the resolution resulting in a very coherent, well thought-out story line.

This progression from action-based representations of human behaviour to intention-based representations has also been seen in children's understanding of a mother's role. Young girls were shown four comic strip depictions of children in problematic situations and asked what a mother would do in each situation and why she would act that way (Goldberg-Reitman, 1992). The same age-related differences at 4, 6, and 10 years were found in this task as were found in the McKeough (1992) story telling task. For example, when asked what a mother would do when her little girl was falling from a roof, children at the pre-intentional stage gave a response limited to describing the action: "she would catch her" (why?) "because she is falling". Intentional responses such as "she will catch her because she doesn't want her to get hurt" indicated an understanding of the relationship between the mother's desires and her actions and were most prevalent in children by the age of 6. By 10 years, children's responses were clearly more elaborate referring to at least one type of mental state in addition to offering an overarching, long-term statement (e.g., "her mother doesn't want her to get hurt because she loves her daughter") (Goldberg-Reitman, 1992).

The developmental progression in children's social cognition documented by McKeough in the narrative domain and Goldberg-Reitman in the understanding of a mother's role has

been replicated by other researchers measuring empathic reasoning (Bruchkowsky, 1992) and children's understanding of feelings (Griffin, 1992). The same pattern of development from action-based responses at 4 years (I do "A", then I do "B"), to intentional responses increasing in complexity from 6 to 10 years (I do "A" and "B" because I feel/think "X" and "Y") reflects the growth of the central intentional structure. This central structure is presumed to apply to children's understanding of all social events and serve as a "building block" for the shift to the "vectorial" stage (Case, Okamoto, Henderson, & McKeough, 1993).

In the narrative domain, children at this stage are now able to coordinate two "intentional" story units to produce new kinds of stories: the flashback, the dream, the novella, foreshadowing (Case, Bleiker, Henderson, Krohn, & Bushey 1993) as well as stories that demonstrate an understanding of the personality and psychological make-up of the characters (McKeough, 1992). At earlier stages, these literary devices were not in evidence. In the following exerpt from a prototypic 12-year-old's story entitled "Choosing", the flashback is utilized and the inner psychological worlds of the protagonist and other main characters are linked to the external action in a fashion that produces a psychological dilemma:

This is the worst day of my life. My parents are getting divorced. The judge has called upon me to choose between which parent I have to live with. It all happened one night after I went to bed. All of the sudden I heard arguing, no more like yelling. I could clearly hear what they were saying but I couldn't make out what it was about. All of the sudden it stopped. I heard my mother crying, my dad was still yelling at her. The last thing I heard was "I'm leaving!!" my father said. Then I heard the door slam.

Three weeks later they were in court. They argued about who's started and why they wanted a divorce. I wasn't allowed to go in the court room. I was kept at a foster home until things were straightened out. I was pressued in choosing which parent I loved more. But I couldn't. I love both of my parents very much. They're the ones who've taught me things, showed me things and now I have to choose.

I'm the only child and if I abandoned one, I'll leave the other one alone and sad and it will make him or her feel like they've been hated and it makes the other seem like they've been liked all those years. Now I'm in a confused state. I'm sad. I've been crying for two weeks.

As can be seen, this story describes a problem (how to choose between which parent to live with) but also moves away from the action to outline the psychological dilemma the main character faces (how other characters may feel as a result of the choice). Responses during the vectorial stage have been termed "interpretive" as they reflect the child's abilities to interpret events in more than one way.

Case et al (1993), have investigated the structure of the interpretive stage as it relates to the inclusion of trick endings. Results of their analyses of 10, 12, and 14-year olds' stories indicated that the majority of 10-year-olds had limited and unsophisticated usage of surprise endings but that 12 and 14-year-olds showed increasing ability to incorporate a trick ending into their stories. In order to accomplish this, the child must consider two possible outcomes: first, the outcome the reader is lead to expect, and second, the surprising outcome which leads to a retrospective interpretation of events.

Criteria have been developed for scoring these levels of narrative development. Table 2.1 illustrates the sequence from pre-intentional action event scripts (level 1) to intentional stories (levels 2, 3, and 4) to the first phase of the interpretive stage (level 5) (McKeough, Yates & Marini, in press). Table 2.2 outlines the scoring criteria for stories with trick endings from the final phase of the

intentional stage (prevectorial) through the univectorial and bivectorial phases of the interpretive stage (Case et al, 1993).

These examples from the intentional and interpretive stages of narrative development serve to illustrate the evolution of children's social reasoning. Children are assumed to progress through invariant stages of reasoning where they are able to co-ordinate an increasing number of units to form complex knowledge structures. These structures vary in content according to the particular conceptual domain under study, but are assembled in the same fashion by consolidating, co-ordinating and elaborating upon structures developed at the earlier stages.

By applying this theory of cognitive development to the study of an abnormal population, McKeough and her colleagues found that responses of aggressive boys showed evidence of a cognitive delay when compared to those of behaviourally normal boys (McKeough, Yates & Marini, in press). On three of four intentional reasoning tasks, the aggressive group performed between 1/2 and 1 full substage lower on the developmental continuum. However, the aggressive boys' performance did appear to follow the same developmental pathway as their normally functioning peers inasmuch as their responses across three age levels (6, 8 and 10 years) showed increasing complexity. Of interest then, is whether

Table 2.1

Criteria for structural scoring of problem stories

Does the story have a problem?

    NO=Level 0 YES

                |

Is the problem resolved?

    NO=Level 1 YES

                 |

Are there any failed attempts (or impediments) inserted before the resolution?

    NO=Level 2 YES

                 |

Is one impediment/attempt more significant than the others, with the ultimate resolution having a well developed or carefully planned feeling as a consequence?

    NO=Level 3   YES

                 |

Is the "inner world" of the protagonist developed, in addition to his "outer world", such that a psychological orientation results?

    NO=Level 4   YES=Level 5

(McKeough, Yates & Marini, in press.)

Table 2.2

Scoring system for trick endings

Level 0 (prevectorial). At this level, the ending of this story is not one that would be expected from the beginning, but it is also not one that is particularly UN-expected, either. The child deals first with creating the beginning of the story, and then at the very close of the story deals with creating the "trick" requested by the prompt. Because the child deals with the ending only when s/he reaches it, s/he can only make it surprising or "tricky" in a locally constructed manner. In creating the ending, the child does not even go back to reconstruct the earlier part of the story in order to integrate the ending with the beginning.

Level 1 (univectorial). At the univectorial level, the first coordination of the episode at the beginning of the story with the one at the end is seen. In this type of story, we have a series of events that sets up some clearly delimited expectation for the ending. However, the actual ending violates this expectation. Often all of the characters in the story are fooled by the same trick that tricks the reader. As yet, though, there is nothing in the text of the story that lays hidden clues for what the real ending will turn out to be for the reader who is looking for them.

Level 2 (bivectorial). At level 2, the beginning of the story once again sets up a clearly expected ending that the real ending violates. There is a new element, however, which makes the stories more coherent and interesting. This is that there are devices in the body of the story holding some sort of double meaning, and acting to integrate the story from beginning to end. In effect, then, the cognitive complexity of the first part of the story, for the author, at least, is doubled. S/He must actively be thinking of two possible interpretations of each early event, as s/he crafts this part of the story. The two interpretations are the one the reader will focus on (and thus be tricked), and the one that will fit with the actual ending. (Case, Bleiker, Henderson, Krohn & Bushey, 1993, p. 116-17)

the aggressive group's development would continue to lag
behind the behaviourally normal group or whether they would
"catch-up" over time. A major goal of the current
investigation, therefore, was to address that question by
re-administering the problem story task to a subsample of
boys from the original study. Table 2.3 illustrates the
performance of the two groups in the original study.

<div align="center">Content Analysis</div>

An additional purpose of the current study was to look
more closely at the content of the stories. In a historical
context, the methodology of story analysis has frequently
been applied to investigate the meanings that individuals
attribute to people and events. It is assumed that in the
spontaneous telling of a story, subjects will unconciously
project their inner states (De Vos & Boyer, 1989).

Projective tests such as the Children's Apperception
Test (CAT) (Bellak & Bellak, 1950) and the Thematic
Apperception Test (TAT) (Morgan & Murray, 1935) have both
utilized stories to explore "drives, emotions, sentiments,
complexes and conflicts" of which the subject is unaware
(Murray, 1943, p. 1). In an early study, Haworth (1963)
used the CAT to discriminate between a group of emotionally
disturbed children and their normally functioning
schoolmates. Cut-off points were established that

Table 2.3

Structural Mean scores and Standard Deviations for each of the 3 age levels on the problem story task

		STORY	
Age*	Group**	Mean	SD
6	aggressive (n=6)	1.0	(0.000)
	normal (n=6)	1.7	(0.516)
8	aggressive (n=8)	1.5	(0.756)
	normal (n=11)	2.5	(0.798)
10	aggressive (n=10)	2.3	(0.675)
	normal (n=10)	2.9	(0.568)

*age [story $F(2,44)=13.14$, $p<.01$

** group [story $F(1,44)=17.31$, $p<.01$

effectively identified the clinical population, however, the responses themselves were not evaluated.

