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**Content and Complexity: Investigating Adaptiveness and Aggression
in the Narratives of Young Adolescents**

by

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ABSTRACT

This exploratory research investigated the social adaptiveness, consistency, and developmental complexity evident in the narratives of young adolescents. Fourth and seventh grade participants were assigned to non-aggressive, aggressive, or other group (i.e., those who fell outside of specified criteria) based on teacher's ratings on the Aggressive and Prosocial Behavior Scales of the Caprara and Pastorelli Behaviour Checklist. Two narrative tasks, the Problem Story and the Conflict Story, were analyzed.

Results indicated that there was no consistency found across narrative tasks in the adaptiveness of story content. There was a slightly significant finding across the conflict story adaptiveness and teacher's identifications of group membership, as group 2 (Aggressive) had more maladaptive conflict stories. Developmental complexity differences were found across group, grade, and gender.

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Chapter I

INTRODUCTION

“Kids will be kids” is a common phrase in our society used to dismiss aggression and bullying displayed by children. However, this adage’s ability to explain away for children’s aggression has decreased over the years. There is an emerging perception that violence has become more pervasive in society, including our schools. School-based violence among children and youth is of increasing concern. Educators are becoming increasingly vigilant in their efforts to identify potentially aggressive and violent students. A recent court case in Cornwall, Ontario reflects such vigilance. In this instance, a high school student read a monologue to his class. When other students reported being on this student’s “hit list,” the teacher recognized that this presentation may reflect potential real problems and the Ontario Police were contacted. The student, dubbed “Storyboy” by the media, was subsequently expelled from school and incarcerated for a month.

It is widely held that school violence is a social problem, reflecting the violence in society. As Berger (1974) noted, school violence is a manifestation of our modern violent urban society. This increased level of concern has motivated professionals to attempt to understand and address the issue of school-based violence (Solicitor General Canada, 1998, p.6).

In terms of its etiology, aggression may be understood as multiply determined, having origins in both biological and environmental factors. Factors that have been found to contribute to the development of aggression include infant temperament, quality of the parent-child attachment, emotional regulation, errors in cognitive processing, and being victimized and witnessing violence. It is likely that there is significant interplay between the above mentioned factors.

It appears that aggression follows a developmental trajectory. However, there is not one single defined pathway to the development of aggression. Research has shown that as children grow older, they interact less and less in a physically aggressive way. However, children's use of indirect aggression becomes increasingly frequently as they age. At every age, boys are more physically aggressive than girls, while girls show higher levels of indirect aggression than boys (Tremblay, Boulerice, Harden, McDuff, Persusse, Pihl, & Zoccolillo, 1996).

Research has also demonstrated that aggressive children display a number of social information processing errors. Specific deficits (such as poor cue recall and poor problem-solving abilities) and negative biases in social information processing are associated with aggression. These errors in interpreting social situations lead to a tendency to over attribute negative or hostile intentions to others (Crick & Dodge, 1996; Dodge, 1980) when the actual intent is ambiguous. Consequently, the aggressive child reaffirms his/her perception that the world is a very hostile place, which in turn, justifies (in their view) the use of aggression towards others.

Aggression has been classified into distinguishable typologies or patterns of behavior. One typology of characterizing aggression that was posited by Dodge, Lochman, Harnish, Bates, & Pettit (1997) suggested that aggression is either proactive or reactive in nature. Proactive aggression is "a deliberate behavior that is controlled by external reinforcement" (Crick & Dodge, 1996, p.67). That is, proactive aggression is driven by the expectation of some favorable outcome or reward. Conversely, reactive aggression is defined as "an angry, defensive response to frustration or provocation" (Crick & Dodge, 1996, p.67). Reactive aggression is far more emotional in nature than proactive aggression. Children demonstrating this type of aggression are highly volatile, responding quickly and

aggressively to threat or perceived threat (Shields & Chichetti, 1998). Dodge (1991) hypothesized that early experiences of maltreatment and rejection by parents will lead to a child developing reactive aggression. Subsequent research has supported this hypothesis. Reactively aggressive children demonstrate more hostile intent attributions in their cognitive style (Crick & Dodge, 1996). Grotper and Crick (1996) developed a different typology, describing aggression as either overt or relational. Overt aggression is characterized by verbal and physical acts directed towards others, with the intent of harm. Relational aggression “harms others through damage to their peer relationships (e.g. using social exclusion or rumor spreading as a form of retaliation)” (Crick et. al, 1997, p.579). This type of aggression uses manipulation and exclusion towards others, and as such, is less observable than overt aggression.

The expression of different forms of aggression by children may be indicative of their world representations. Narrative has been an important way that we make meaning of our experiences in world. Bruner (1986) suggested that narrative is a system by which people organize their experience in, knowledge about, and transactions with the social world. Sarbin (1986) suggested that human beings think, perceive, imagine, and make moral choices according to narrative structures. Individuals organize life events through stories in such a way that will give them perspective and fit the social context of their lives (Gee, 1991). The story plots we use reflect our personal understanding of our desires and needs (McAdams, 1998; Sarbin, 1986). Developmental psychopathology research has suggested that developing ways of understanding how children view the world and their own behavior is fundamental to being able to help them change (McKeough, Yates, & Marini, 1994). Our understanding of aggression may be enhanced through using a narrative approach. By analyzing the narratives of youths, adults may gain perspective on

the way that these children interpret and make sense of their world. Narratives provide a key to the storyteller's psychological reality, as well as social and cognitive functioning (Bruner, 1990). Because a story incorporates the same feelings, goals, needs, and values of the people who create it, analyses of the story world created by individuals offer insights into the functioning of their personal worlds, allowing us to see how they interpret social events and the types of conflict resolution they see as effective (Sarbin, 1986).

Statement of the Problem

The growing concern in our educational systems regarding aggression and violence has led to numerous violence prevention and intervention programs. It appears that the development and implementation of violence prevention policies and programs in Canada is haphazard and sporadic (Solicitor General Canada, 1998). Moreover, very few educational programs aimed at the prevention and management of aggressive behavior have proven to be effective (Van Acker, 1991). A more comprehensive understanding of aggressive children's world view may help contribute to positive outcomes. It is generally held that one way of understanding how children construct their developing sense of the social world is through the stories they create as a part of their own understanding and development of self. The aim of the current research was to investigate the social adaptiveness and complexity differences in the narratives of early adolescents. By understanding aggressive children's sense of the social world, practitioners may be more successful in their intervention efforts.

Organization of the Thesis

In the following chapter, theoretical and empirical literature related to the development of narrative and aggression provides the research basis for the current study. In Chapter III, I describe the methodology used in the current study, including a description

of participants, tasks and scoring criteria. In Chapter IV, the statistical procedures and their results are discussed. Findings, methodological issues, limitations, implications, and directions for future research are discussed in Chapter V.

Chapter II

LITERATURE REVIEW

Aggressive Behavior in Children and Adolescents

There is growing concern in our society that aggressive and antisocial behaviors in youth have increased in prevalence and severity. Research has shown that, relative to adult crime rates, which are decreasing, violent criminal offenses among youth are increasing. As Bala (1994) noted, although no one can know “how much of this increase is due to heightened sensitivity to violence and an increase in reporting rates, it is apparent that the public and professionals are increasingly concerned about youth violence” (p.1). Clearly, violence and aggression among youth are complex social issues that need to be furthered explored and understood.

Canadian prevalence rates for delinquent behavior have been reported for school-aged children. LeBlanc, McDuff, Charlebois, Gagnon, Larrivee, and Tremblay (1991) found that 21.8% of their sample of disadvantaged Canadian youth had committed at least one of three serious delinquent offenses (fighting with a weapon, breaking and entering, or stealing goods worth more than \$100) between the ages of 4 and 9 years. Recent police data from the Uniform Crime Report (UCR) indicated that the number of youths aged 12 to 17 years who were arrested by the police in Canada rose 18% between 1986 and 1992 (Statistics Canada, 1993). It is noteworthy that a relatively small percentage of offenders account for the majority of criminal charges, particularly violent crimes. Within the general population, only six to seven percent of adolescents are responsible for committing the majority of officially-recorded crimes (Tracy et al., 1990). These findings are of concern to educators and school administrations, as “violence spills over into the school setting, giving rise to the growing sense of urgency of how to deal with antisocial and

aggressive behavior among children and youth” (Solicitor General Report, 1995). School violence affects not only the perpetrator and victim, but the whole school community, including the student body and educators.

Surveys of teachers in British Columbia (British Columbia Teachers’ Federation [BCTF], 1993) Ontario (Roher, 1993; Ontario Teachers’ Federation [OTF], 1991), Alberta (Teacher Associations, 1992), Manitoba (The Manitoba Teachers’ Society [MTS], 1993), and Nova Scotia (Robb, 1993) indicated that violence is of increasing concern in Canadian schools. An Environics poll conducted in April, 1993, revealed that violence is the top educational concern, surpassing academic standards (MacDougall, 1993).

In the absence of data collected over multiple time periods, it is difficult to determine the precise level of school violence in Canada (Solicitor General Report, 1995). A survey in Manitoba reveals that 72% of teachers and 42% of the administrators agreed with the statement, “Abuse is on the increase.” (MTS, 1993). In a survey conducted in Alberta, 50% of teachers reported that physical and emotional abuse is increasing (Teachers’ Associations, 1992). Another school survey conducted in Ontario found that only 67.8% of respondents indicated that they felt as safe now as they did five years ago (Safe School Task Force, 1994b).

Given that there is clearly an “emerging perception that violence has become pervasive in society, including in our schools” (Solicitor General Report, 1995, p.23), it is imperative that the factors related to aggression are better understood.

Factors Related to Aggression

Research has clearly shown that numerous factors are related to the development of aggression in children. These can be classified as biological, cognitive, familial and environmental factors. Although this review delineates these as separate factors, it is likely

that there is much interplay among them and thus they cannot easily be teased apart (Malcolm, 2000). The etiology of aggression is best understood as multiply determined, having determinants in both biological and environmental factors (Solicitor General Report, 1995).

Biological Factors

Several physiological differences are evident between aggressive and non-aggressive children. It has been found that aggressive children have elevated levels of central serotonergic activity, which may be a developmental precursor to serotonin deficiencies later in life. Serotonin is believed to influence information processing as well as to regulate aggressive behavior (Barlow & Durand, 1995). Low serotonin activity is associated with less inhibition. Consequently, in both animals and adult humans, deficits in central serotonergic activity facilitate impulsive aggression (Pine, Coplan, Wasserman, Miller, Fied, Davies, Cooper, Greenhill, Shaffer, & Parsons, 1997). In addition, low levels of the brain enzyme monoamine oxidase, which metabolizes serotonin, epinephrine and dopamine, results in decreased activity of these neurotransmitters in the brain. Low levels of monoamine oxidase are thus associated with a disinhibitory temperament (Blackburn, 1993). As well, lower resting heart rates and reduced skin conductance response have been found in aggressive individuals in comparison to non-aggressive individuals (Ellis, 1991). Moreover, it has also been reported that antisocial individuals have a lower level of autonomic arousal than non-antisocial individuals (Raine, 1993).

Neural mechanisms regulate human behavior, including aggression. Damage or insult to certain areas of the brain can affect aggressiveness, depending on the specific area(s) involved (Phares, 1991). The limbic system is one area of the brain involved in the experience and expression of aggression. Damage or insult to this area may have a direct

effect on the development of aggression (Van Acker, 1996). In addition, the hypothalamus and other temporal lobe structures have been found to help mediate aggressive behavior. Phares (1991) reported that damage to these structures may result in a loss of emotional reactivity and, consequently, the ability to mediate aggressive behavior may be impaired. Furthermore, both cognitive and behavioral similarities have been noted between individuals who have had frontal lobe damage and those who show characteristics of antisocial behavior (Price, Daffner, Stowe, & Mesulam, 1990).

The potential of the human brain remains unexpressed at birth, and it is the experiences of childhood that express that potential (Perry, 1997). It is clear that early life experiences are of paramount importance in organizing the mature brain. A lack of critical nurturing experience, as well as excess exposure to traumatic experiences, will alter the developing brain. Perry (1994) postulated that childhood experiences of trauma, such as neglect and/or abuse, can impact brain development, which may account for differences in the limbic system. However, it is important to note that not all children who experience or witness violence later exhibit aggressive behavior.

While physiological differences exist between aggressive and non-aggressive children, it is unclear as to whether these differences are causal or are a result of aggression. Although physiological factors are related to the development of aggression, cognitive factors have also been found to play an important role.

Cognitive Factors

Aggressive children suffer from both distortions and deficiencies in their cognitive processing (Dodge, 1987; Kendall, Ronan, & Epps, 1991). General cognitive antecedents of aggression have been identified as low intelligence, reading problems, and attention problems (including hyperactivity). More specific cognitive factors related to aggression

include social cognitive deficiencies, mental scripts, attitudes favorable to aggression, rejection sensitivity, and inflated self-esteem (Loeber & Hay, 1997). Research has revealed differences in the cognitive problem solving between aggressive and non-aggressive children. Dodge and Tomlin (1987) used a linear information processing model to describe these differences. This model uses a series of interrelated steps that are involved in the processing of social information. There are six steps that describe the process used to make decisions in social situations: encoding, interpretation, goal formulation, response search, response decision, and enactment. Errors can occur at each stage, and it is evident that aggressive children make multiple errors (Dodge & Tomlin, 1987).

The first step is encoding, in which an individual assesses a situation and makes note of information that is relevant to the situation. In contrast to non-aggressive children, aggressive children have been found to attend to fewer cues overall. Moreover, they tend to make use of the most recent and stimulating cues and consequently do not use cues that would enable accurate interpretation of the situation (Dodge & Tomlin, 1987).

The second step of cognitive problem solving is interpretation. In this step, meaning is assigned to social cues. Aggressive children tend to commit errors in this stage when they assign hostile intent to neutral or ambiguous social cues. This is referred to as the "hostile attribution bias". This bias results in a misinterpretation of the social situation (Crick & Dodge, 1994).

Goal formation is the third step, in which goals are selected on the basis of an individual's desired outcome from the social situation. Non-aggressive children are likely to select goals that foster peer relationships by using positive social mores, such as sharing (Dodge & Tomlin, 1987). In contrast to non-aggressive children, aggressive children tend to select inappropriate goals that are counterproductive to social relationships.

Furthermore, aggressive children tend to ignore the long-term consequences of using aggressive acts to solve social problems (Dodge & Tomlin, 1987).

The fourth step, response search and formulation, involves identifying a range of possible responses to the social situation. This generation of possible responses is dependent on the information gathered in the above steps. In contrast to non-aggressive children, aggressive children identify fewer possible responses. Aggressive children also tend to generate more coercive responses to the social situation (Dodge & Tomlin, 1987).

The fifth step in the cognitive problem solving model is response decision. In this step, the child is required to make a decision regarding the action/response to be taken in the situation. Aggressive children evaluate aggressive responses as more favorable than non-aggressive children, and consequently are more likely to select such a response (Dodge & Tomlin, 1987).

The final step in the cognitive problem solving model is enactment. The child carries out the selected response/action for the social situation. Once action has been taken, the child typically evaluates the outcome and the process becomes incorporated into one's sense of self and understanding of the world. If the interaction has resulted in a negative outcome, aggressive children inappropriately assign blame, unable to see their own contribution to the outcome (Crick & Dodge, 1994).

The linear cognitive problem solving model described by Dodge and Tomlin (1987) provides valuable information regarding the social cognitive problem solving abilities of aggressive children. These previously described six steps are continually interacting with an individual's personal data base (i.e., social knowledge and schemas; Crick & Dodge, 1994). Thus, Crick and Dodge (1994) reformulated the model of cognitive problem solving to include a depiction of the model whereby it moved from a linear model to a non-linear

model (i.e., parallel and simultaneous). In this reformulated model, multiple processing steps can occur simultaneously. Moreover, social processing is circular, and individuals may be engaged in more than one processing step at one time.

It is important to note that social processing is also based on the individual's existing knowledge that is constructed in the context of their experience in the social environment. As a result, another set of factors that have been related to the development of aggression in children are familial and environmental factors.

Familial and Environmental Factors

Much research (e.g. Dodge, Pettit, Bates, & Valente, 1995; Kupersmidt, Griesler, DeRosier, Patterson, & Davis, 1995) has explored the role of family environment and parenting in the development of childhood aggression. Patterns of parenting style have been linked to the development of aggression in children (Kingston & Prior, 1995; Ollendick, 1996). Family factors such as parental abuse (Dodge et al., 1995) and poor parenting practices (Pettit, Dodge, & Brown, 1988) are associated with aggression in children. High parental rejection, lack of supervision, use of harsh punishment, failure to set limits, and unsatisfactory communication patterns are all typical of homes with aggressive children (Patterson, 1991).

Because the development of one's identity is determined, in part, by early childhood experiences within the family (Phares, 1991), the culture of the early home experiences can serve to shape a child's identity. Interparental conflict, characterized by the degree of parent's cooperation and agreement in performing parenting functions in the family, was associated with aggression in children between ages three and eight years. Moreover, parents who reported high levels of interpersonal conflict with each other also reported high

levels of aggression in their children (Dadds & Powell, 1991; Skinner, Elder, & Conger, 1992).

Another force influencing and confirming our beliefs are environmental factors. Individuals often make sense of the world around them by using meanings that the members of society share. Children learn to integrate many societal beliefs into their personal identity through frequent exposure to the media. Canadian research indicates that, by the time children complete elementary school, each child will have witnessed in excess of 8000 murders and over 100,000 acts of miscellaneous violence (Campbell, 1993). Although most scholars believe that there is some relationship between media violence and aggression, there is less consensus on the degree of this relationship (Heath, 1986). Research has shown that viewing violent programming leads to an increase in aggressive behaviors (Dietz, 1998; Phares, 1991). The effects of media violence are more pronounced when the aggression is rewarded, when the child can identify with media character, and when the program is realistic (Heath, 1986). Video games have also been implicated in aggression in youth. Specifically, Silvern and Williamson (1987) found that 4- to 6- year olds displayed more violent and less prosocial behavior after playing violent video games. It has also been argued that video games may have an adverse effect because the child is actively involved as a player rather than as a passive viewer (Scott, 1995). Additional concerns about media violence are that children will learn to value, rather than devalue, the use of violence to solve conflicts. Furthermore, through mass media viewing, children will not learn to use alternative, prosocial responses to deal with conflict (Solicitor General Report, 1995). It is important to note, however, that not all children are adversely affected by media violence, and not all media violence results in aggression (Sjoblom, 2000). While the biological, cognitive, familial, and environmental factors postulate about the etiology of

aggression, they do not provide information about the developmental changes in the expression of aggression. The developmental trajectory of aggression across the lifespan is important to examine.

Development of Aggression

Aggression appears to follow developmental pathways in its expression. A developmental pathway is defined as the behavioral development of a group of individuals that is different from the behavioral development of another group or other groups of individuals (Loeber, Keenan, & Zhang, 1997). In the following section the developmental characteristics of aggression during infancy, early childhood, middle childhood, and adolescence and early adulthood are discussed.

Infancy

The earliest manifestations of aggression occur in the infant's earliest encounters with the social world. An infant's temperament, which encompasses qualities such as level of energy, lability of mood, intensity of action, persistence, and distractibility, serve to shape an infant's response to situations. Furthermore, infants with a difficult temperament (irregular, avoidant, intense) may be less resistant to stress (Strauss, 1994) and, consequently, be at risk for later aggression. Difficult child temperament may serve to elicit negative parenting and lead to angry-aggressive parent-child interactions (Keenan & Shaw, 1994). This can contribute to attachment difficulties, which have also been found to be predictive of aggression in childhood and adolescence (Crick & Dodge, 1994).

Attachment is the development of strong, affectional ties that results in the individual seeking to be near certain people. Bowlby (1969) proposed the ethological theory of attachment, whereby attachment is viewed as an evolved response that promotes survival. Ainsworth, Blehar, Waters, and Wall (1978) further examined infant attachment patterns

through the “Strange Situation,” reasoning that infants and toddlers should use the parent as a secure base from which to explore an unfamiliar playroom. One secure attachment pattern and three patterns of insecurity were found. Secure attachment is characterized by the child using the parent as a secure base from which to explore. When separated, the child may cry due to the mother’s absence. When the parent returns, the child actively seeks contact and his/her crying is reduced immediately. The quality of insecure avoidant attachment is characterized by infants who are not distressed by maternal separation and who avoid the mother when she returns. Insecure-ambivalent attachment is characterized by infants who remain close to the mother before departure, and display angry, resistive behavior when she returns. Insecure-disorganized attachment is characterized by several signs of disorganization and confusion when reunited with the mother. Children who are securely attached to a primary caregiver are less likely to develop behavior and social problems, and are better able to regulate their negative emotional states than insecurely attached children (Greenberg, Speltz, & DeKlyen, 1993). In the absence of an early supportive parent-child relationship, such as one characterized by neglectful, unresponsive, inattentive, or overly protective parent, maladaptive outcomes are likely to ensue (Solicitor General Canada, 1995).

While there is no evidence for gender differences in possible precursors to aggression in infancy, there are some signs of difference between the sexes in emotional expressiveness and self-control that may predate later gender-differentiated problems (Loeber & Hay, 1997). Boys are more emotionally labile than girls and express both positive and negative emotions at higher rates (Weinberg & Tronick, 1997).

Early Childhood

During the second and third years of life, behavioral expressions of temper tantrums and aggression are observed and minor gender differences are noted. Data from the first collection cycle of the National Longitudinal Survey of Children and Youth (NLSCY) (1995) indicate estimates that 3.5% of 2- to 4-year-old Canadian children, according to the person most knowledgeable about the child, often exhibit physically aggressive behaviors. Caplan, Vespo, Pederson, and Hay (1991) found that groups with a female majority were more likely to come into conflict and to use personal force. However, Tremblay, Boulerice, Harden, McDuff, Perusse, Pihl, and Zoccolillo (1996) found that boys possess higher physical aggression scores than girls in every age group, including children aged 2 to 3 years.

Gender differences in levels of aggression become marked between the third and sixth birthdays, when many children enter preschool or elementary (Loeber & Hay, 1994). Females tend to use more verbal and indirect aggression rather than physical aggression, displaying relational aggression through peer exclusion, gossip, and collusion. Males show higher rates of physical aggression (both instrumental and personal force) than females (Loeber & Hay, 1994).

Middle Childhood

Children are beginning to construct their own representation of the world through interactions with their peers during middle childhood. For many children, the developmental trajectory includes a decrease in physical aggression from early to middle childhood, in tandem with a rise in interpersonal skills. However, other children deviate from this pathway. Children who do not learn to inhibit physically aggressive behavior during early childhood appear to be at risk for later delinquency (Baillargeon et al., 2000). Specifically, Nagin and Tremblay (1999) investigated the trajectories of boys' physical

aggression, opposition, and hyperactivity on a path to physically violent and nonviolent juvenile delinquency. This Canadian longitudinal study found that a chronic physical aggression trajectory, with the oppositional and hyperactivity trajectories held constant, led to overt delinquency (physical violence) and to the most serious delinquent acts. Thus, in this study, it was the boys who were physically aggressive in kindergarten who had committed the most serious delinquent acts at age 15.

As children grow older, they generally interact less and less in a physically aggressive manner, but use indirect aggression increasingly frequently. Indirect aggression requires children to have acquired some insight into the complexity of social interactions, usually attained after early childhood (Baillargeon, Tremblay, & Willms, 2000). In their research with the National Longitudinal Survey of Children and Youth, Tremblay et al. (1996) found that the average non-physical aggression score increased for boys and girls from age 4 to 7, and remained relatively stable until 11 years of age.

Bentley and Li (1994) investigated the prevalence of bullying (physical and relational aggression) in elementary school children in Calgary, Alberta. It was found that 21.3% of students reported being bullied with some regularity, whereas 9.2% were bullied “once a week” or more. Gender differences among the elementary-aged students were found. Boys were found to be at risk for being bullied mainly by boys, whereas girls were most commonly bullied by both boys and girls. It is noteworthy that the playground was found to be the most common place to be bullied. This is consistent with past research indicating that bullying occurs more frequently where there is less close adult supervision (Olweus, 1991). The social effects of bullying have also been researched.

Relational aggression was significantly related to present social maladjustment (Crick and Grotpeter, 1995), as well as predictive of future social maladjustment as it

appears to be stable over time (Crick, 1995). Relationally aggressive children were found to become more rejected by peers over the course of the school year (Crick, 1995).