More recently, stories have been seen not only as expressions of how we interpret events but as tools for developing our understanding of them. Bruner (1987) suggests that we "account for our own actions and for the human events that occur around us principally in terms of narrative, story, drama..." (p. 94). As well as opportunities to make meaning of the "possible explanations and possible goals" that confront us in daily life, stories, from the trivial to the bizarre, are vehicles for transmitting cultural and personal values (Bruner & Haste, 1987, p. 5).

As such, stories told by "abnormal" populations of children have increased our understanding of how they construct and interpret their worlds. For example, stories told by maltreated children as early as age 3, indicate the negative impact that dysfunctional parent-child relationships have on the child's developing moral knowledge (Buchsbaum, Toth, Clyman, Cicchetti, & Emde, 1992). As well, researchers have found that stories of disturbed children showed more themes of conflict, aggressive goals, and negative outcomes (Yule, 1985), and their characters were frequently left in problematic situations, unable to take positive action or make appropriate plans (McGrew &

Teglasi, 1990). If stories are a reliable indicator of the way individuals understand their world, then these findings indicate that disturbed children are making sense of the world in a very disturbing manner.

In the following section, research related to the characteristics of antisocial children is used to predict the content that may be expected in their stories. Behavioural and social-cognitive characteristics are explored, developmental time lines and influences are examined, and the effects of antisocial behaviour on the child's environment are summarized.

Behavioural Characteristics of

Antisocial Children

Although all children are expected to violate the rules and standards set by parents and society at some point, the defiant or rule-breaking behaviour they display does not constitute a serious behavioural disorder. To distinguish between "ordinary mischief" and antisocial behaviour, Kazdin (1987), noted that the behaviour must be frequent, chronic, and significantly impair every day functioning. The two most common diagnoses given to such behaviour are Conduct Disorder (CD) and Oppositional Defiant Disorder (ODD). All children in the original study were diagnosed by mental health professionals as either CD or ODD. Criteria for these disorders are outlined in Table 2.4 and 2.5.

Table 2.4

Oppositional Defiant Disorder (ODD)

A disturbance of at least six months during which at least five of the following are present:

1. Often loses temper

2. Often argues with adults

3. Often actively defies or refuses adult request or rules

4. Often deliberately does things that annoy other people

5. Often blames others for his or her own mistakes

6. Is often touchy or easily annoyed by others

7. Is often angry and resentful

8. Is often spiteful or vindictive

9. Often swears or uses obscene language.

Note. From The Diagnostic and statistical manual of mental disorders (3rd ed. rev.) (p. 55) 1987. Washington, DC: Author.

Table 2.5

Conduct Disorder (CD)

A disturbance of conduct lasting at least six months in which at least three of the following have been present:

1. Has stolen without confrontation of a victim on more than one occasion

2. Has run away from home overnight at least twice while living in parental or surrogate home

3. Often lies

4. Has deliberately engaged in fire setting

5. Is often truant from school

6. Has broken into someone else's house, building, or car

7. Has deliberately destroyed others' property

8. Has been physically cruel to animals

9. Has forced someone to have sexual activity with him or her

10. Has used a weapon in more than one fight

11. Often initiates physical fights

12. Has stolen with confrontation of a victim

13. Has been physically cruel to people

Note. From The Diagnostic and statistical manual of mental disorders (3rd ed. rev.) (p. 55) 1987. Washington, DC: Author.

Although the CD and ODD labels are useful in clinical settings, they often become blurred in research studies. More often, terms such as antisocial, behaviourally disturbed or disruptive, delinquent or aggressive have been applied to differentiate between disorders of conduct and social or emotional problems. There is, however, considerable symptom overlap, and children diagnosed with CD or ODD often warrant a second psychiatric diagnosis (Richters & Cicchetti, 1993).

For the purposes of this review, however, and following Hinshaw, Lahey & Hart (1993), and Horne & Sayger (1990), the term antisocial will be used generically to include disorders of conduct diagnosed as CD or ODD as well as those more general categories discussed above.

Development of Behaviour Problems

In the developmental progression of both CD and ODD, two pathways have been delineated: early onset and adolescent onset. In normal development, the aggressive behaviour evidenced between the ages of 1 and 2 in nonaggressive children usually declines steadily, but does not do so in aggressive children (Hinshaw, Lahey & Hart, 1993; Horne & Sayger, 1990). Children displaying this early onset of disruptive behaviour (such as hitting, kicking, arguing, angry outbursts and noncompliance) are thought to progress to more significant symptoms of conduct

disorder (lying, fighting, petty stealing) and, in some cases, continue to exhibit antisocial behaviour into adulthood (Hinshaw, Lahey & Hart, 1993). The symptoms characteristic of early development are outlined in Table 2.6 for both ODD and CD.

Table 2.6

Mean age of onset reported by parent of symptoms of Oppositional Defiant Disorder and Conduct Disorder

Median Age	Oppositional Defiant	Conduct Disorder
3.0	Stubborn	
5.0	Loses temper, defies	
5.5	Argues	
6.0	Blames, annoys others, irritable	Hurt animals
6.5	Angry, spiteful	Fights, bullies, lies, vandalizes uses weapons
7.0		Steals, cruel
8.0	Swears	Sets fires
9.0		Truant, breaks and enters
9.5		Runs away from home
12.0		Forces sex

(Hinshaw, Lahey, & Hart, 1993, p. 38)

This pathway of early development contrasts with the more common adolescent-onset that often does not persist past the adolescent years. Those with onset of CD after 11

years of age are half as likely to receive an adult
diagnosis of sociopathy than those with onset prior to 11
(Hinshaw, Lahey & Hart, 1993). As well, childhood onset is
markedly more aggressive than adolescent-onset and likely
associated with "more aggressive and seriously damaging
crimes" (p. 36). The proposed DSM-IV criteria suggest
creating two separate categories of conduct disorder, early
and late on-set (Barkley, 1993).

Effects of Antisocial Behaviour

Not surprisingly, the pattern of antisocial behaviour
that characterizes the actions of this group impacts all
aspects of the child's life. For example, the relationship
between antisocial behaviour and school performance was
demonstrated in a study by Hinshaw (1992) where academic
underachievement (poor grades, retention, academic deficits)
and externalizing behaviour (defiance, impulsivity,
disruptiveness, aggression, antisocial features,
overactivity) overlapped to a sizable and "important"
extent (p. 149). By adolescence, a "clear linkage (existed)
between antisocial behavior/delinquency and severe
underachievement" (Hinshaw, Lahey & Hart, 1993, p. 43).

As well as problems in academic areas, antisocial
children are also extremely vulnerable to rejection by
teachers and peers. They frequently defy teachers and
engage them in interactions that escalate explosively; "they

are masters at provoking adults into fits of anger and rage"
(Walker, 1993, p. 21). Teachers experiencing disruptive
children in their classroom are often sorely taxed and
exasperated by their behaviour reporting a sense of
helplessness in dealing with it (Horner & Sayger, 1990).

Peer relationships can be as problematic as those with
teachers. Gresham (1981) found that peer-rejected
adolescents obtained higher scores than popular adolescents
on measures indicative of externalizing behaviour problems,
specifically impulsive, aggressive, disruptive, and
distractible behaviours. Children with behaviour problems
who are rejected by their peers are the "most aversive and
least liked in the school setting", often uncooperative,
coercive, verbally and physical abusive towards their peers
(Walker, 1993, p. 21). This rejection seems to extend
beyond their own immediate peer group. Identified
aggressive/rejected children, when placed in a group with
children who do not know them, are rejected and excluded
within a very short period of time (Asher & Dodge, 1986).
Whether this peer rejection is incidental or causal to the
behaviour problems themselves is open to debate.

Disruptive parent-child relationships are, by the very
nature of the disorder, strongly associated with CD/ODD.
Children with ODD are characterized in the Diagnostic and
Statistical Manual (3rd ed., rev.; American Psychiatric

Association, 1987) as "argumentative with adults, frequently (losing) their temper, swear(ing), often angry, resentful, and easily annoyed by others. They frequently actively defy adult requests or rules and deliberately annoy other people" (p. 56). The symptomology of CD, a "persistent pattern of conduct in which the basic rights of others and major age-appropriate societal norms or rules are violated" also implies conflicted interpersonal relationships (p. 53).