Researchers have found that patterns of aggressive behavior in childhood are strong indicators of behaviors typically shown in adolescence, and to some extent even in adulthood (Salkind, 1994).

Adolescence

In adolescence, there is generally a decrease in the amount of aggressive behavior. This decrease may come as a result of the individual assuming greater responsibility for his/her own behavior, making decisions about what is socially appropriate and acceptable and demonstrating self-control (Baillargeon et al., 2000; Solicitor General Report, 1995). However, more serious violence tends to increase with age, especially during adolescence (Loeber & Hay, 1997)

As adolescents age, they become physically stronger and have greater access to weapons. Peer groups, both in schools and in community settings, are more likely to engage in collective forms of violence and aggression. As members of social networks are often similar to one another in levels of aggression and in other antisocial tendencies (Cairns & Cairns, 1994), there is an increased likelihood of gang formation in adolescence (Loeber & Hay, 1997). It should be noted, however, that a relatively small percentage of offenders account for many of the criminal charges, particularly violent crimes. For example, 21% of a sample of young offenders in Toronto accounted for 65% of the total number of charges incurred by the sample (Day, Minevich, Hunt, and Hrynkiw-Augimeri, 1994).

During adolescence, there is an increase in cross-gender aggression (Loeber & Hay, 1997). Girls report more conflicts with boys than boys report with girls (Cairns & Cairns,

1994). Over the years of adolescence, boys' conflict continued to show overt aggression and other forms of direct confrontation, whereas girls' conflicts tended to become less violent (Cairns & Cairns, 1994). Girls tend to find other ways to express anger. This decrease in overt aggression may be explained by the development of gender identity and sex-typed behavior (Cairns & Cairns, 1994). Societal and cultural norms are integrated into adolescent's own sense of identity. Girls may learn that physical aggression, such as physical fighting, is less acceptable for girls than for boys. As a result, they may reduce their engagement in such activities. Society and the adolescent's peers then identify with this behavioral reduction of physical aggression. However, there is a sub-group of girls who may not internalize the cultural norms, and who remain physically aggressive. Recent data from Statistics Canada indicate that the prevalence of violent offending among adolescent girls has increased much faster than for adolescent boys. In 1997, the rate for violent crimes increased 5% for girls and decreased 4% for boys (Statistics Canada, 1998). Pepler and Sedighdeilami (1998) analyzed data from the first collection cycle of the NLSCY to examine aggressive girls in Canada. The results indicated that although aggressive girls reportedly exhibited fewer physically aggressive and difficult behaviors than aggressive boys, their psychosocial development was equally impaired. That is, aggressive girls were rated as having more emotional problems, lower self-esteem, fewer prosocial behaviors, and more difficult behavior than the non-aggressive girls. Subsequent analyses with future phases of the NLSCY will shed light on the developmental pathway of aggression in girls.

Given that aggression typically develops along a developmental trajectory, early identification and intervention are critical if the pathway is to be altered. To prevent the development of chronic problems with physical aggression, identifying children at risk is

imperative (Baillargeon et al., 2000). It is widely accepted that the school system plays a pivotal role in addressing the issue of youth violence because of the potential for reaching a large number of children throughout childhood (Solicitor General Report, 1995).

Professionals in school settings are ideally positioned to help in the identification of aggressive children.

Identification of Aggression

The school setting is evolving into an environment that is increasingly exposed to aggressive and violent behaviors (Van Acker, 1996). In addition to the demands of promoting academic skill development, our schools are charged with the task of assisting children to reach adulthood in the midst of escalating aggression and violence (Solicitor General Report, 1995).

Much of the data collected on school-based violence rates in Canada are based on the perceptions of a single source, teachers. However, teachers' perceptions are not without bias. The Solicitor General Report (1995) postulated that the perceived level of school violence by teachers is inextricably tied to two factors: first, teachers' sense of personal confidence or self-efficacy to manage discipline problems and, secondly, the level of support they perceive to be available from the school administration. The greater the teachers' sense of self-efficacy to manage behavior problems and the higher the perceived support from the administration, the lower the level of perceived violence. Unfortunately, there is a paucity of empirical research investigating the accuracy of teachers' identifications of aggressive youth. Teachers' identifications provide little information about how children understand their world and their own behaviors. However, by examining the narratives of youth, we begin to develop richer understanding of how they interpret and make sense of their world. Youth's narratives potentially offer a rich source

of information about their psychological reality and social and cognitive functioning (Sanderson & McKeough, 1999).

Narrative Investigations of Aggression

Although narrative methodology has been used to examine several disciplines and domains, such as formation of identity and knowledge of self, it has been only recently that there has been a shift to focus on children's behavioral problems. A narrative perspective can be used to explore the world view and social understanding of aggressive youth. Several recent investigations have addressed children's aggressive behaviors through narrative frameworks.

Bates (1997) explored the content and themes of adolescents' stories, postulating that the adolescent voice would describe issues of concern for adolescents. Bates's sample consisted of academically average early adolescents in a middle socioeconomic neighbourhood schools located in a large Western Canadian city. Bates used a four-factor model of adolescent concerns, previously developed by Violato and Holden (1988), that suggested that adolescents are primarily concerned about Health and Drugs, School and Career, the Personal Self, and the Social Self. Bates proposed that adolescents' narratives reflected these topics if they were truly a concern. The findings revealed that participants wrote stories about the issues reflected in the four factors, suggesting that adolescents are indeed concerned with the issues previously identified by Violato and Holden (1988). Support was also found for a fifth category, Hostility and Harm, which consisted of issues such as hostile peer aggression, family aggression, suicide, and kidnapping. Bates concluded that all five of these issues are of concern to adolescents.

Malcolm (2000) used the same model to investigate a specific subset of youth. Moreover, Malcolm used Violato and Holden's (1988) four-factor model of adolescent

concerns to investigate the topic and thematic similarities and differences in the narratives of aggressive and non-aggressive boys and girls, across grades four and seven. This investigation was based on the assertion that children's narratives reflect how youth organize and interpret their developing sense of identity, as well as how they view the social world. Malcolm found evidence supporting the four-factor model, in addition to evidence supporting the fifth category that Bates found, Hostility and Harm. The results indicated that aggressive and non-aggressive boys and girls in grades four and seven wrote stories with similar topics and themes, and therefore organized and interpreted events in a similar way. This suggested that a non-clinical sample of aggressive children are similar to the non-aggressive children and that they are concerned with the same issues (Malcolm, 2000).

Indicators of developmental psychopathology have been addressed through narrative techniques. Warren, Openhiem, and Emde (1996) showed a link between the internal representations expressed through a narrative task and the measurable externalizing problems of the child. Warren et al. found that themes in children's narrative play reflect behavioral problems as measured by the Child Behavior Checklist in preschool children. Such data provide valuable information about how children view themselves and their social world, which can then be used for both diagnosis and treatment planning (Warren et al., 1996).

Using a life story narrative task, Sanderson and McKeough (1999) also looked at a subset of youth. Specifically, they investigated the differences between behaviorally troubled adolescent girls living on the street compared to behaviorally average adolescent girls. This study was predicated on the Bruner's (1988) position that autobiography provides us with a way of ordering experience and reflecting on it. That is, narrative

facilitates individuals to understand the concrete aspects of an experience, but also their own or other's intentional states (Bruner, 1987, 1989, 1990). Consequently, the self-narrative also allows insight into the individual's perception of an experience. While the participants' stories did not differ developmentally, significant differences were found in the content of the stories. The life narratives of the behaviorally troubled girls reflected their previous experiences of maltreatment and their emotional, social, and scholastic difficulties. Additionally, it was posited that negatively biased interpretive frameworks were central to these girls' sense of self. The narratives also revealed that the behaviorally troubled girls were significantly more likely to portray themselves in a victim's role, suggesting that they perceived they had little or no control over their experiences (Sanderson & McKeough, 1999).

McKeough, Yates, and Marini (1994) explored the developmental differences in the narratives in a clinical sample of boys who had met the diagnostic criteria for oppositional defiant disorder or conduct disorder, or both, with average functioning, non-aggressive boys. Results indicated that aggressive boys' stories were less socially adaptive, and more negative in their story worlds than non-aggressive boys' stories. Furthermore, the aggressive group performed one half to one substage lower on measures of structural complexity than their non-aggressive peers. These results suggest that the aggressive boys displayed evidence of a cognitive delay, indicating that early life experiences have delayed their abilities to interpret and react to social situations. Moreover, McKeough et al. suggested that the aggressive boys' ability to reflect on social interaction may have been impaired by the construction of defensive structures. Stern (1985) asserted that defenses are some sort of cognitive or affective distortion, created in an attempt to suppress an otherwise overwhelming emotional conflict.

Howard (1994) conducted a follow-up study of McKeough, Yates and Marini (1994) by using a subgroup of the original investigation's participants. The problem story narratives, as well as responses to the Thematic Apperception Test (TAT), of aggressive and non-aggressive boys were examined for content and developmental differences. Howard broke stories into T-units, that is, the smallest grammatically correct segment that a passage can be broken down into without creating fragments (Hunt, 1977). Each T-unit was given a rating of either extreme hostility, less extreme hostility, or lacking in hostility. Moreover, the aggressive boys were found to continue to score approximately one substage below their behaviorally average peers on a measure of structural complexity. In addition, the aggressive boys referred to conflict and aggression more than the non-aggressive group on the TAT, but not problem stories. The results further indicated that behaviorally aggressive boys tended to portray characters more negatively than the non-aggressive boys.

Smorti (1999, in press) explored the cognitive strategies used by victims and bullies when interpreting socially incongruent situations. These discrepant situations are what Bruner (1990) described as a "violation of canonicity," where one's expectations of a situation are not consistent with what ultimately happens. That is, anticipated and actual events are different. The results indicated that bullies relied on both action and mental states to interpret the discrepant stories (Bruner, 1990), thereby allowing them to justify their actions and protect their sense of personal responsibility. The victims, however, relied more often on an action strategy of interpretation. This interpretation serves to protect their sense of responsibility and control in the situation.

The Development of Narrative Thought

Narrative is the organizing framework through which one gains an understanding of, and makes sense of, the social world. Sarbin (1986) proposed that narrative is the root

(organizing) metaphor for psychology. He suggested that we, as humans, organize our experience and interpret our social lives through narrative plots. Moreover, he suggested that humans “think, perceive, imagine, and make moral choices according to narrative structures “ (Sarbin, p.8, 1986). Polkinghorne (1988) echoed this position, asserting that humans explain their own actions and the actions of others by means of a plot. Individuals construct plots in the realm of meaning, documenting relationships among his or her unique perceptions. Through the action of emplotment, the narrative form constitutes human reality into wholes, manifests human values, and bestows meaning on life (Polkinghorne, 1988).

Meaning Making Through Narrative

Bruner (1986) suggested two modes of cognitive functioning: paradigmatic and narrative. Although each mode of thought is a distinct way of ordering experience and constructing reality, Bruner postulated that they must be considered together in order to fully capture the variety of human thought. The paradigmatic mode of thought, also called the logico-scientific mode, is well suited to scientific domains as it employs categorization or conceptualization. This mode of thought is driven by principled hypotheses. That is, the paradigmatic mode is defined “not only by observables to which its basic statements relate, but also by the set of possible worlds that can be logically generated and tested against observables” (Bruner, 1986, p.13). The narrative mode of thought, on the other hand, “deals with human and human-like intention and action and the vicissitudes and consequences that mark their course” (Bruner, 1986, p.13). Moreover, narrative knowledge allows us to rewrite events, explaining the non-canonical in life by bringing unusual events into the realm of the plausible (McKeough, Templeton, and Marini, 1996). Narrative thought attempts to give meaning and purpose to human affairs and as such, provides

understanding as to the nature of humans in the context of social interactions (Polkinghorne, 1988). While the narrative mode of thought is used to provide meaning and purpose to an individual's experiences, the ability to understand and make sense of the world is not an automatic process. Rather, it is only in the process of reflection on our experiences that we construct a narrative to understand and attribute meaning (Robinson & Hawpe, 1986). Events are interpreted and reinterpreted in a way that is consistent with the context and time which they occurred, taking into account all relevant information that may be present. The individual assigns relevance to the information, a process that is influenced by past experiences, as well as the narratives constructed around those experiences. Stories are dependent upon the perspective of the constructor, and are consequently subject to change with the beliefs, values, feelings, and goals of the constructor (Robinson & Hawpe, 1986). It would make sense, then, that the stories of behaviorally aggressive and non-aggressive youth would vary as a result of their different beliefs, values and goals.

The narrative mode of thought is based upon the temporal and causal ordering of two landscapes simultaneously: first, those that take place in the physical world, on the "landscape of action" (comprised of actions, intentions, and goals). Second, those that take place in the mental life of the character, on the "landscape of consciousness" (comprised of what characters know, think, feel, or believe about the first landscape) (Bruner, 1988). Narratives allow us to interpret the action and intention of others by describing and linking the action, thoughts, or protagonists with consequences (Polkinghorne, 1988). It is possible, then, that we are able to gain insight into children's understandings of events and their inferences as to the intentional or mental states of others through narrative. In addition to past experiences, the social context and cultural scripts will also influence the meaning that is interpreted from the event.

Cultural Influences on Narrative Thought

The story has traditionally been an important form of sharing knowledge and communicating to others, and appears in every culture known (McAdams, 1993). Culture shapes people's experiences, including the language with which they are organized in thought and shared in speech. Culture plays an important role in language, given that "learning how to use language involves both learning the culture and learning how to express intentions in congruence with the culture" (Bruner, 1986, p.65). Bruner (1986) postulated that cultural understanding and knowledge are imbedded within the language that arises from it. That is, through language we learn the subtleties of communication and interactions that are part of the culture we live in. Our culture exerts influence not only in our social interactions, but in our narratives created to interpret and explain those interactions as well.

Culture provides the interpretive system by which meaning is assigned to action in the social world (Bruner, 1990). Stories also often reflect a social or moral lesson consistent with the culture (Yussen & Ozcan, 1996). Bruner (1990) suggested that in all cultures, a folk psychology develops which provides the norms by which humans operate. For example, folk tales often provide us with a rich understanding of social interactions and the consequences for not complying with the cultural expectations. Culture is deeply embedded in narrative through the themes and principles expressed in stories. Smorti (1999) suggested that narrative thought is an effective method by which to interpret social interaction, from whatever cultural context the person lives. As a result, a child's culture influences their understanding of the social world. It follows, then, that children's development of a sense of self is reflected in the stories they tell (Fox, 1997).

Cultural differences can also be explored from a narrative framework. As previously discussed, culture has great influence on the narratives of its' members. Zahn-Waxler, Freidman, Cole, Mitzuba, and Hiruma (1996) used a narrative task to explore cross-cultural differences in prosocial and aggressive themes in Japanese and American school children. The results revealed that American children portrayed more aggressive behaviors and language, and showed more anger and under-regulation of emotion than Japanese children. American children were also found to use more force and aggressive solutions when coping with conflict. Clear gender differences were also evident, indicating that regardless of culture, females expressed more prosocial themes than males.

Recall that school-based violence is thought to be a reflection of societal violence. It follows, then, that the narratives of school-age youth reflect the culture they live in. Through narratives, we are able to gain insight not only into youth's unique perception of their experiences, but also into the culture in which they live.

Narrative offers a method to make meaning of our experiences and our social world. Furthermore, it serves to help develop and structure our personal identities, resulting in an integrated and flexible sense of self. Children's understanding of the social world and value system can be observed through their written narratives. Social and cultural influences constrain the creation of narrative. However, there are also cognitive development constraints that impact narrative thought.

Cognitive Development of Narrative

Children develop the ideas in their stories in parallel with their understanding of the social world (Fox, 1997). The ability to conceptualize the world in the form of narrative thought emerges as early as three or four years of age (Mancuso, 1986; Sutton-Smith, 1986). Children's narratives are a reflection of their knowledge of causality, social

interaction, intentionality, and goals and values (Yussen & Ozcan, 1996). A child's understanding and creation of narrative representation is dependent on his or her social and cognitive development (McKeough, 1986; McKeough, 1992; Yussen & Ozcan, 1996). It follows then that a theoretical framework by which children's knowledge of the world and complexity of thought can be understood is needed. One theory that meets this need has been proposed by Case (1985, 1992).

Case (1985, 1992) expanded and revised Piaget's stage theory of cognitive development. He proposed that cognitive development progresses through a series of stages and is dependent upon working memory or cognitive processing capacity. As working memory increases with age and experience, children learn to incorporate new information within existing information. As children grow older, their working memory capacity increases as a function of maturation and operational efficiency, allowing for the assembly of increasing complex structures (Case, 1985).

Case's theoretical framework has been used to map out children's development of narrative thought (McKeough, 1992). As children mature, their cognitive structures advance, resulting in a higher level of thought complexity. Narratives progress from being simple descriptions with little plot in early childhood to interpretive descriptions of the psychological motivations of the characters by adolescence (McKeough, 1986, 1992; McKeough, Sanderson, Martens, & Salter, 1996). In the domain of narrative, children integrate structural, cultural, and social knowledge as they develop increasingly complex modes of narrative thought (McKeough, 2000).

To analyze developmental change in narrative, McKeough, Templeton, and Marini (1995) applied a T-unit analysis (Hunt, 1977). Recall that T-units are the smallest grammatically correct segment that a passage can be broken down into without creating

fragments. The T-units were classified into three types: descriptive/action, intentional, and interpretive. Results indicated group differences for the number of intentional and interpretive T-units, but not for the action T-units. Misfeldt (1999) investigated the developmental differences in narrative plot structure in a community sample of youth identified as either behaviorally aggressive or non-aggressive by teachers. The results indicated significant developmental differences. Specifically, grade seven participants included significantly more interpretive T-units in their stories than the grade four participants, whereas the grade four participants included significantly more intentional T-units. Thus, as children age, a shift towards more interpretive thought occurs.

Summary

There is a growing concern in our society that aggressive behavior in youth has increased in prevalence and severity. This is a complex social issue that needs to be further explored and understood. A developmental trajectory of aggression exists, with early aggressive behavior as the strongest predictor of later involvement in violent acts. The etiology of aggression is best understood as multiply determined, with origins in biological, cognitive, familial, and environmental factors. Aggressive children show evidence of cognitive deficits in cognitive problem solving and social reasoning. Early identification and treatment of aggressive children in order to prevent the development of chronic problems with aggression and violence.

Studies such as those described above point to the importance of the narrative approach in the understanding and intervention of behavioral disorders in children. Stories are dependent on the perspective of the constructor (Robinson & Hawpe, 1986). As such, narrative frameworks potentially provide insight and understanding into the author's interpretation of their social world. The social context and cultural scripts also influence

the meaning that is derived from events. Moreover, narrative may provide insight into how aggressive children interpret and assign meaning to their experiences.

The Current Study

This study attempted to characterize the aggression found in youth's stories and to examine if these characterizations are consistent across narrative tasks. Furthermore, this study attempted to gain insight into the identification of aggressive children through narrative, and to compare these narrative identifications with teachers' identifications of aggressive, non-aggressive, and other children.

Hypotheses and Research Questions

The following research questions in this exploratory study sought to examine the differences between children identified by a teacher as either behaviorally aggressive, non-aggressive as well as those who fell outside of the specified criteria for identifying the two groups, across gender and grades four and seven. The following research questions and hypotheses were investigated:

1. Can we use narratives to identify aggression in children? Is there consistency in youth's performance across narrative tasks? Are there differences in group (aggressive, non-aggressive, or other), grade (4,7), and gender?
2. Is children's level of social adaptiveness of children's stories consistent with teacher's group assignment? Are there differences in group, grade, and gender?
3. Are there differences in the developmental complexity of the narratives across group, grade, and gender?

Chapter III

RESEARCH DESIGN

This exploratory study investigated the qualitative and quantitative differences in children's narratives. Once ethical approval from the school board and the Department of Educational Psychology at the University of Calgary was received, five publicly funded schools in a large urban centre in Western Canada were approached for participation. Initial contact with the teachers was made in a meeting that included a description of the specific procedures of the study upon consent from the school principal. If at that time a teacher wished to participate, a teacher consent form (Appendix A) was provided. On signing and returning the form, the participating teachers were supplied with letters of information (Appendix B), parental consent forms (Appendix C), and Parent Information Questionnaires (Appendix D) to be sent home with their students. The sample was composed of three groups of participants, identified as aggressive, non-aggressive, and those students who did not meet the selection criteria for the first two groups (other).

For this study, participants completed two narrative tasks during regularly scheduled class times:¹ the problem story and the conflict story. Narrative task analysis included an examination of the social adaptiveness and complexity of the narratives.

A demographic questionnaire, which assessed SES and education level of the parents, was used for the purpose of describing the sample as well as to control for variation due to ethnicity. SES was calculated using the National Occupational Classification System (NOCS; Employment and Immigration Canada, 1993). A summary of the findings are presented in Misfeldt (1999). Of a total of 225 potential participants,

¹ The current sample is a subgroup taken from a larger sample. Four other narrative tasks were also administered but are not reported in this document.

ninety-seven participants met the inclusion criteria of either aggressive (N=35) or non-aggressive (N=65), described below. The remaining 125 participants were classified as the 'Other' group. The composition of the current sample across grade is shown in Table 3.1.

Table 3.1

Composition of the Current Sample

	Non-Aggressive		Aggressive		Other	
	Male	Female	Male	Female	Male	Female
Grade						
Four	17	16	11	10	25	26
Seven	17	15	8	6	37	37

Screening Materials

Caprara and Pastorelli Behaviour Checklist for Children: Teacher's Version

Teachers rated each participant using the Caprara and Pastorelli Behaviour Checklist for Children (CPBCC): Teacher's Version² (Appendix E). The CPBCC was used as this study is part of larger cross-cultural investigation, including an Italian sample. The CPBCC is available in both English and Italian languages, and is comprised of three scales: Prosocial Behaviour, Aggressive Behaviour, and Emotional Instability. For the purposes of the present study, only the teacher's rating scale for the Aggressive Behaviour and Prosocial Behaviour scales were administered, as a clinical population was not being identified. The CPBCC Prosocial Behaviour scale consists of fifteen items, including five control items. The CPBCC Aggressive Behaviour scale consists of twenty items, including five control items. While the original checklist is scored on a three point ordinal scale (1 = never, 2 = sometimes, 3 = often), a fourth point category was added by Misfeldt (1999) (0 = unknown). This addition recognizes the limited contact between Canadian

² This instrument was used because this data was part of a larger study comparing Canadian and Italian participants.

teachers and students, particularly those in grade seven. As the original scale is scored by summing the numerical value of each of the items, a large amount of data appeared as though it was missing as a result of the inclusion of the option of “0 = unknown”. Consequently, the items to which teachers responded “unknown” more than 25% of the time were removed from the scale. See Misfeldt (1999) for a table of the omitted items. The remaining items were averaged, resulting in a possible score of one to three. Misfeldt (1999) conducted a principal components factor analysis on the remaining scale items. This analysis revealed that the remaining scale items loaded on the appropriate factors, with the exception of item PB5 (“The student is gentle”), which was found to load more heavily on the factor representing the Aggressive scale. As a result, this item was included in the Aggressive scale. One copy of the CPBCC for each participant was given to his or her teacher for completion on the first day of data collection.

If participants were rated as falling above the 75th percentile on the Aggressive scale, and below the 50th percentile of the Prosocial scale, they were identified as behaviorally aggressive; if participants were rated as falling below the fiftieth percentile on the Aggressive scale, and above the fiftieth percentile on the Prosocial scale they were identified as non-aggressive. The intent of the process for the identification of aggressive participants was to target specifically those students who are the particularly difficult ones in the class, however not necessarily requiring a clinical diagnosis. Therefore, using the “above the seventy-fifth percentile” as a cut off on the Aggressive scale indicates that a high level of aggressive behavior is noticeable; using “below the fiftieth percentile” as a cutoff on the Prosocial behavior scale also suggests tendencies towards social inadequacy and aggressive behaviors. This is consistent with past research that indicated that a lack of prosocial behavior is also indicative of social problems and aggression (Center & Wadcom,

1987). Conversely, identifying those participants who were below the fiftieth percentile on the Aggression scale and above the fiftieth percentile on the Prosocial scale provided a sample that could be considered non-aggressive. Participants whose ratings did not meet the above criteria for either the aggressive group or the non-aggressive group were considered to be an “Other” group.

Task Description, Administration, and Scoring Procedures

For the present study, each participant was asked to respond to two narrative tasks: Problem story and Conflict story. The tasks were administered in randomized order. Both tasks were completed using paper and pencil. The Problem story was completed in three class periods of thirty minutes, while the Conflict story was completed in one class period of thirty minutes.