Factors Influencing Antisocial Behaviour

The family is not only a recipient of the child's maladaptive behaviour, but has also been assigned a prominent role in its development. Parental rejection, inconsistent management with harsh discipline, large family size, absent fathers, and parental psychopathology have all been correlated with aggressive/antisocial behaviour (Horne & Sayger, 1990; Stouthamer-Loeber & Loeber, 1988). Carro, Grant, Gotlib, and Compas (1993) found that parental depression, particularly during the ages of 2 and 3 was strongly correlated with childhood behaviour problems. Recent research into childhood attachment patterns has also shown that insecure attachment is positively correlated with poor school performance and disruptive behaviour problems (Easterbrooks, Davidson & Chazan, 1993). In that study, however, a more significant predictor of behaviour problems was "psychosocial risk". Risk factors included "low

socioeconomic status, maternal depression, conflicts with law enforcement, serious injury or hospitalization of the child and reports of abuse or neglect" (p. 393). Hunt (1993) stated that in his treatment of aggressive children, exposure to violence was a common denominator; 40% having seen relatives harmed by weapons and 30% witnessing a relative harmed or killed by gunshots.

Social-cognitive Characteristics
of Antisocial Children

The factors of background by themselves do not guarantee a psychiatric diagnosis. Researchers in the social cognitive domain posit the role of cognitive processes in mediating between social behaviour and social adjustment. Considerable research supports the presence of delayed social reasoning in groups receiving a psychiatric diagnosis compared to normal children (Arbuthnot & Gordon, 1986; Beardslee, Schultz, & Selman, 1987; Demorest, 1992). For example, in the realm of moral development, delays in sociomoral reasoning were related to aggressive behaviour in "normal" 6th grade boys (Bear, 1989) and incarcerated girls (Chalmers & Townsend, 1990). In an intervention study designed to accelerate moral reasoning development, Arbuthnot and Gordon (1986), found that antisocial behaviour decreased as sociomoral reasoning matured.

Later research in this area has, however, pointed to the discrepancy between moral thought and moral action. Findings suggest that some maladjusted children suffer from a general deficit in moral reasoning ability but others may have the sufficient ability but fail to apply their highest ability in some situations (Demorest, 1992).

Deficits in reasoning were also found in aggressive children's abilities to solve problems. The quality of children's reasoning in terms of interpreting social cues, generating alternative solutions to problems, and thinking about consequences has been investigated quite thoroughly by Dodge and his colleagues (Dodge, 1980; Dodge, Bates, & Pettit, 1990; Dodge, Pettit, McClaskey & Brown, 1986). Maladajustment, in these studies, is seen as a qualitative bias in processing. For example, a bias in seeing others as hostile may be reflected by the child's encoding of social cues that supports that bias. Competent functioning even within a delinquent population has been related to better problem solving abilities (Hains & Hermann, 1989).

Summary

Research into the characteristics of children with conduct problems has demonstrated that not only do they have unusual patterns of development, but also show evidence of cognitive delays and deficits in social reasoning. As well, conflict-filled interpersonal relationships at home and at

school are commonly associated with this behavioural syndrome. It also appears that aggressive children have dysfunctional family backgrounds that include a history of abuse, violence and psychopathology. Based on these characteristics and the research undertaken by McKeough, Yates and Marini (in press), it is hypothesized that the narratives of the aggressive children will show evidence of qualitatively distinct social reasoning that is immature in structure and biased in content.

Specifically the hypotheses of the current study are as follows:

1. Structure:

The aggressive boys' stories will continue to show a less developed structure than the stories of the behaviourally normal group.

2. Content:

(a) The aggressive boys' stories will include more instances of violence and conflict than the stories of the normally functioning group.

(b) Characters in the aggressive boys' stories will be depicted in a more "negative" fashion than characters in the stories of the normally functioning group.

(c) The aggressive boys' stories will show less adaptive problem resolutions than the stories of the normally functioning group.

(d) The aggressive boys will generate fewer alternative story endings than the normally functioning group.

Chapter III

RESEARCH DESIGN

General Method

This study is exploratory in nature and designed to follow-up and expand on previous research (referred to as "the original study") conducted in 1990 by McKeough and Yates (McKeough, Yates & Marini, in press). In that study, aggressive boys, when compared to a group of normally functioning boys, showed evidence of a delay in the complexity of their intentional reasoning over four tasks designed to measure cognitive development. As well as carrying out a 2 1/2 year follow-up to determine if that delay in structural complexity was maintained, the current study expands on the original study by looking at the differences in story content generated by the two groups.

As an introduction, a brief overview of the methodology of the original study is given, followed by a detailed accounting of the methodology of the current study.

Procedure

Original Sample

Fifty-nine subjects, aged 6 to 10 years participated in the original study. All were enrolled in schools located in a large urban centre in Western Canada.

Subjects were matched on intelligence, socioeconomic status and age. An abbreviated version of the Wechsler

Intelligence Scale for Children Revised (WISC-R) (Wechsler,
1974) was administered and only children of average
intellectual ability were included in the sample (see Table
3.1 for WISC-R mean scores). Socio-economic status as
measured by parental occupation and level of parental
education was not significantly different between the two
groups. Of the aggressive group, 5 met the criteria for
Conduct Disorder, 16 met the criteria for Oppositional
Defiant Disorder and 7 met both. All subjects were in
treatment at the time (i.e., special class placement,
counselling or institutional care).

Table 3.1

Means and standard deviations of WISC-R scores for the
aggressive and normal groups

Age	Group	WISC-R Mean	SD
6 yrs.	Aggressive (n=7)	98.5*	13.02
	Normal (n=10)	105.6	4.72
8 yrs.	Aggressive (n=10)	100.7	11.81
	Normal (n=10)	106.5	8.51
10 yrs.	Aggressive (n=11)	98.4*	7.68
	Normal (n=11)	105.2	7.44

*The exact IQ score of one subject at each of these age levels was not
released because of institutional policy. However, both children were
reported to be functioning in the average range.

(McKeough, Marini & Yates, in press)

Current study

Following ethical approval from the school board, 43 subjects from the original study were located and consent forms describing the study and outlining ethical considerations were mailed to each parent/guardian (see Appendices A & B). Written permission to participate was gained from 30 subjects. The subjects were distributed over 3 age groups as shown in Table 3.2. Two tailed t-tests demonstrated that no significant difference existed in ages between the two groups $(p>.05)$.

Table 3.2

Subjects by Age (n=30)

	Aggressive[a]	Comparison[b]
8 years	3	3
10 years	6	8
12 years	5	5

[a] Mean = 11.1 years

[b] Mean = 11.5 years

Principals of the schools where each student attended were contacted and gave permission for the researcher to interview the subjects individually during the school day. Interviews lasted 30 to 50 minutes. All interviews were tape-recorded. Tapes of the interviews were transcribed and protocols used in the analyses.

Tasks

Each subject was asked to respond to two narrative tasks[1]. Descriptions of tasks and scoring criteria are presented in the order administered.

1) <u>Telling a problem story</u> (McKeough, 1992).

The purpose of this task was to replicate the problem story task, one of the four intentional reasoning tasks in the original study. Results indicated that the aggressive boys showed a one substage delay in the cognitive complexity of their stories. To see whether that delay was maintained, the task was re-administered.

Subjects were given the following instructions: "I would like you to tell me a story about someone, around your age, who has a problem they want to solve...you know, make all better." If subjects were unable to generate a story, this task was re-administered at the end of the interview.

Stories were scored according to two procedures, namely story structure and thematic content. Structural scoring criteria were utilized from the original study as presented in Chapter II. Each story was read and given a rating for complexity of reasoning.

---

[1]Four other narrative tasks were also administered but are not reported in this document.

Criteria for scoring story content were developed in two ways. Based on a review of the literature, categories were broadly delineated in relation to themes of conflict and violence as well as depiction of characters. These categories were further developed by reading the stories and refining the categories as required. Results of these analyses are presented in Chapter IV. Secondly, to give an overall rating of the problem resolutions, all stories from the original study were read and categories developed from the protocols.

From this analysis, a global rating of either "adaptive", "maladaptive", or "indeterminate" was assigned on the basis of the relationship between the 1) the response to the initiating problem (plan), and 2) the eventual resolution (outcome). The overall rating scheme is presented in Table 3.3.

The plans outlined in Table 3.3 can be categorized as either prosocial or antisocial. Prosocial responses included (i) asking for or receiving help, or (ii) initiating a constructive, or socially acceptable plan. Antisocial responses involved (i) initiating a plan

Table 3.3

Scoring criteria for rating problem resolutions

RESPONSE TO PROBLEM	OUTCOME		
	Positive	Negative	Uneven/Unstated
Seeks/receives help	Adapative	Maladaptive	Indeterminate
Initiates a constructive/ socially acceptable plan	Adaptive	Maladaptive	Indeterminate
Fortuitous events (i.e., time passes	Adaptive	Maladaptive	Indeterminate
Actively avoids/ignores problem	Maladaptive	Adaptive	Indeterminate
Acts aggressively/ antisocially	Maladaptive	Adaptive	Indeterminate

involving antisocial or aggressive acts, or (ii) consciously avoiding the problem or stating that the problem could not be resolved. The fortuitous intervention of events beyond the control of the main character was deemed neither prosocial or antisocial. Outcomes were categorized as either "positive" (the protagonist successfully met his/her goals), "negative" (the protagonist was unsuccessful), "uneven" (the protagonist was partly successful and partly unsuccessful) or "unstated" (no resolution was mentioned).