Problem Story

Participants were instructed to write a story about someone who has a problem that he or she wishes to solve in the problem story task (McKeough, 1992). This problem could be either real or fictional. Consequently, participants were given the freedom to present different types of problems they may have read or heard about, actually encountered, or anticipated in their lives. This task has been used to discover a variety of themes and concerns that children face (Bates, 1991; Howard, 1994). Within a narrative framework, it is anticipated that the problem story will allow the reader to uncover the child’s world view (their cultural milieu) (Polkinghorne, 1988).

Task Administration

The instructions were provided to participants both verbally and in writing. Participants were instructed: “I would like you to tell me a story about someone, around your own age, who has a problem they want to solve. It can be real, made up, or sort of

half and half.” A researcher was available at all times to answer questions or provide direction.

Scoring Procedures

Two types of scoring were undertaken: social adaptiveness and complexity. Briefly, scoring for social adaptiveness involved the Problem/Response/Outcome (PRO) analysis. Scoring for complexity involved a developmental T-unit analysis. This scoring method was selected because it had been successfully utilized in past research (Howard, 1994; Malcolm, 2000; Misfeldt, 1999; McKeough, 19992). Each analysis is described in more detail in what follows.

Social Adaptiveness. This analysis considered the response to a problem and the resulting outcome presented in the stories (Misfeldt, 1999; Howard, 1994; McKeough et al., 1994), and thus identified qualitative differences in conflict resolution. The response to a problem could be either prosocial or antisocial. Prosocial responses to problem solving included: self-initiated action (with no aggression); seeking or being given help by another; and fortuitous events intervene (McKeough et al., 1994). Antisocial responses to problem solving included: self-initiated action with aggression; being refused help by another; and avoidance of the problem. The outcome of the story could be rated as positive, negative, or undetermined. In order to categorize the overall story world created by participants, the dimensions of response and outcome were linked. This interaction led to a rating of “adaptive,” “maladaptive,” or “indeterminate,” based upon the relationship between the (a) response to the problem and (b) the eventual outcome articulated in the story. The scoring criteria for the PRO analysis is presented in Table 3.2.

Table 3.2

Scoring Criteria for the PRO Analysis

OUTCOME			
Response to a Problem	Positive	Negative	Unstated
Seeks/Receives Help	Adaptive	Maladaptive	Indeterminate
Initiates a constructive/socially acceptable plan	Adaptive	Maladaptive	Indeterminate
Fortuitous Events	Adaptive	Maladaptive	Indeterminate
Actively avoids/ignores problem	Maladaptive	Adaptive	Indeterminate
Acts aggressively/antisocially	Maladaptive	Adaptive	Indeterminate

Complexity Scoring. The stories were broken down into T-units, or terminable units (Hunt, 1977). T-units are the shortest grammatically complete sentences that a written passage can be broken down into without creating fragments. The T-units were categorized as “action/descriptive,” “intentional,” or “interpretive.” The scoring scheme was developed by McKeough, Templeton, & Marini (1996) and enables the developmental analysis of the stories at the level of the sentence. The scoring criteria for T-unit analysis is presented in Table 3.3.

Conflict Story

The second narrative task that was analyzed in the current study was the Conflict story. Participants were instructed to write about a school related event that they had been involved in, been witness to, or had heard about. Whereas the problem story could have been either true or fictional, the conflict story was a true re-creation of an actual conflict. The story was followed by six questions designed to provide insight into how participants interpreted the conflict situation. Specifically, the questions were asked in order to determine the participants’ feelings about the conflict, their assignment of blame in the conflict, and their ability to generate alternative solutions to the conflict.

The questions were as follows:

1. To make sure we understand the situation you wrote about, please underline the part of your story that tells about the main or most important problem.
2. When you saw the problem situation happen or when you heard about it, what did you think or feel? Try to think back to the situation and tell as much as possible about your different thoughts and feelings then.
3. Do you think any person was to blame for this situation? YES NO
4. If YES, who?
5. Was anyone else to blame? YES NO
6. If yes, who?

Task Administration

This task was administered by the researcher who remained accessible to answer questions. Participants were given 30 minutes to complete this narrative task and were provided with the following instructions both verbally and in writing:

I want you to write a story about a time when you or one of your classmates were involved in a problem situation at school that needed to be solved. Maybe you were there when it happened, so that you actually saw it happening, or maybe you just heard about it a bit later. The situation might have happened in your classroom, somewhere else in the school, or around the school. You can decide how long your story will be, but please make sure you describe the situation in enough detail that a stranger, who might be reading your story, will be able to understand what happened. After you finish writing your story, I have a few short questions for you to answer.

Table 3.3

Scoring Criteria for the T-Unit Analysis

-
- (1) Action or descriptive T-units: Action T-units describe physical movement (e.g., “Sue got up and got ready to go to school.”), whereas descriptive T-units give information concerning settings or physical states and events transcribed by a copula verb (e.g., July 16th was the day” and “she was deaf”).
- (2) Intentional T-units refer to first-order mental states. They can be expressed in four ways:
- (a) Thoughts, needs, wishes, and plans that motivate action (e.g., “She then decided to do just that.”).
 - (b) A social judgment that is context specific (e.g., “Your (you’re) doing all right for (as) a baseball player.”), describes a general social trait (e.g., “a nice boy”), or social relation (“friend”, “enemy”, not a title such as “teacher”).
 - (c) Affectively-laden verbs that describe emotion (e.g. “She was really scared”).
 - (d) Actions or descriptions that suggest underlying mental states (e.g., “Leave me alone!” she screamed” and “her cold shaky hand.”).
 - (e) An explanation of the cause and effect of psychological states or social judgment (e.g., “Every time I look at a guy I feel so guilty. I always think he’s (i.e., a jailed boyfriend/pimp) going to see me.”).
- (3) Interpretive T-units refer to second-order mental states that underlie first-order mental states. They can be expressed in several ways:
- (a) Justification of a mental state or social judgment [e.g., “Joey loved pets (first-order mental state) because he knew they wouldn’t make fun of him” (second-

order mental state).] The initial clause, “Joey loved pets” would have been considered an intentional T-unit if it had stood alone. However, with the addition of the underlying motivation “because he knew they wouldn’t make fun of him” the entire sentence is categorized as one interpretive T-unit. Both T-units occur within the same character, making the two units interpretive.

- (b) Reflection on (or taking a meta position to) the psychological cause and effect of (i) affects (e.g., “On my way home I was really upset. Maybe I was really stupid coming here. I tried to stop a problem and all I did was create another one.”), (ii) cognitions (e.g., “Joey hadn’t realized that if he had told them earlier it would have been much easier to face the facts”, and (iii) social situations (e.g., “But remember there are always those few kids that are left out of everything, are loners and don’t really care what they do. In other words, they’re different than everyone else.”).
- (c) Statements denoting self understanding, self knowledge, self questioning, social understanding (e.g., “I was known to suck up to people. And now I know it’s true. Whenever someone was mad at me I would always be the first to apologize. Even if it wasn’t my fault.”).
- (d) Enduring psychological/social state or trait, or understanding of long-term social consequences (e.g., “Teasing and nagging would always ring in his ears during the night.”).
- (e) Psychological/social similes and metaphors (e.g., “So now it’s like the whole world has closed up around me.” and “The wall had started to build. Not a wall of concrete or stone but a mental wall that no one, except for Rachel herself, could move or tear down.”).

- (f) Flashback and foreshadowing (e.g., “I thought about the first time I met her in grade one.” and “That was one promise I wished I had kept.”).
 - (g) Paradoxical consequences or juxtaposed alternatives (e.g., “And poor Laurie. An innocent girl who got what she did not deserve. Things like this sometimes happen. Too often though.”).
 - (h) Perspective-taking (e.g. ““I am sixteen and mature enough to handle the responsibility of a vacation alone’. No that would be no good, it sounded to superior.”).
-

Scoring Procedures

The conflict stories were analyzed using the same procedures as for the Problem Stories: social adaptiveness and complexity level. As well, the appropriateness of participants' response to the conflict (question 2) and their assignment of blame (questions 3-6) was rated. Each scoring procedure is described in more detail in what follows.

Social Adaptiveness Scoring. As with the Problem Story, the Conflict stories were also scored for the social using PRO scoring scheme.

Complexity Scoring. Similar to the problem story analysis, a developmental T-unit analysis of the conflict stories was performed. The participants' response to question #2 was also scored for complexity using the developmental t-unit analysis. A global score was assigned to the highest t-unit level in question #2, reflecting either "action/descriptive," "intentional," or "interpretive."

Conflict/Feeling Congruency Scoring of Question #2. Following Misfeldt (1999), participants' answer to question #2 was analyzed as appropriately or inappropriately congruent. Question #2 stated, "When you saw the problem situation happen or when you heard about it, what did you think and feel? Try to think back to the situation and tell as much as possible about your different thoughts and feelings then." The participant's response was scored for whether or not he/she identified feelings that were congruent with the conflict situation. Responses were rated as either "adaptive" or "maladaptive" according to whether or not the description of the participants' thoughts and feelings were congruent with the conflict situation described. The scoring criteria for the congruency of feelings to the conflict situation are presented in Table 3.4.

Table 3.4

Scoring Criteria for Feeling Congruency of the Conflict Situation

Thoughts and Feelings	Rating
Feeling bad or sorry about the situation	Adaptive
Expressing disapproval of the people involved in the situation	Adaptive
Feeling happy that they acted as they did	Adaptive
Repeating the story action or what they did (e.g., "I kicked him")	Maladaptive
Thinking about an aggressive act they had wanted to carry out	Maladaptive

Assignment of Blame Scoring. Based on the finding that aggressive children possess a hostile attribution bias (Crick & Dodge, 1994; Schwartz, Dodge, Pettit, & Bates, 1997), it was decided to explore if the aggressive group would assign blame inappropriately significantly more often than the non-aggressive and 'other' groups. Following Misfeldt (1999) blame was considered appropriately assigned if the assignation was congruent with the situation described in the story. Otherwise, blame was scored as "inappropriate".

Summary

Participants completed the two narrative tasks during regular class times. The Problem Story task required participants to write a true or fictional story about someone their own age who had a problem. The Conflict Story required participants to write a true story about a conflict that had occurred at school, then to answer six questions.

The current study was designed to examine the social adaptiveness and complexity in the stories told by behaviorally aggressive and non-aggressive children, and well as children who did not meet the classification criteria for these groups (i.e., 'other' group). The two tasks were scored in the same manner, with the Conflict Story having additional analyses. Both the Problem and Conflict stories were scored for the Problem/Response/Outcome (PRO) scoring of the adaptiveness of the story world. Both stories, as well as the Conflict Story question #2, were also scored for complexity using

developmental T-unit analysis. The Conflict stories were further analyzed by addressing the conflict/feeling congruency and the assignment of blame. These analyses were predicated on the assumption that identifying a characteristic story world across tasks would provide insight into the functioning of the students' personal worlds, allowing us to understand how they interpret social events and the types of conflict resolution they see as effective. By comparing the teachers' ratings and the investigator's ratings of stories, it is possible to determine if a relation exists between the two methods of identification.

Plan of Statistical Analysis

The chi-square and MANOVA analyses were conducted. Analyses were declared slightly significant at the .06 level or significant at the .05 or .01 level. The results of the statistical analyses are presented in the Results chapter.

Chapter IV

RESULTS

In this chapter, the results will be discussed in terms of the three questions that served to frame the current study. The first question addressed the consistency in children's narrative performance across the conflict story and the problem story. The second question addressed whether the level of social adaptiveness was consistent with group assignment based on teacher's ratings. The third and final question addressed the developmental complexity of the stories across the conflict story and problem story as well as the feeling congruency question of the conflict story.

Question #1

The first set of questions addressed in the study was as follows: "Can we use narratives to identify aggression in children? Is there consistency in children's performance across narrative tasks? Are there differences in group, grade, and gender?" Following Sarbin (1986) and Bruner (1990), this question was predicated on the assertion that children's inner world are reflected in their narratives and interpretations. Consistency in narrative performance across tasks was addressed through chi-square analyses of conflict story Problem/Response/Outcome (PRO) analysis and problem story PRO analysis, across group, grade, and gender. Chi-square analyses were also conducted on the feeling congruency and blame responses of the conflict story.

PRO Scoring Analysis

Recall from chapter III that PRO analysis involved rating narratives as 1 (adaptive), 2 (maladaptive), or 3 (indeterminate). In what follows, stories are presented to illustrate each of these categories. While the PRO analysis was undertaken for both conflict and

problem story, only the conflict story will be illustrated. The stories are written verbatim, although spelling has been corrected for ease of reading.

An example of a grade four female conflict story rated as adaptive is as follows:

Last year in grade 3 my friend Christy was wanted to play with these three girls, but when she played with them they were never nice to her. They teased her called her names and made her feel bad. Finally she couldn't take it any more so she told the teacher. After being talked to the girls realized they were being mean, and they apologized. Now today they are best friends.

Based on the PRO scoring criteria (Table 3.2), the above story was rated as adaptive because the girl's response to the problem (a girl being teased) was to seek and receive help ("she told the teacher"). The outcome of this response was positive ("they apologized" and "now today they are friends").

An example of a grade seven male conflict story rated as maladaptive is as follows:

Right now I have a little club and some other losers in our class have a club and they keep making fun of our group and squirting us with juice so pretty soon I am going to beat them up them ALL up because I feel the school isn't handling in properly.

This story was rated as maladaptive. This student's response to the problem (other people making fun of his club) was to act aggressively ("I am going to beat them ALL up"). The outcome of the response was positive (and thus maladaptive) because he viewed his actions as an effective means to solve the problem.

An example of a grade four male conflict story rated as indeterminate is as follows:

We could not make fair soccer teams. Everyone was arguing with the teams. We needed to make the teams.

This story was rated as indeterminate because the response to the problem (making teams) was unstated. Consequently, the outcome was indeterminate.

To address the question of performance consistency across PRO analyses, chi-squares were conducted for both conflict story and problem story across group, grade, and gender. There were no significant results found through this analysis. Table 4.1 illustrates the percentage of performance consistency in the PRO analysis across group, grade, and gender.

Table 4.1

Percentage of Performance Consistency in the PRO Analysis in the Conflict Story and Problem Story Across Group, Grade, and Gender.

	Adaptive	Maladaptive	Indeterminate
Overall	59.2%	23.5%	20.8%
Group 1 (Non-aggressive)	58.7%	18.2%	0%
Group 2 (Aggressive)	50.0%	50.0%	0%
Group 3 (Other)	63.0%	28.6%	27.8%
Grade 4	58.8%	11.1%	18.8%
Grade 7	59.7%	28.0%	25.0%
Females	65.4%	41.7%	23.1%
Males	52.6%	13.6%	18.2%

An interrater reliability check was conducted on the PRO scoring of the Problem story. The two raters agreed on 0.80 of the ratings. The Conflict story PRO analysis was conducted by two raters. Any rating disagreements were resolved through discussion.

Recall from chapter III that the feeling congruency question was as follows: “When you saw the problem situation happen or when you heard about it, what did you think and feel? Try to think back to the situation and tell as much as possible about your different thoughts and feelings then.” In addition, recall from chapter III that the assignment of blame questions in the conflict story were as follows:

Do you think any person was to blame for this situation? YES NO

If YES, who?

Was anyone else to blame?

If YES, who?

In addition, the conflict story was also analyzed for feeling responses that were congruent with the situation and for assigning appropriate blame. Recall from chapter III that these analyses were scored as 1=appropriate or 2=inappropriate. In what follows, examples of stories and the corresponding congruency and blame responses are presented.

An example of a grade 7 male conflict story with inappropriate congruency and inappropriate blame is as follows:

About 3 week ago there was fight between a grade 7 our friend and a grade 9. They went across the street to fight, there was at least 80 people watching. We had one person that was a watch guard. No one really won but the grade 7 got more punches in. They never got caught so no one got in trouble.

This story was rated as maladaptive according to the PRO scoring criteria, given that they acted aggressively but had a (perceived) positive outcome.

This student responded to the congruency question, “When you saw the problem situation happen or when you heard about it, what did you think and feel? Try to think back to the situation and tell as much as possible about your different thoughts and feelings then.” as follows:

Happiness because the grade 9 started it and got what was coming.

This congruency response was rated as inappropriate feeling congruency because he was feeling happy that the students acted as aggressively they did.

This student responded to the blame questions as follows:

Yes, the grade 9er. No one else.

This blame response was rated as inappropriate because he only assigned to the grade 9 student, despite the involvement of the grade 7 students and others.

An example of a grade 4 female conflict story with appropriate congruency and appropriate blame is as follows:

One of my classmates and me had a fight over a ball. We tried to get the ball from each other and hurt each other with it. Then she threw the ball in my face by purpose. We both went to the teacher and told on each other then the teacher made us say sorry to each other we said sorry then we became friends again.

Following the PRO scoring criteria, this story was rated as adaptive. The student's response (seeking help from a teacher) to her problem (fighting over a ball with a friend) resulted in a positive outcome.

This student's response to the feeling congruency question was as follows:

I felt mad at her.

This feeling congruency response was rated as adaptive, following the scoring criteria. She expressed anger at her friend for fighting with her.

This student's responses to the blame questions were as follows:

Yes, Maria. Yes, me.

This assignment of blame was rated as adaptive, as the student assigned blame not only to her friend with whom she was fighting, but also to her own actions. That is, she acknowledged her own contribution to the dispute, as well as that of her peer.

Chi-square analyses were conducted on the feeling congruency and blame questions. The results did not reveal significantly consistent performance.

An interrater reliability check was conducted on the assignment of blame and feeling congruency. The two raters agreed on 0.86 of the assignment of blame ratings, and on 0.86 of the feeling congruency ratings.

Question #2

The second set of questions explored in the current study was as follows: “Is the level of social adaptiveness consistent with group assignment based on teacher’s ratings? Are there differences in group, grade, and gender?” This question was motivated by the increasing level of concern in society that children who write aggressive stories are those who will potentially engage in aggressive or violent actions. Recall from chapter III that teachers used the Caprara and Pastorelli Checklist to rate each student via the Prosocial and Aggressive scales. Students were subsequently categorized into groups based on these ratings, with 1=Non-aggressive, 2=Aggressive, 3=Other. Recall that the conflict story social adaptiveness (PRO) was rated 1=Adaptive, 2=Maladaptive, 3=Indeterminate.

To address the question of consistency between social adaptiveness and teacher’s ratings, a series of chi-square analyses were conducted as follows. First, a chi-square analysis was conducted on the conflict story by group. Table 4.2 presents the percentage of participants whose conflict stories were rated as adaptive, maladaptive, or indeterminate. Results of the chi-square analysis were slightly significant at the 0.06 level. Table 4.2 shows that group 2 (Aggressive) had a greater percentage of maladaptive stories than group 1 or group 3 in conflict story.

Table 4.2

Percentage of Story Ratings on Conflict Story PRO Across Groups

	Adaptive	Maladaptive	Indeterminate
Group 1 (Non-Aggressive)	60.7%	24.6%	14.8%
Group 2 (Aggressive)	55.9%	44.1%	0%
Group 3 (Other)	62.8%	24.8%	12.4%

Next, a chi-square analysis was conducted across the problem story PRO and group. Table 4.3 presents the percentage of participants whose problem stories were rated as adaptive, maladaptive, or indeterminate. Results of this chi-square analysis revealed no significant differences across teachers' group ratings in the PRO analysis of the problem stories.

Table 4.3

Percentage of Story Ratings on Problem Story PRO Across Groups

	Adaptive	Maladaptive	Indeterminate
Group 1 (Non-Aggressive)	75.8%	17.7%	6.5%
Group 2 (Aggressive)	85.7%	8.6%	5.7%
Group 3 (Other)	68.8%	16.8%	14.4%

In addition, a chi-square analysis was conducted on the conflict story assignment of blame across group. The results of this analysis were not significant, revealing no difference in the appropriateness of blame assignment across teachers' ratings of group membership. Table 4.4 presents the percentage of appropriate assignment of blame across groups in the conflict story.

Table 4.4

Percentage of Appropriate Assignment of Blame Across Groups in Conflict Story

	Appropriate Assignment of Blame
Group 1 (Non-aggressive)	75.4%
Group 2 (Aggressive)	55.9%
Group 3 (Other)	71.7%

Next, a chi-square analysis was conducted on the conflict story feeling congruency across group. Table 4.5 presents the percentage of appropriate feeling congruency across groups in the conflict story. The results of this analysis showed a significant difference across groups, with 100% of group 1 (Non-Aggressive) having appropriate feeling congruency.

Table 4.5

Percentage of Appropriate Feeling Congruency Across Groups in Conflict Story

	Appropriate	Inappropriate
Group 1 (Non-Aggressive)	100%	0%
Group 2 (Aggressive)	94.1%	5.9%
Group 3 (Other)	88.3%	11.7%

Question #3

The third set of questions that served to frame the current study was as follows:

“Are there differences in the complexity of the stories across group, grade, and gender?”

The investigation into the differences in story complexity was motivated by the prior research of McKeough, Yates, and Marini (1994) which investigated the cognitive complexity of narratives of behaviorally disturbed boys. McKeough et al.’s (1994) results indicated that clinically diagnosed behaviorally disturbed boys demonstrated significant delays in their understanding of intentionality, compared to their normal peers. Recall from chapter III that the complexity analysis involved breaking the stories into T-units (Hunt, 1977) and then categorizing them as “action/descriptive,” “intentional,” or “interpretive.” Scores were assigned by tabulating the number of each type of T-unit and computing the percentage of each type of T-unit. This procedure was performed on the conflict story, the problem story, and the second question of the conflict story. Comparisons of the

proportion of the story made up by each type of T-unit could then be made across group, grade, and gender.

To illustrate the T-unit analysis, the following conflict stories have been broken into T-units, and categorized as action, intentional, and interpretive. Action/descriptive T-units are in plain text, intentional T-units are in italics, and interpretive T-units are underlined. The specific type of intentional or interpretive T-unit is included in brackets. The non-aggressive and aggressive groups' conflict stories were previously T-unit analyzed by Misfeldt (1999), and are included for illustrative purposes.

Grade 4 Female (Aggressive)

/ In the winter, Nicole, Michelle and Mandy were walking around telling little kids what to do like big shots, (action implying a mental state) / and I told them not to / and Mandy called me a name (action implying mental state) / so I walked away. / At the end of the day we apologized (action implying mental state) / and we were friends again (social judgment). /

2. When you saw the problem situation happen or when you heard about it, what did you think and feel? Try to think back to the situation and tell as much as possible about your different thoughts and feelings then.

/ I felt like going up to them and kicking their ass, but I didn't. (affective mental state) /

3. Do you think any person was to blame for this situation?

/ Yes, Mandy /

Grade 7 Female (Non-Aggressive)

/ One time at school, my friend needed money really bad. (social judgment) / At

the end of the day, my friend noticed the \$5.00 bill on our teacher's desk.(cognition)
/ My friend took the money and left. / The next day our teacher noticed that her
money was missing (cognition). / My friend didn't confess.(action implying mental
state) / But eventually she was caught stealing from the teacher again. (social
judgment) / [My friend got in a big mess with her teacher and her friends. No one
could trust her. (justification)]³/

2. When you saw the problem situation happen or when you heard about it, what did you think and feel? Try to think back to the situation and tell as much as possible about your different thoughts and feelings then.

[/ I knew that taking the money was wrong / but I didn't tell her to stop because she would get mad at me. (juxtaposition)]⁴/

3. Do you think any person was to blame for this situation?

/ Yes, my friend.(social judgment)/

To address the differences in complexity in the conflict story and problem story, a series of two-way MANOVA was conducted. Although 3-way MANOVA would have been preferable, the total subject number was too small for sufficient power. To address the differences in complexity in the second question of the conflict story (feeling congruency), chi-square analyses were conducted.

Group Differences in Complexity

First, a two-way MANOVA was conducted on the percentage of action T-units across tasks (conflict story and problem story) and group. The proportional means and standard deviations are presented in Table 4.6.

³ Here two intentional T-units are combined to form one interpretive T-unit.

⁴ Here two intentional T-units are combined to form one interpretive T-unit.