In stories where the protagonist utilized a prosocial plan and the outcome was positive, an "adaptive" rating was given; where the protagonist utilized a prosocial plan and the outcome was negative, a "madalaptive" rating was assigned. For example, a story about a child wishing to escape from bullies would receive an adaptive rating if the child called the police (asked for help) and the police arrested the bullies (goal was met), but maladaptive if the bullies beat him up before the police arrived (goal was not met).

Where the response involved an antisocial plan which resulted in a positive outcome, the story was rated "maladaptive". When antisocial plans resulted in negative outcomes, stories were rated "adaptive" since the use of an antisocial plan was not rewarded. To illustrate, consider the following "adaptive" story:

> There was this guy that wanted this tape badly, but he
> didn't have any money (problem), so he went to the
> store and stole it (antisocial response) and he got
> caught (negative outcome).

A maladaptive rating would be given to this same story if
the outcome was successful (boy got away with the theft).
Stories where the outcome was uneven, or where no outcome
was stated received a rating of "indeterminate".

2) Generating Alternative Endings. Because researchers have
found that antisocial, aggressive children are less able to
generate solutions to problems than normally functioning
children (Kazdin, Esveldt-Dawson, French, & Unis, 1987;
Spivak, Platt & Shure, 1976), subjects were probed as to
their ability to generate solutions to their problem
stories.

When subjects had completed their stories, they were
each asked: "Do you think this story could have been solved
any other way?" If subjects did not spontaneously generate
an alterative, they were probed for specific responses:
"Could the (main character) have asked for help?", "How
could the (main character) have avoided this problem?",
"Could the (main character) have solved it on their own?"

If the subject failed to include a problem solution in
their initial story, they were first probed as to how the

problem could be solved, and then asked for alternative
solutions using the questions described above.

3) <u>Telling a story in response to a blank card</u>. The blank
card element of the Thematic Apperception Test (T.A.T.)
(Morgan & Murray, 1935) was used as a stimulus to generate a
story of the subject's own choice[2]. Standard T.A.T.
instructions appropriate to this age group were used:

> I want you to make up a story. See what you can see
> on this blank card. Imagine some picture there and
> describe it to me in detail. Tell what has happened
> before and what is happening now. Say what the people
> are feeling and thinking and how it will come out. You
> can make up any kind of story you please. Do you
> understand?

If subjects missed a crucial detail, (i.e. the antecedent
circumstances or the outcome), they were prompted briefly,
at the conclusion of the story, to include it. If subjects
were unable to generate a story, additional prompts were
given (i.e. "close your eyes and picture something, now tell
me a story about it.")

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[2] Two other items from the T.A.T. were also administered (Cards #17BM, man climbing a rope
and #1, boy looking at a violin). As noted earlier, results are not reported in this
document.

The blank card task was analyzed for themes of hostility/ violence and manner of character depiction. These scoring schemes will be outlined in the following chapter.

Summary

The current study was designed to assess the performances of two groups of subjects: 14 behaviourally aggressive boys and 16 average functioning boys ranging in age from 8 to 13 years. First, subjects were asked to tell a "problem" story and asked to generate alternative endings to that story. Then, they were asked to tell a story when shown a blank card. Only the interview protocols were used in the analysis.

Protocols were analyzed in two ways: level of structural complexity and thematic content. The structural analysis identified quantitative differences in the reasoning of the two groups using a scoring system utilized in the original study. The content analysis identified qualitative differences in the themes of conflict and violence, character depiction, problem resolution and ability to generate alternative endings. Methods for scoring content were developed for the current study. Results of the statistical analyses are presented in Chapter IV.

Chapter IV

RESULTS

Introduction

The purpose of the current study was to follow up and expand on research which investigated developmental differences in cognitive reasoning between aggressive and behaviourally normal boys (McKeough, Yates, & Marini, in press). Thirty of 59 original subjects participated in the present study; 14 from the aggressive and 16 from the behaviourally normal group.

Using scoring criteria from the original study, it was hypothesized that the structure of the aggressive boys' stories would continue to be less developed than that of the behaviourally normal group. It was also hypothesized that differences in story content would be evident. To test that hypothesis, scoring methods were developed specifically for the present study. All scoring methods were applied to the interview protocols to determine whether statistically significant differences existed between the subjects in the two groups.

Findings are presented for each hypothesis and where scoring methods evolved from protocol analyses, these are outlined. All scoring was done by the researcher with reliability checks performed by a trained rater blind to group assignment. Inter-rater reliability correlations are

presented for each scoring system utilized. All disagreements were resolved through discussion.

Story Structure

Hypothesis #1

The first prediction was that the structure of the stories generated by the aggressive subjects would continue to show a developmental delay when compared to those generated by the behaviourally normal group. In the original study, a difference of approximately 1 substage was evident. Subjects were administered the same story task and the protocols were scored according the systems outlined in Tables 2.1 and 2.2. An inter-rate reliability check was conducted on the structural scoring system. Two raters agreed on 87% of the levels assigned.

A repeated measures analysis of variance (ANOVA) was used to evaluate the difference between Time 1 and 2 scores for both groups. A significant difference was observed between the two groups, ($F(1,27)=6.82$, $p<.05$) and no significant group by time difference was noted (see Table 4.1 for means and standard deviations). An examination of the means for each group indicated that, on average, the aggressive group performed approximately one substage below their behaviourally normal peers at both Time 1 and Time 2 (see Figure 4.1). This type of difference was also observed between the two groups in the original study.

Table 4.1

Means and Standard Deviations on T1 and T2 problem story
tasks for aggressive and normal subjects

| | Story Time 1[a] | | Story Time 2[b] | |
	Mean	SD	Mean	SD
Aggressive	1.62	.96	2.85	1.14
Normal	2.50	1.10	3.50	.89

[a] Aggressive (n=13), Normal (n=15)

[b] Aggressive (n=13), Normal (n=16)

The nominal responses of 1 subject in each group at Time 1
were not included. One subject in the aggressive group was
unable to generate a story at Time 2.

Story Content

Hypothesis #2

The second hypothesis stated that the content of the two groups' stories would be significantly different. Four elements were examined: 1) themes of violence and conflict, 2) tone of character depiction, 3) nature of problem resolution, and 4) capacity to generate alternate resolutions.

1. Themes of Violence and Conflict

Hypothesis 2a stated that the stories of the aggressive group would contain more themes of violence and conflict than the stories generated by the behaviourally normal group. To investigate this hypothesis, categories were developed that reflected extreme and less extreme forms of conflict and aggression.

Within each of these two major categories, frequencies were calculated for explicit mention of violence that was a) verbal, b) physical, or c) occurring in the world of thought (e.g., dreams, intentions). Following the frequency count, an overall determination was made as to whether the story had predominantly less extreme or predominantly extreme depictions of conflict. Additionally, a category termed "mixed" was established for stories that contained equal instances of extreme and less extreme forms of conflict. For example, if a story contained one instance of name

calling (less extreme) and one instance of stabbing (extreme), the story was given a "mixed" rating. If the story contained 2 instances of extreme violence and one instance of less extreme, it was rated predominantly extreme. Stories containing no indications of hostility were rated as lacking in conflict. The scoring system is illustrated in Table 4.2.

Problem stories from both the original study (Time 1) and the current study (Time 2) as well as responses to the blank card task (Time 2) were subjected to this scoring system. An inter-rater reliability check was conducted and two raters agreed on 92% of the category assignments.

A series of contingency tables were established to distinguish if the frequencies between the two groups were significantly different. Results for the three tasks, expressed as percentages, are presented in Table 4.3.

Significance was reached only in the blank story task (Chi Square(3)=8.58, $p<.05$) where 85% of the stories (11/13) generated by the aggressive boys contained instances of violence or hostility compared to 31% (5/16) of the stories of the normal group.

2. Characterization

Hypothesis 2b stated that the stories of the aggressive boys would contain characters that were depicted more

Table 4.2

Themes of conflict and aggression

Extreme forms of conflict or violence:

1) Are extreme forms of physical violence or antisocial actions carried out against person/property (e.g., torture, assault, shooting, stabbing, beating, arson, theft?)

2) Is extreme hostility expressed as angry words, threats, curses (e.g., "I told him I would beat him up", "he said he would kill me"?)

3) Is extreme aggression contemplated (thoughts or dreams) or intended (e.g., "I wished he were dead", "I thought about beating him up", "I almost took a knife"?)

Less extreme forms of conflict or violence:

1) Are less extreme acts of aggression carried out (e.g., bullying, chasing, shoving, pushing, fighting, rejecting?)

2) Is less extreme hostility expressed verbally (e.g., teasing, insults, arguments?)

3) Is less aggressive conflict contemplated or intended (e.g., "I thought he might hurt me", "I wished I would have pushed him back", "I almost hit him"?)

Table 4.3

Percentage of aggressive and normal subjects reporting
themes of conflict and aggression.