Table 4.6

Means and Standard Deviations of Action T-units Across Tasks and Group

	Group 1 (Non-Aggressive)	Group 2 (Aggressive)	Group 3 (Other)
Conflict Story	.438 (.213)	.443 (.212)	.441 (.196)
Problem Story	.293 (.240)	.295 (.230)	.164 (.189)

There was a significant interaction effect ($F(2,213)=5.81$; $p=.004$). Follow-up testing of Simple Effect test was conducted to clarify this interaction. The results of the Simple Effect test indicate that the group effect changed for tasks, with no difference across groups in the problem story ($F(1,213)=.01$; $p=.993$), but a significant difference across groups in the conflict story ($F(1,213)=9.94$; $p<.001$). On the average, there was a significant group effect ($F(2,213)=4.62$; $p=.011$) and a significant task effect ($F(1,213)=77.63$; $p<.001$).

Table 4.6 indicates that group 3 (Other) produced proportionally fewer action T-units on the conflict story than group 1 (Non-aggressive) or group 2 (Aggressive).

Next, a MANOVA was conducted on the percentage of intentional T-units across tasks and groups. The results of this analysis showed that while the group effect was not significant, the task effect was significant ($F(1,208)=71.91$; $p<.001$). As shown in Table 4.7, the conflict story had a higher proportion of intentional T-units than the problem story.

Table 4.7

Means and Standard Deviations of Intentional T-units Across Tasks and Group

	Group 1 (Non-Aggressive)	Group 2 (Aggressive)	Group 3 (Other)
Conflict Story	.689 (.216)	.692 (.231)	.746 (.215)
Problem Story	.532 (.200)	.512 (.211)	.506 (.174)

A MANOVA was also conducted on the percentage of interpretive T-units across tasks and groups. The means and standard deviations are presented in Table 4.8.

Table 4.8

Means and Standard Deviations of Interpretive T-units Across Tasks and Group

	Group 1 (Non-Aggressive)	Group 2(Aggressive)	Group 3 (Other)
Conflict Story	.051 (.150)	.054 (.180)	.089 (.140)
Problem Story	.036 (.060)	.035 (.045)	.053 (.065)

The results indicated that there was a slightly significant group effect ($F(2,213)=2.76$; $p=.066$). Table 4.8 shows that group 3 (Other) had proportionally more interpretive T-units than groups 1 or 2. There was also a significant task effect ($F(1,213)=3.97$; $p=.048$). Again, Table 4.8 indicates that there were proportionally more interpretive T-units in the conflict story than in the problem story (19.4% compared to 12.4%). The interaction effect was not significant.

Grade Differences in Complexity

Similarly, MANOVAs were conducted on the level of T-units across grade. The means and standard deviations are presented for the conflict story in Table 4.9, and for the problem story in Table 4.10.

Table 4.9

Means and Standard Deviations of T-Units Across Grade in Conflict Story

	Action	Intentional	Interpretive
Grade 4	.236 (.217)	.744 (.212)	.027 (.062)
Grade 7	.208 (.223)	.702 (.224)	.115 (.190)

Table 4.10

Means and Standard Deviations of T-Units Across Grade in Problem Story

	Action	Intentional	Interpretive
Grade 4	.489 (.222)	.489 (.214)	.023 (.047)
Grade 7	.395 (.172)	.538 (.155)	.066 (.065)

The first of these analyses addressed the proportion of action T-units across tasks (conflict story and problem story) and grade. There was a significant grade effect ($F(1,214)=8.55$; $p=.004$), with grade 4s having proportionally more action T-units than grade 7's. There was also a significant task effect ($F(1,214)=129.59$; $p<.001$), with a higher proportion of action T-units in the problem story than in the conflict story. The interaction effect was not significant.

Next, a MANOVA was conducted on the proportion of intentional T-units across tasks and grade. There was a significant interaction effect ($F(1,209)=5.31$; $p=.022$). On the average, the grade effect was not significant ($F(1,209)=.03$, $p=0.864$), whereas the task effect was significant ($F(1,209)=113.67$; $p<.001$). Testing of Simple Effects was conducted to delineate this interaction, which indicated that there was a slightly significant difference between grades on the problem story ($F(1, 209)=3.62$, $p=.059$), as grade 4's had a higher proportion of intentional T-units than grade 7's in the problem story but not in the conflict story.

Next, a MANOVA was conducted on the interpretive T-units across tasks and grade. On average, the grade effect was significant ($F(1,214)=36.45$; $p<.001$), with the grade 7's had proportionally more interpretive T-units than grade 4's. On average, the task effect was also significant ($F(1,214)=6.73$; $p=.010$), with the conflict story having

proportionally more interpretive T-unit than the problem story. There was also a significant interaction effect between task and grade ($F(1,214)=4.83$; $p=.029$).

Subsequently, a Simple Effects analysis was performed. The results indicated that there was no significant difference across tasks for grade 4 ($F(1,214)=.08$, $p=.785$). However, there was a significant difference ($F(1, 214)= 11.92$, $p=.001$) for grade 7's between the conflict story and problem story, with proportionally more interpretive units in the conflict story.

Gender Differences in Complexity

A MANOVA was conducted on the percentage of action T-units across tasks and gender. Tables 4.11 and 4.12 present the means and standard deviations of T-units in the conflict story and problem story, respectively.

Table 4.11

Means and Standard Deviations of T-Units Across Gender in Conflict Story

	Action	Intentional	Interpretive
Males	.233 (.223)	.708 (.229)	.071 (.168)
Females	.209 (.217)	.737 (.206)	.075 (.128)

Table 4.12

Means and Standard Deviations of T-Units Across Gender in Problem Story

	Action	Intentional	Interpretive
Males	.477 (.205)	.485 (.197)	.035 (.050)
Females	.402 (.194)	.545 (.171)	.057 (.069)

Results indicated a significant gender effect ($F(1,214)=5.52$; $p=.020$), with boys having a higher proportion of action T-units than girls. There was also a significant task effect

($F(1,214)=126.70$; $p<.001$), with the problem story having a higher percentage of action T-units than conflict story.

Next, a MANOVA was conducted on the intentional T-units across tasks and gender. Again, there was a significant gender effect ($F(1,209)=5.23$; $p=.023$), with girls having a higher proportion of intentional T-units than boys. The task effect was also significant ($F(1,209)=109.44$; $p<.001$), with the conflict story having a higher proportion of intentional T-units than the problem story.

A final MANOVA was conducted to examine the interpretive T-units across tasks and gender. The gender effect was not significant. The task effect was significant ($F(1,214)=6.90$; $p=.009$), with the conflict story having a higher percentage of interpretive T-units than the problem story.

An interrater reliability check was conducted on the T-unit analysis of the Conflict story. The two raters agreed on 0.85 of the T-units assigned. The T-units for the Problem story were rated by two raters, and any ratings differences were resolved through discussion.

Conflict Story Feeling Congruency Differences and Complexity

A series of chi-square analyses were conducted on the feeling congruency question following the conflict story. Recall from chapter III that this was as follows: “When you saw the problem situation happen or when you heard about it, what did you think and feel? Try to think back to the situation and tell as much as possible about your different thoughts and feelings then.”

First, a chi-square analysis was undertaken to examine the level of T-unit generated in response to this question. The group effect was not significant. Table 4.13 presents the percentage of T-units across group.

Table 4.13

Percentage of T-units Across Group in the Feeling Congruency Question in Conflict Story

	Action	Intentional	Interpretive
Group 1 (Non-Aggressive)	0%	63.3%	36.7%
Group 2 (Aggressive)	2.9%	76.5%	20.6%
Group 3 (Other)	0.8%	63.1%	36.1%

Next, a chi-square analysis was conducted to examine the level of T-units across grade. The grade effect was significant, with the grade 4's having a higher percentage of intentional T-units than grade 7's, and the grade 7's having a higher percentage of interpretive T-units than grade 4's. Table 4.14 presents the percentage of T-units across grade.

Table 4.14

Percentage of T-units Across Grade in Feeling Congruency Question in Conflict Story

	Action	Intentional	Interpretive
Grade 4	1.9%	78.1%	20.0%
Grade 7	0%	53.2%	46.8%

A final chi-square analysis was conducted to examine the level of T-units across gender. There was a significant gender effect, with males having a higher percentage of intentional T-units, and females having a higher percentage of interpretive T-units. Table 4.15 presents the percentage of T-units across gender.

Table 4.15

Percentage of T-units Across Gender in Feeling Congruency Question in Conflict Story

	Action	Intentional	Interpretive
Males	1.8%	71.2%	27.0%
Females	0%	59.0%	41.0%

Summary

The statistical analysis results for the first question that framed the current study, “Can we use narratives to identify aggression in children? Is there consistency in children’s performance across narrative tasks? Are there differences in grade, group, and gender?” revealed no significant difference in the PRO analysis across tasks. Nor were there significant differences in participant’s assignment of blame and feeling congruency.

The second question that framed the current study was “Is the level of social adaptiveness consistent with group assignment based on teacher’s ratings? Are there differences in group, grade, and gender?” The statistical analyses indicated that there was a slightly significant difference between group across tasks, with group 2 (Aggressive) writing more maladaptive stories than groups 1 or 3. There was no significant difference across group in the assignment of blame. There was a significant difference across groups in the congruency of feelings, as 100% of participants in group 1 (Non-Aggressive) had appropriate congruency of feelings.

The third question that framed this study was “Are there differences in the complexity of the stories across group, grade, and gender?” This question was addressed in terms of the conflict story, problem story, and the second question of the conflict story (feeling congruency). The results indicated that group 3 (Other) had a smaller proportion of action T-units and a larger proportion of interpretive T-units. The grade four students had a larger proportion of action T-units and a larger proportion of intentional T-units on the problem story. However, the grade seven students had a larger proportion of interpretive T-units on the conflict story. Males had a larger proportion of action T-units than females, whereas females had a larger proportion of intentional T-units than males. The problem story had a larger proportion of action T-units than the conflict story, whereas

the conflict story had a larger proportion of intentional and interpretive T-units than the problem story. The implications of these findings will be addressed in the Discussion chapter.

Chapter V

DISCUSSION

Two narrative tasks, the problem story and the conflict story, were analyzed in this exploratory study, comparing non-aggressive, aggressive and other groups, grade 4's and 7's, and males with females across narrative tasks. The research questions exploring group, grade, and gender differences in narrative content and developmental complexity were based on the reviewed literature on aggression as well as the development of narrative thought.

In this chapter, the research findings are discussed by beginning with the social adaptiveness of children's stories and the teacher identifications of group membership. Discussion of the developmental complexity of the narratives follows. Finally, the limitations of the study are presented, as well as the practical implications and directions for future research.

Social Adaptiveness in Stories and Teacher's Group Membership Identifications

The first set of questions addressing the issue of social adaptiveness in stories was as follows: "Can we use stories to identify aggression in children? Is there consistency in children's performance across narrative tasks? Are there differences in group, grade, and gender?" This question was addressed by the PRO analysis, as well as the consistency between the assignment of blame and the congruency of feelings.

PRO Analysis

Recall from Chapter III that the PRO analysis was completed on both the conflict story and the problem story tasks, across group, grade, and gender. The aim was to determine if there was consistency in narrative performance (e.g., adaptive, maladaptive, or indeterminate) across tasks (conflict story and problem story). The results of the chi-square

analyses revealed no significant results. This suggests that aggressive children were as likely to be inconsistent in their narrative performance as non-aggressive or other children. Furthermore, as will be more extensively discussed in the practical implications, this suggests that an aggressive narrative performance alone should not be considered to be reflective of an aggressive child.

To date, little empirical research has focused on the consistency of narrative content across narrative tasks. This finding may be inconsistent with prior theoretical research. For example, this finding does not fully support Bruner's (1986, 1990) hypothesis that a child's inner world view and understanding of his/her social world is reflected through narrative. However, caution in the interpretation of this finding is recommended. As will be discussed later, the nature and context of the specific narrative task may be an important consideration in the narrative approach. For example, there may have been greater consistency in the children's narrative performance if both tasks were required to be non-fiction, rather than one non-fiction and one fictional narrative task, such as in the current study. In addition, it is possible that there may have been more consistency in narrative performance found if the participants were older. As will be discussed in later sections, children's thought moves from intentional to interpretive narrative reasoning with increasing age (McKeough, 1987, 1992a). As such, it is possible to hypothesize that the interpretive reasoning level may result in a higher degree of consistency in narrative performance across tasks, given that early adolescents begin to incorporate their interpretive knowledge in their story construction. Further research investigating the influence of the nature of the narrative task and the age of the participants on narrative content consistency is recommended.