	Problem (T1)		Problem (T2)		Blank (T2)	
GROUP[a]	Agg.	Norm.	Agg.	Norm.	Agg.	Norm.
Lacking	61.5	50	30.8	31.3	15.4	68.8
Mixed	7.7	12.5	0	18.8	7.7	6.3
Less Ext.	30.8	18.8	38.5	43.8	38.5	12.5
Extreme	0	18.8	30.8	6.3	38.5	12.5

[a] Aggressive (n=13), Normal (n=16)

Note: The nominal response of 1 subject in the aggressive group was not included in the

analysis at T1; 1 subject in the aggressive group was unable to generate a story at T2 or

in response to the blank card task.

negatively than the characters contained in the normal boys' stories. To investigate this hypothesis, four character groupings emerged from the protocols: main character, peers, adults, and family members. Each character mentioned was given either a positive or negative rating depending on how they were depicted in the story. Terms for guiding scoring were developed from the protocols and from research regarding negative and positive role-relationships (Horowitz, Merluzzi, Ewert, Ghannam, Hartley & Stinson, 1991). Table 4.4 outlines the categories and guidelines for scoring.

Table 4.4

Scoring for Character Depiction

1. Main Character:

Generally Positive	Generally Negative
Competent	Incompetent
Kind	Aggressive
Cooperative	Uncooperative
Adequate	Inadequate

2. Peers: (children/teens, other than the main character, who relates to the main character in some way)

Generally Positive	Generally Negative
Helpful	Unreliable
Friendly	Rejected/rejecting
Accepting	Withdrawn

| Protective | Aggressive |
| Competent | Stupid |

3. **Adults**: (Other than family members)

Generally Positive	Generally Negative
Helpful	Unreliable
Affectionate	Withdrawn
Encouraging	Blaming/judging
Competent	Stupid

4. **Family Members**:

Generally Positive	Generally Negative
Helpful	Unreliable
Affectionate	Withdrawn
Encouraging	Blameful, critical
Accepting	Rejecting
Protecting	Aggressive
	Neglectful

The problem stories from the original (Time 1) and current study (Time 2) and the stories generated in response to the blank card task were subjected to the scoring criteria. An inter-rater reliability check was conducted and two raters agreed on 87% of the category assignments.

Because many of the stories contained only one reference to other types of characters, the peer, family and adult categories were grouped together as "others" and given an overall rating dependent on whether there were more

positive or more negative character depictions. Stories with equal numbers of both positive and negative depictions of others were rated "mixed".

Data was tabulated in the form of a series of contingency tables and subjected to Chi Square analyses. Results, expressed as percentages, are presented for both categories in Tables 4.5 and 4.6

Table 4.5

Percentage of aggressive and normal subjects falling in each of the Main Character categories on 3 story tasks.

	Problem(T1)[a]		Problem(T2)[b]		Blank(T2)[c]	
	Agg.	Norm.	Agg.	Norm.	Agg.	Norm.
Positive	23.1	35.7	46.2	68.8	18.2	93.8
Negative	76.9	64.3	53.8	31.3	81.8	6.3

[a] Aggressive (n=13), Normal (n=14)

[b] Aggressive (n=13), Normal (n=16)

[c] Aggressive (n=11), Normal (n=16).

Note: The nominal responses of 2 normal and 1 aggressive subject at T1, and 2 aggressive subjects in the blank card task were not included in the analyses. Also 1 subject from the aggressive group was unable to generate a story at T2 or in response to the blank card task.

Table 4.6

Percentage of aggressive and normal subjects falling in each
of the Other Character categories on 3 story tasks

	Problem (T1)[a]		Problem (T2)[b]		Blank(T2)[c]	
	Agg.	Norm.	Agg.	Norm.	Agg.	Norm.
Mixed	44.4	27.3	7.7	28.6	0	15.4
Positive	11.1	45.5	30.8	42.9	30	76.9
Negative	44.4	27.3	61.5	28.6	70	7.7

[a] Aggressive (n=9), Normal (n=11)

[b] Aggressive (n=12), Normal (n=14)

[c] Aggressive (n=10), Normal (n=13)

Note: Stories not including references to others or where no rating could be made were not

included in the analyses (T1 = 5 subjects in the normal group, 4 in the aggressive group;

T2 = 2 in the normal group; Blank = 3 in the normal group, 2 in the aggressive group).

Also, 1 subject in the aggressive group was unable to generate a problem story at either

Time 2 or in response to the blank card task.

Significance was reached only in the blank card tasks
(Main Character Chi Square(1)=15.96, $p<.01$; Others Chi
Square(2)=10.05, $p<.01$). Fifteen of the 16 blank card
stories produced by the normal group contained positive main
characters compared to 2/11 of the aggressive boys' stories.
Also on that task, 10/13 of the stories produced by the
normal group contained positive depictions of others,
compared to 3/10 of the aggressive group. In all other

story tasks the pattern of more positive character depictions by the normal boys and negative by the aggressive boys was sustained.

3. Problem Resolution

Hypothesis 2c stated that the stories of the aggressive boys would show less adaptive problem resolutions than the stories generated by the normal group. Scoring criteria (described in Chapter 3) were developed as a result of a qualitative analysis of all of the problem stories from the original study. Problem stories at both Time 1 and Time 2 were given either an adaptive, maladaptive or indeterminate rating based on the interaction of the response to the problem and the outcome of the story. An inter-rater reliability check was conducted and two raters agreed on 91% of the category assignments. Results, expressed as percentages, are presented in Table 4.7.

Results of the Chi Square analysis revealed that there were significantly more aggressive boys' stories in the maladaptive or indeterminate categories (T1 = 11/14, T2 = 9/13) whereas a disproportionate number of stories produced by the normal subjects fell in the adaptive category (T1 = 10/15, T2 = 14/16). Significance was found in problem stories from the original study (Chi Square(2)=10.64, $p<.05$) and the current study (Chi Square(2)=8.24, $p<.05$).

Table 4.7

Percentage of aggressive and normal subjects falling in each
of the problem resolution categories on Time 1 and Time 2
problem story tasks.

| | Time 1[a] | | Time 2[b] | |
	Aggressive	Normal	Aggressive	Normal
Adaptive	21.4	66.7	30.8	87.5
Maladaptive	28.6	26.7	38.5	12.5
Indeterminate	50	6.7	30.8	0

[a] Aggressive (n=14), Normal (n=15)

[b] Aggressive (n=13), Normal (n=16)

Note: At T1, 1 story generated by a subject in the normal group was unscorable and 1

subject in the aggressive group failed to generate a story at T2.

4. Alternative Endings

Hypothesis 2(d) stated that the aggressive group would fail to generate as many alternative story endings as the normally functioning group. To investigate this hypothesis, subjects were asked whether their story could be solved in any way other than the one they had mentioned. The following dialogue illustrates the process:

Questions and Responses:

What was the main problem in this story?

"That the man was trying to kidnap the boy."

And how did he solve it?

"By keep running away from him."

Do you think he could have tried to solve it another way?

"He could have, shouldn't have went outside when the man asked him to".

Subjects were given a "yes" rating if able to generate an alternative ending and a "no" rating if not. An inter-reliability check yielded 100% agreement between two raters. Table 4.8 summarizes the percentages falling into either category.

Results of the Chi Square analysis indicated a significant difference between the two groups (Chi Square(1)=5.63, $p<.05$). A majority (13/16) of the

Table 4.8

Percentage of subjects able to generate an alternative story
ending.

	Normal (n=16)	Aggressive (n=11)[a]
Yes	81.3	36.4
No	18.8	63.6

[a] The nominal responses of 3 subjects were not included in
the analysis.

behaviourally normal boys were able to generate alternative endings whereas only 4/11 of the aggressive boys did so.

Additionally, those subjects who responded negatively to the request to generate an alternative ending were provided with "clues" as to hypothetical solutions:

"Could (main character) have asked someone for help?",

"Could (main character) have avoided the problem?",

"Could (main character) have solved it on their own?"

Interestingly, with these prompts, all of the normal group were able to generate a prosocial alternative ending. However, none of those given additional cues in the aggressive group were able to do so. When probed, they often gave reasons for the inappropriateness of those alternatives.

Summary of Findings

Story Structure

The problem stories of the aggressive group were significantly less complex than the stories of the behaviourally normal group at both Time 1 and Time 2 administrations.

Story Content

1) The blank card stories generated by the aggressive group contained significantly more themes of violence and conflict and more characters depicted as "negative" than the stories of the behaviourally normal group.

2) The problem stories generated by the behaviourally normal group showed significantly more adaptive problem resolutions than the stories generated by the aggressive group at both Time 1 and Time 2 administrations.

3) The behaviourally normal group was able to generate significantly more alternative problem story endings than the behaviourally aggressive group.

Chapter V

DISCUSSION

Introduction

In the present exploratory study, stories told by aggressive and behaviourally normal boys were analyzed from two perspectives: structure and content. Specific predictions regarding structure were based on results from a previous study (McKeough, Yates & Marini, in press) and predictions regarding content were based on a review of the literature regarding antisocial children.

In the original study, both groups were matched on intellectual functioning (as measured by the WISC-R), socio-economic status, and age. In the current study, 30 of the original 59 subjects agreed to participate. Fourteen aggressive and 16 behaviourally normal subjects were administered two story tasks and the response protocols analyzed and scored to compare between-group performance. All of the aggressive subjects were receiving some form of treatment (i.e., special class placement, counselling or institutional care). There was no significant difference in age between the two groups.

In this chapter, findings related to the structure of the stories are reviewed first, followed by an examination of the findings related to specific content hypotheses.

Methodological issues, limitations of the study and
directions for future research are also discussed.

Story Structure

The first prediction was that the aggressive boys'
stories would continue to show the same delay in complexity
of plot structure as evidenced in the original study.
Here, the aggressive boys performed approximately one
substage below their behaviourally normal peers.

Examination of the results from the repeated measures
analysis of variance indicated that whereas both groups
showed development in their story structure over time, the
aggressive group's development showed a delay, as compared
to the normal group. In returning to Figure 4.1 which
illustrates mean differences between story structure scores,
it is apparent that the aggressive subjects continue to
function almost a substage below their normal peers[1].

To illustrate this difference, stories from two 10-
year-old subjects are presented below. Recall that at 10
years, children's stories often include a series of
complicating events as well as significant sub-plots. The
integration of these events within the resolution of the

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[1] The mean age of both groups was approximately 11 years, however, the means found in the
story task were below those expected for children that age (Expected 4.0, Normal 3.5,
Aggressive 2.5) (McKeough, 1992).

story gives these narratives a well thought-out and
organized feeling.

The first story, from a subject in the behaviourally
normal group, illustrates this organization. It tells of a
boy who is not well-liked at his school (story problem)
because he has his own "style" (sub-plot). The boy wants to
solve his problem, but he is not sure how to go about it
(complicating event) and is afraid to talk to his mother
(additional complicating event). Eventually the boy
discusses it with his mother (integration of complicating
event) who gives him advice that leads him to feeling
comfortable with his "own style" (resolution of significant
sub-plot) and becoming well-liked (resolution of original
problem). Transmitting the message that it is more
important to be liked for who you are, not what you wear,
appears to be the main reason for telling the story.

> I picture in my mind that there's a little boy and
> he has a problem because everybody hates him in
> school. And only because he wears different
> clothes and he has his own style and he wants to
> solve it so bad but he doesn't know how and he's
> scared to tell his mom because he thinks his mom's
> going to be really mad at him. So finally he gets
> enough courage and goes tells his mom and then his
> mom talks to him and she says "you can have your

own style but you can still make friends". And

then he solves it, like he goes, and he has his

own style and he meets people and he gives them

his best attitude and then they really like him.

The second story, told by a 10-year-old subject in the

aggressive group, differs on several counts. In terms of

it's structural organization, it has a plot structure more

typical of an 8-year-old than a 10-year-old. In complexity,

it is only slightly more developed than the basic problem-

resolution format typical of most 6-year-olds. There are

two plot units that are both resolved but that are not

credibly integrated into the final resolution. The boy

describes the main character as a boy who breaks his Walkman

(problem) causing him to get angry and beat up kids

(complicating event). This behaviour causes his mom to send

him for treatment (sub-plot). His reform is reported, but

not integrated in the story line, giving the resolution a

"fortuitous" rather than well-developed feeling.

OK, well one day there was this ten year old kid that

broke his Walkman and then he got really mad and he

beat up a lot of people on his way home from school.

He broke it at school and his mom got really mad at him

and put him in a children's bad boy home and then he

got really mad there but then he behaved so he could

get out and then he got out and then his mom had a new

Walkman for him and then he was so happy and then the problem was solved.

Based on the theoretical perspective underlying this analysis, the growth in narrative structural complexity seen from Time 1 to Time 2 scores of both groups reflects the children's developing understanding of the emotions, motives, intentions and goals that drive human behaviour. However, the differences between the two groups' stories suggest that the aggressive children continue to hold a relatively naive conceptual representation of intentionality.

How might we account for this continued difference in the performances between the two groups? In returning to the theory of cognitive development posited by Case (1985, 1992) and McKeough, Yates and Marini (in press), two factors have been suggested: maturation and experience. As subjects were originally matched for age and intellectual ability, it seems unlikely that the difference in performance is due to a difference in processing capacity (maturation). The second factor, experience, is a more likely explanation for this difference and one that receives significant support in the literature.

As discussed earlier, children who display aggressive behaviour problems clearly experience daily life that is qualitatively different from those children who do not

manifest this type of behaviour. Parental psychopathology, violent homes, incidents of peer rejection, inconsistent parenting and harsh discipline are all correlated with aggressive/antisocial behaviour (Horne & Sayger, 1990; Stouthamer-Loeber & Loeber, 1988). As children's understanding of themselves and others grows within the experience of their daily lives, researchers suggest that it is apprehended and comprehended to a considerable extent through stories told to them or by them (Hardy, 1978; Van Dongen & Wesby, 1986). We would expect, then, to see some evidence of this less adaptive environment in the content of their stories.

Story Content

Specifically, it was predicted that the aggressive boys' stories would contain more themes of violence and conflict, more "negative" character depictions, less adaptive problem resolutions and fewer alternative endings than stories of the behaviourally normal group. Each of these findings will be discussed separately and then integrated in a summary.

a) Themes of Hostility and Conflict:

Recall that "problem" stories from the original study (Time 1) and the current study (Time 2) as well as stories generated in response to a "blank" card (at Time 2) were

subjected to a thematic analysis. Stories were rated as either:

1) lacking in hostility or conflict,

2) containing extreme instances of hostility or conflict,

3) containing less extreme instances of hostility or conflict, or

4) containing both extreme and less extreme instances (termed "mixed" stories).

Significant differences were noted only in the stories generated in response to the blank card. On this task, a disproportionate number of stories composed by the aggressive subjects contained instances of violence or hostility whereas a disproportionate number of normal subjects' stories were devoid of conflict. To illustrate this difference in tone, two stories are presented, the first from an aggressive subject, the second from a behaviourally normal subject.

Questions and Responses:

Interviewer: How about making up a story now, there's nothing on this sheet but I want you to just sort of imagine there's a picture on here and then tell me what the picture is, it could be anything you want, and then make a story up about it.

Subject: Someone on the railroad tracks.

I: What are they doing there?

S: Standing on there and then someone comes along and ties them up....and then a train will come and run over them and he has to try to get hisself out.

I: And then what's going to happen Bobby?

S: If he doesn't get out he'll get run over.

I: Who put him on the railroad tracks?

S: Um, some old people.

I: How come?

S: Trying to rob him.

I: Trying to rob him, steal his money. So they tied him up, put him on the railroad tracks.

S: And took all his money.

I: Oh no, how will it turn out in the end?

S: I don't know...and then tie a knife or something against his stomach and then when the train comes he'll be stabbed from the...and then he'll be cut all up.

In this particular story there were several instances of extreme violence (stabbing, robbing, probable death). However, the following story, quite typical of the normal group, is about a pleasant day at school.

   Subject: Kid in art class and he's colouring something and he might get bored and he could start to colour again and then he's probably finished and then he could

do something else, like L.A. Then he's probably having
fun cause he might be playing game and might be... .
(laughs)

Interviewer: So he was in art class and was a little
bit bored but then he went to L.A. and was feeling
better cause he was playing games.

S: And it's recess and he went outside with his friends
and he plays soccer. And then recess is over he he has
gym, he goes in the gym they played basketball and then
he...then that would be gym, he goes home for lunch and
goes home for lunch and his mom's cooking lunch for him
and he's happy and that's the end.

It is an interesting finding that no significant
thematic differences were found in either the problem
stories from the original study or the current study.
Without the results from the blank card task, one would
hypothesize that both groups' story worlds, and perhaps
social worlds, deal with issues of violence and conflict to
a similar degree. However, considering the results from the
blank card task, it might be that the directions for
generating the problem story necessitate the inclusion of
some kind of hostility or conflict inasmuch as they ask for
"a problem that someone has and how they try to solve it".
Without this "good vs evil" theme, stories would not comply
with the required problem-solution format. However, when no

problem was requested, as in the blank card task, the aggressive group included significantly more conflict than did the behaviourally normal children. This trend was also evident in the way characters were portrayed within the blank story task and is discussed in the following section.

b) Characterization:

Recall that the problem stories (at Time 1 and Time 2) as well as the stories in response to the blank card task were analyzed for character portrayal in terms of positive, negative or mixed depictions (containing an equal number of positive and negative characters). Findings indicated that a disproportionate number of blank card stories generated by the aggressive group contained main characters generally depicted as incompetent, aggressive, uncooperative or inadequate whereas most of the stories generated by the normal group depicted positive main characters. Parents, other family members, and adults were portrayed in the same manner. In over 90% of the normal boys' stories other characters were depicted positively (including mixed ratings) whereas others were portrayed positively in only 1/3 of the aggressive boys' stories. Two-thirds of their characters were characterized as unreliable, withdrawn, rejecting, neglectful, etc.

Although the results from both these analyses suggest a trend towards a more positive tone in all the behaviourally

normal groups' stories, significant findings were noted only in the blank card task. This again, may be a factor of the requirements for the task as outlined above and/or indicative of the aggressive group's preoccupation with violent or aggressive issues and less capable and positive characters. Yule (1985) found that well-adjusted children showed a wide repertoire of stories (including violent and aggressive stories) but that disturbed children's stories showed recurring violent themes. McGrew and Teglasi (1990) also found that emotionally disturbed boys tended to have more hostile and violent responses to less-aggressive stimuli than did their normally functioning peers. This tendency is evident when examining the way their characters choose to resolve problems.

c) Problem-Resolutions

Recall that the problem stories from the original study (Time 1) and the present study (Time 2) were analyzed to identify qualitative differences in problem resolution. A rating was assigned based on the interaction of the plan and the ultimate outcome of the story. Stories were rated either adaptive, maladaptive, or indeterminate (see Table 3.3). The Chi square analysis indicated that a disproportionate number of stories composed by the aggressive subjects fell in the maladaptive or indeterminate categories whereas a disproportionate number of stories

produced by the normal subjects fell in the adaptive category. Sample stories are presented below that illustrate the qualitative differences between the two groups. In the first, a story from an 8-year-old boy in the behaviourally normal group, an adaptive rating was assigned based on the prosocial response to a friend's accidental injury (seeking and receiving help) and the positive outcome.

> Let's see...like me and Graham were playing this game and he got hit in the face with the puck or ball. Like we play with this ball for street hockey. And he started bleeding and I helped him get up and by the time I knew first aid, I got the First Aider Badge, and I helped his jaw and I stopped it bleeding and took him to his mom, then she called an ambulance, then the ambulance came and gave him a cast right on his left jaw, right here. So he couldn't talk...yeah, and after 5 weeks or more he got the cast off and he could, he still had to talk like this (clenches teeth) because the jaw still hurt, he couldn't move it so much and then, I don't know, then, it was all together and they played street hockey again and played with lots of friends.

A maladaptive rating was assigned to the following story from an 8-year-old in the aggressive group. Here an

antisocial response resulted in a positive outcome for the "hero"; he escaped any consequences for his antisocial acts.

Subject: Me and my friends took and egg and threw it at my auntie's face.

Interviewer: Oh no. How come?

S: She was a bad, no not my auntie's face, Gina's face, a girl named Gina we threw it at her face because she's so mean. She was about to spank them and she uh she uh um we kept on going to throw our eggs back at her and she told me, "If you tell, on the next time I see 'em I'm going to strap them."

I: Did you tell?

S: No. I just told them and they kept on throwing more eggs at her and then when we took a whole carton there we just squished it in her face. (laughs)

I: Were you laughing?

S: Yeah and we rode our bikes away.

I: So she was bugging you, eh?

S: Yeah, and she threw a rock at us at one of our tires but she missed.

Although not all stories generated by the normal subjects were adaptive, it was evident that their stories were (at both Time 1 and Time 2) more prosocial in tone. One possible explanation may have been that 50% of the aggressive boy's stories received "indeterminate" ratings at

Time 1 (stories either lacking an ending or containing an ambivalent resolution). However, this was not the case in the second administration where 30% of their stories were rated indeterminate. Nevertheless, these unresolved or ambivalent stories may be a reflection of their lack of confidence in their own problem-solving abilities and perceptions of others as less than helpful in this process.

A factor that contributed to the negative tone was apparent upon closer examination of the types of plans preferred by the normal group: in 62.5% (20/32) of the stories, protagonists received help from another, or utilized their own resources to successfully resolve their problems. When antisocial attempts at problem resolution were depicted, outcomes were quite negative, often resulting in harsh punishment for the perpetrator. In contrast, only 26% (7/27) of the aggressive children utilized those prosocial responses in their stories and antisocial actions were often rewarded, not punished.

The aggressive groups' inability to overcome the challenge of the story problem, or their antisocial resolution of it, may be indicative of pessimism and lack of control in their story worlds and, as the research reveals, in their "real life" social worlds (Buschbaum et al, 1992; Cicchetti, Rogosch, Lynch & Holt, 1993). This is further demonstrated in the analysis of alternative story endings.

d)   Alternative Story Endings

Recall that on completion of their problem story, each subject was asked whether their story could be resolved in any other way. Initially, 13 of the 16 behaviourally normal boys and 4 of the 11 aggressive boys gave alternative endings. With the provision of specific clues, or probes, eventually all of the normal group were able to generate positive solutions. Those probed in the aggressive group were unable to generate prosocial alternatives. The following exerpts illustrate the differences in responses between the two groups. The first is from an 8-year-old boy in the normal group.

Questions and Responses:

So what would be the main problem in that story?

"That he's taking drugs."

And how does he solve it?

"By quitting."

Could he have solved it any other way?

"No."

Do you think he could have avoided the problem in the first place?

"Yes."

How?

"He could have just forgot it, just be what he is."

Do you think he could have asked somebody for help?

"Yeah."

Like who?

"Like his counsellor...they could have helped him to stop."

The second excerpt, from an interview with an 8-year-old boy in the aggressive group, tells of a time when he and a friend threw eggs at a woman who retaliated by throwing a rock at them. They escaped by riding away on their bikes.

Questions and Responses:

Could you think of any other way you could have solved that problem?

"It was my friend's idea, not mine."

Could you have thought of a different way?

"No. I just thought it was funny."

Do you think you could have just asked her to stop bugging you?

"Yeah, but she wouldn't so one day I came and threw rocks at her garage door and I egged her windows."

Do you think you could have asked an adult to help you there?

"No, I didn't want to."

No, how come?

"Cause I just didn't want to."

Could you have ignored her?

"Yeah, but I didn't want to do that either. I just wanted to handle it the way I did."

Generally, the aggressive boys were able to identify reasons for not accepting any of the hypothetical solutions. This suggests that rather than not being able to come up with multiple solutions to a problem, aggressive children are consciously dismissing options that for them, are ineffectual or untenable. As several children stated when asked if there was any other way they could solve their problem: "yeah, but I don't want to do it."

Summary Discussion

When combined, the findings from the current and original studies present an interesting picture of the social and cognitive functioning of aggressive children. Cognitively, it appears that the aggressive boys' narrative skills are developing although they continue to tell less structurally complex stories than their normal peers. Additionally, their development appears to be along a qualitatively different pathway. The social environment they portrayed in their stories was considerably less adaptive than that of the comparison group: their stories were populated with generally negative characters and told of worlds where violence and conflict were often rewarded. As well, their protagonists consistently chose less adaptive problem resolutions even when prosocial solutions were

suggested to them. It may be that the solutions favoured by the normal group were not regarded as effective options.

If we hypothesize that the worlds depicted in their stories are representative of their social worlds, then these findings support the work of other researchers who have concluded that aggressive children interpret the motives and mental states that drive human action in very different ways than their normal peers (Dodge, Bates, & Pettit, 1990). Following the attachment theorists, McKeough, Yates and Marini (in press) suggest that for these children, there are fewer opportunities to "construct appropriate working model[s] of human interaction" due to the dysfunctional social environments they inhabit (Ainsworth, 1989; Greenberg, Speltz & DeKlyen, 1993).

That aggressive children have experienced and will continue to experience negative social environments is well documented. That they have not constructed age-appropriate social cognitive structures for understanding human behaviour (i.e., intentional structure) is in line with other research where aggressive and/or behaviourally disturbed children have performed less well on tasks of social cognition (Akhtar & Bradley, 1991; Dodge, 1980; Guerra & Slaby, 1990.

Noam (1988) refers to "problem pathways" to describe the relationships between maladaptive life experiences and

cognitive development. He states that negative experiences can become organized into "core life themes" (such as fear of abandonment). As these themes are continually re-organized, elaborated and transformed at each stage of development, they become consistent reference points which are used to "understand, explore and respond to reality" (p. 239). In light of the finding that disorders of conduct appear to be lifelong and intergenerational (Kazdin, 1993), attempts to derail this maladaptive development are critically important.

In order to make significant changes to these patterns, to generate more positive worlds, therapists need to understand and work within the children's worlds to perhaps help "rewrite" some of the life themes that form the core of their social-cognitive development (Spence, 1986). Within this therapeutic milieu, stories may be useful devices for increasing our understanding of how children interpret the world around them and indicators, along the way, of therapeutic growth (Brandell, 1986; Buschsbaum et al, 1992).

Methodological Issues

1. Task Administration:

In working with a group of children whose behaviour is characterized by opposition to authority and hostility towards others, the manner in which the tasks were presented was extremely important. In order to build rapport, it was

necessary to administer all tasks in a very conversational manner. It was also necessary to be somewhat flexible in the order of task presentation. For example, if a child was unable (or unwilling) to generate a problem story at the beginning of the session, another opportunity was given at a time when the child seemed to feel more comfortable, and therefore more likely to comply with the request.

Additionally, it was necessary to persevere past initial "no responses" and ask questions repeatedly, in a variety of ways, until either a response was given, or it was apparent that no response was forthcoming. The following excerpt illustrates the resistance and the attempts to overcome it:

> Interviewer: Now I'm going to ask you to tell me some stories, OK? I'm going to tape record them because I'm not going to be able to write them down as fast as you talk.
>
> Subject: Where am I supposed to get the story from?
>
> I: I'd like you to tell me a story about someone, who's about your age, who has a problem that they want to solve, you know, make all better. Can you think of a story about someone, do you know anybody who has a problem?
>
> S: No.

I: OK.   Um, you know some people about your age

right?   It could be about yourself, about your friend,

or it could even be a made up story.

S: I'm not good at making up stories.

I: No?   I have a hard time making up stories sometimes

too.   Um, like just try your best to think of someone

who has a problem that they want to solve, you know.

(long pause)   Do you know any of your friends in your

class with problems?

S: No.

I: Nobody has a problem in your class, that you know

of, huh?   Maybe they have them but keep them to

themselves, huh?

S: Right.

I: What kind of problems do you think some kids your

age might have?

S: I don't know.

I: Can you take a guess at that?   (long pause)

S: I don't know.

Eventually, this subject was able to generate a story

however, the interviewer had to administer other tasks first

and return to the problem story at the end of the interview.

In spite of the researcher's efforts, and although every

effort was made to allow the boys to express themselves, the

issue of noncompliance cannot be dismissed. The aggressive boys may have not given their "best" effort.

2. Task Variety:

It was apparent that a range of story-telling tasks must be administered in order to allow the subjects to tell a variety of stories. When generating stories using the structured prompt (i.e., problem stories) as opposed to a composition of their choosing, (i.e., blank story task) there were significant differences in the two group's themes. Without the unstructured story prompt, some differences in story content were not apparent.

3. Subject Selection:

In general, the symptoms and behaviours exhibited by aggressive children range across a broad spectrum. In the original study, an effort was made to obtain those having more severe difficulties by using a sample with a clinical diagnosis, rather than those identified as "behaviour problems". Because of this clinical focus, subjects were often carrying two diagnoses (two of either CD, ODD or ADD). Although some researchers query whether there is truly a distinction between CD and ODD (Achenbach, 1993; Richters & Cicchetti, 1993), others suggest that ADHD/CD children are a specific subgroup with a greater range of antisocial behaviour (Hinshaw, Lahey & Hart, 1993). As there is such

considerable overlap in these areas, it is very difficult to obtain a large sample of children with a single diagnosis.

Limitations and Delimitations

of the Study

An important limitation of the current study was the inability to control for the effects of treatment on the performance of subjects in the aggressive group. Although all aggressive subjects in the original study were in treatment and continued in some form or other in the current study, there was a significant range of therapeutic intervention. For this study, two of the subjects were in institutional care whereas others were receiving private counselling, special behaviour class placement or remedial assistance. The effects of treatment over the course of 2 1/2 - 3 years were not taken into account.

A second concern is that there was no way to control for motivation/effort invested by the subjects, or the level of confidence they had in story telling. Prompting questions often had to be rephrased to de-emphasize the word "story" (for example, "just tell me about someone who has a problem", or "about something that happened"). This lack of effort or lack of confidence in their story-telling abilities may have affected the richness, and therefore the level of complexity of their narratives. However, considerable conversation took place between the examiner

and the subjects in the aggressive group to minimize this effect and to encourage and support their efforts.

Another factor that may have influenced the results was the use of different researchers in the original and follow-up studies. It is important to note however, that both researchers had masters level training in psychology and experience working with aggressive children.

Of some concern is the validity of the content scoring system in that the majority of scoring categories were developed from a review of existing literature. An alternate method is to use an ethnographic approach where the protocols themselves are used to generate categories and several readers are utilized to give a range of interpretations (Brown & Gilligan, 1991; Tappan, 1990).

Further, the content categories may have been too broad to capture subtle differences in content. For example, differences in hostility and aggression were not significant between the problem stories of the two groups, yet there were differences in the expected directions. A more finely-grained analysis may have better captured these. For instance, looking closely at who was the victim and who was the perpetrator in conflict situations might have yielded more information.

Suggestions for Future Research

The increasing number of acting-out and aggressive children in our school systems signals the need to further our understanding of this particular group. The pattern of early aggression and later academic failure, drop-out, and delinquency are extremely problematic both economically and socially. As Walker (1993) stated this "national emergency" requires the "investment of considerable resources and expertise" (p. 23). Although exploratory in nature, the findings from the present study suggest further investigation be undertaken, as follows:

1. The study should be replicated and the content scoring system that was developed for the present investigation applied to a similar group of subjects to determine if the results can be reproduced.

2. The study should be replicated with a group of female children.

3. The study should be expanded to extend the age range.

4. Additional information related to family background, peer relationships and personal history might be included to give a fuller picture of how individual characteristics interact with family and environmental

conditions. A "case study" approach might allow a more in-depth analysis of these factors.

5. The stories of aggressive children before, during, and after treatment could be obtained to examine differences at various points in therapy.

6. The range of story telling tasks could be expanded to include written as well as oral story tasks. It may be that oral story telling is more appropriate for younger children and written stories for older.

7. As the interviews with the aggressive group contained more verbal interactions between the examiner and the subjects than those of the behaviourally normal group, these conversations could also be included in the analysis. For example, aggressive subjects often stated: "I don't know any stories", "my parents don't tell me any stories", or "I'm not very good at stories".

8. Finally, subject selection criteria might also include a distinction between socialized and undersocialized subtypes of CD. There is evidence that undersocialized CD children are more aggressive and show a poorer prognosis than those characterized as socialized aggressive (Hinshaw, Lahey, & Hart, 1993).

Concluding Comments

The current exploratory study sought to investigate the differences in structure and content in the stories

generated by a group of aggressive boys and a group of behaviourally normal boys. Because it was exploratory in nature, the findings should be considered with caution. With this caveat in mind, the study demonstrated that the story worlds of aggressive children are different in structural organization and thematic content from those of their behaviourally normal peers.

The findings from both the original study and the follow-up study suggest that they may not, as might be thought from their outward "street smart" behaviour, be developing social understanding at the same rate as their peers. The results of the content analysis indicate that development may also be along a qualitatively different pathway.

Rather than punishing children for their antisocial behaviour, these stories suggest that we might best help them by understanding the framework from which they are viewing their social environments and assisting them in developing a more positive world. In order to do that, it is necessary to involve all players within the child's social world - parents, teachers and peers - in an effort to begin rewriting their stories in a more adaptive way.

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APPENDIX A

Letter of Participation

Dear Parent,

I am a graduate student at the University of Calgary in the Department of Educational Psychology. As part of my degree requirement, I am currently doing research for a thesis under the supervision of Dr. Anne McKeough, and request the participation of your son to enable me to complete the study. This research is a follow-up study to the one your son was involved in two years earlier. You might recall that we are investigating how children develop an understanding of what motivates human behaviour.

All participants will meet with me for one session of approximately 30 to 45 minutes and the meeting will can either take place in your home at a time convenient for you or at your son's school during school hours. The meetings will be tape recorded in order to obtain an accurate record of the child's answers.

Please sign the attached form if you will allow your child to participate in this study, and return it to me in the enclosed self-addressed envelope.

If you would like more information, you may telephone me at 938-3495 (home), 686-9300 (work) or Anne McKeough at 220-5723.

Thank you very much for your participation.

Sincerely,

Maureen Howard

APPENDIX B

Letter of Consent

CONSENT FOR RESEARCH PARTICIPATION

I hereby consent to allow my minor child, _____, to participate as a subject in the research project conducted by Maureen Howard under the supervision of Dr. Anne McKeough of the Department of Educational Psychology at The University of Calgary.

I understand that the study will involve the following general procedures:

At a time and place agreed upon by you, my child will meet individually with Maureen Howard and be asked to tell a series of stories about:

    a) a problem a friend has
    b) a parent helping a child
    c) 2 pictures
    d) a family teaching

I understand that my child's participation is completely voluntary, and that this study will not effect his school marks in any way. I also understand that my child is free to withdraw at any time.

The general plan of this study has been outlined to me. I further understand that the reporting of this project's results will not identify my child and that if the results are published, my child's name or school will not be associated in any way.

I understand that if at any time I have questions, I can contact the researcher at 938-3495 (home), at work 686-9300, or Dr. Anne McKeough at 220-5723.

_____   _____

Date   (Signature, parent or guardian)

                   _____

                 (Participant's name, printed, and signed

if possible)