Appropriateness and Consistency of Feeling Congruency and Blame Assignment

In order to gain a better understanding of how participants viewed and interpreted conflict situations, question #2 of the conflict story task asked participants to think back to the situation and remember what they were thinking and feeling at the time. The aim was to investigate if the feelings the participants reported were congruent with the conflict story they described. In addition, the third through sixth questions of the conflict story task asked participants if anyone was to blame for the situation, and asked for the identification of the person(s) to blame. Here, the aim was to determine if blame was assigned appropriately. An additional aim was to determine if participants performed consistently across the two questions. This analysis, conducted across group, grade, and gender, the results yielded no significant findings. This suggests that non-aggressive, aggressive, and other children were equally as likely to show inconsistency in their assignment of blame and congruency of feelings. Similarly, grade four students and grade seven students, as well as males and females, were equally as likely to show inconsistency in their assignment of blame and congruency of feelings.

Misfeldt (1999) found that aggressive children were significantly more likely to have feelings that were incongruent with the situation described. It is noteworthy that Misfeldt used only two groups: aggressive and non-aggressive. The current study also included the group of participants who did not meet either the aggressive criteria or prosocial criteria, the “other” group. It is possible that it was the inclusion of this group that washed out the effect.

Social Adaptiveness and Group Assignment

The second question that framed the current study was as follows: “Is children’s level of story adaptiveness consistent with teachers’ group assignment of ratings? Are

there differences in group, grade, and gender?" This question was motivated by the increased concern both in society and the educational community that children who write aggressive stories are those who will potentially commit aggressive or violent acts. If narrative reflects the inner world view as well as cognitive functioning of the youth, then the adaptiveness of the narratives should be consistent with the youth's group assignment based on teacher's ratings of behavior, if the teacher accurately rate the children.

The results of the chi-square analysis for the conflict story adaptiveness by group revealed slightly significant results at the .06 level. Group 2 (Aggressive) had more maladaptive stories than group 1 or group 3 in conflict story. This suggested that teacher's ratings of group membership were not entirely independent of the production of maladaptive stories.

Recall that in the conflict story task, participants were required to write about a real event, rather than a fictional event. This may have influenced the participants to write about a situation that held particular personal saliency. Moreover, recall that the aggressive children wrote more maladaptive conflict stories. It is possible that the different demands of the tasks influenced the resulting stories. For example, the conflict story, a non-fictional task, may have better reflected the aggressive children's maladaptive interpretation of their social world, whereas the problem story, a fictional task, did not allow such insight into their world view. Moreover, it is possible that the conflict story may have more accurately reflected the values, beliefs and goals of the author, which is consistent with Robinson & Hawpe's (1986) research. In addition, recall from chapter II that Dodge and Tomlin (1987) proposed that aggressive children engaged in social processing errors, leading them to interpret neutral social cues as hostile intent (Crick & Dodge, 1994). It is possible that this

social processing error was reflected in the aggressive children's maladaptive conflict stories.

The results of the chi-square analysis for the social adaptiveness of problem story by group revealed no significant results. This suggests that the non-aggressive, aggressive, and other groups were equally as likely to write problem stories reflecting an adaptive, maladaptive, or indeterminate story world. Similarly, the grade four students were just as likely as the grade seven students, and males as likely as females, to write problem stories reflecting one or another of these story worlds.

As previously discussed, the problem story task asked participants to write about a real or fictional event. Thus, it is possible that the fictional nature of the story influenced the adaptiveness of the story, and thus it was not found to be consistent with teacher's ratings of group membership. It also important to recall that difficulty was encountered with the translation of the Caprara and Pastorelli Behaviour Checklist for Children: Teacher's Version from Italian. It is possible that the narrative adaptiveness levels may have been found to be more consistent with a better validated teacher behavior rating scale or checklist. Future research in this area is recommended.

The results of the chi-square analysis of the conflict story assignment of blame across group showed no significant results. Based on previous work (Dodge and Tomlin, 1987; Crick & Dodge, 1994), it was anticipated that group 2 (Aggressive) would have a higher percentage of inappropriate assignments of blame. A possible explanation for the non-significant results is that the current sample was composed of a community population, integrated in a school setting. A clinically diagnosed sample may have demonstrated more inappropriate blame assignments. This finding is inconsistent with previous exploratory research. Misfeldt (1999) found significant differences between aggressive and non-

aggressive participants in their assignment of blame, as aggressives were more likely to assign blame inappropriately. Again, it is possible that the inclusion of the Other group may have affected the significance.

Feeling congruency across group was also analyzed. Based on previous work (Misfeldt, 1999), it was anticipated that group 1 (Non-aggressive) would have a higher percentage of appropriate feeling congruency than the group 2 (Aggressive) or group 3 (Other) groups. Consistent with expectations, the chi-square analysis of the conflict story feeling congruency across group revealed significant results. Specifically, 100% of group 1 (Non-aggressive) had appropriate feeling congruency. Casey (1993) suggested that aggressive children's representation of emotions in conflict situations is weak, and consequently, their empathic response may be compromised. This prior research may be generally supported by the current findings, as group 2 (Aggressive) did not have a significant level of appropriate feeling congruency.

Developmental Complexity Analyses

The third question that framed the current study was: "Are there differences in the complexity of the stories across group, grade, and gender?" Each factor is discussed in what follows. As well, task effects are presented.

Group Developmental Complexity Differences

Recall from Chapter IV that, on average, there was a significant group effect in action T-units in the conflict story. Group3 (Other) had proportionally fewer action T-units and proportionally more interpretive T-units than group 1 (Non-Aggressive) or group 2 (Aggressive). This finding supports prior research, with the aggressive children not writing as complex stories as the non-aggressive or the other children. For example, past research has shown that there are cognitive developmental differences between severely aggressive

and non-aggressive children. The “developmental lag theory”, proposed by Crick & Dodge (1994) suggested that maladjusted children are cognitively delayed compared to their non-aggressive peers. Furthermore, McKeough et al. (1994) found that boys with clinically diagnosed conduct disorder, oppositional defiant disorder, or both performed one structural level lower than non-aggressive boys on a narrative task. However, it is unclear why the non-aggressive (group 1) children did not perform at the same level as the other (group 3) children. Future research which includes these groups of participants is recommended.

The level of T-units in the second question of the conflict story (feeling congruency) across group was also investigated. There were no significant group effects.

Grade Developmental Differences

On average, the current study found that grade 4 students had a proportionally higher number of action T-units than the grade 7's, whereas the grade 7's had a higher proportion of interpretive T-units than the grade 4's. The grade four students also had a higher proportion of intentional T-units than the grade seven students. Furthermore, the analysis of the feeling congruency question of the conflict story (“Think back to the situation, what did you think and feel?”) also revealed that grade 4's had a higher proportion of intentional T-units than the grade 7's, and the grade 7's had a higher proportion of interpretive T-units than the grade 4's.

The current grade developmental findings support previous research. Bamberg and Damrad-Frye (1991), as well as Genereux (1997), and McConaughy, Fitzhenry-Coor, & Howell (1984), found developmental differences between the narratives of children and young adolescents. Specifically, there was a developmental movement from an emphasis on physical action and outcomes in childhood to an emphasis on internal social-psychological responses and motivations in early adolescence. Furthermore, Stein and

Glenn (1979) found a developmental increase in the number of recalled internal responses in children's narratives. That is, as children age, they appear to shift to recall more internal responses than when they were younger (and less able to recall internal responses).

Applebee (1978) also reported a developmental trend toward greater generalization and abstraction in narrative composition and interpretation.

Gender Developmental Differences

Generally, the current findings support previous research which showed that girls outperform boys in narrative complexity level. Specifically, the current study found that girls had a higher proportion of interpretive T-units on the feeling congruency question, whereas boys had a higher proportion of intentional T-units. Girls also had more complex stories on the conflict story and problem story tasks, having proportionally more intentional T-units whereas the boys had proportionally more action T-units.

Prior research has suggested that females generally outperform males in terms of writing competence (Applebee, Lander, Jenkins, Mullis, & Foertsch, 1990; Hyde & Linn, 1988). Genereux (1997) found that females' narratives included a greater percent of interpretive character descriptors than males'. Genereux related this finding to Rubin and Greene's (1992) finding that, compared to men, women include more egocentric expressions such as, "I think" and "I feel" in their narrative compositions. It is hypothesized that a significant gender difference may have been found if the current study had included older participants. That is, perhaps there would have been stronger interpretive T-unit gender effects if participants were adolescents, such as Genereux used. Further research using an adolescent-aged sample may help to clarify gender effects in narrative performance.

Task Effects

There were several significant task effect findings. Specifically, there was a significant task effect in regards to action T-units. There was a higher proportion of action T-units in the problem story than in the conflict story, whereas there was a higher proportion of intentional and interpretive T-units in the conflict story than in the problem story. As previously discussed, this finding may be due to the additional demand of the conflict story regarding accountability (assignment of blame and feeling congruency), and it consequently may have elicited more interpretive and insightful stories. Bruner (1987,1989) postulated that, through narrative, insight and understanding is gained into an individual's perception of an experience. It is possible that the demands of the conflict story task allowed the participants to better represent their true perceptions of the situation in an interpretive manner.

Limitations of the Current Study

The principal limitation of this exploratory study was related to sample size. Due to the relatively small number of participants in certain groups, it was not possible to conduct a three-way ANOVA to analyze the results. This analysis may have facilitated an explanation of the differences between group (aggressive, non-aggressive, and other), grade (4 and 7), and gender (female and male).

A second limitation related of the study sample was the use of volunteers (whose parents had consented to their participation), which may reflect a limited range of representation. Consequently, these results may not be assumed to be generalizable to the general population. Rather, they should only be considered to specifically reflect the findings of the participants in this study. Furthermore, this sample was composed of a community, not clinical, population. It is likely that more significant results may have been found if using a clinically identified population.

A third limitation was that the researcher was unable to control for intellectual ability or the personal history of the participants. Knowledge of whether any participants had a history of maltreatment would have enabled further differentiation of the groups. The researcher was also unable to control for participants' prior experiences with the tasks, or for the personal saliency of each task.

A fourth limitation was related to the CPBCC: Teacher's Version. Teachers appeared to have some difficulty answering the questions, resulting in the elimination of potential participants. One explanation for the teachers' difficulty may have been in the translation of the instrument. Several of the items that had to be deleted from the checklist asked the teacher to report on the participants' inner states (e.g. "the student *likes* to fight"). Future research using the CPBCC: Teacher's Version should include a more well-validated instrument along with it, to test its validity.

A fifth limitation of the current study is related to the narrative methodology. Although proponents of narrative methods suggest that findings should not be generalized, it is common practice within the field of psychology to generalize. Consequently, researchers who use this approach caution against generalizing from the findings (Reissman, 1993). Rather, these findings represent the current participants, and it is their views that are reflected in the findings.

Implications of the Current Study

Research Implications

The current findings suggest many different avenues for future research. One such avenue is the nature of the social adaptiveness and developmental complexity differences between the conflict story and problem story. As previously discussed, the conflict story task required students to write a non-fiction story about a personal conflict. It is possible

that the nature of this task, versus a potentially fictional narrative task, elicited more personally meaningful content. Thus, it is hypothesized that this task may better represent the child's inner world view and understanding of their social world. Future research investigating the adaptiveness and developmental complexity of fictional versus non-fictional narrative task may be valuable.

Narrative investigations using a wider age range may provide a better understanding into grade effects and developmental complexity differences. Moreover, further exploration of the shift from intentional to interpretive thought may serve as a rich source of information regarding emerging developmental complexity differences. In addition, future research investigating relational and overt aggression across gender is recommended. For example, Sutton-Smith (1975) found that 10-year-old boys and girls differed in conflict resolution strategies in their narratives. Specifically, boys emphasized domination, whereas girls emphasized alliances. The information ascertained from this research topic may help to design violence prevention programs that are better suited address both overt and relational aggression.

Another area for future research is the slightly significant group difference in teacher's ratings in the conflict story. Further research into the relationship between children's narratives and teacher's behavioral identifications of aggression in children may contribute to current knowledge of early identification methodology. As discussed previously, early identification and treatment of at-risk children is imperative if the developmental trajectory of aggression is to be altered (Baillargeon et al., 2000).

Practical Implications

The use of narrative methodology holds much promise for both assessment and intervention. Research has suggested that a narrative approach to assessment can reveal the

child's view of their social world and self-identity (Buchsbaum, Toth, Clyman, Cichetti, & Emde, 1992; McKeough et al., 1994; Salatas Waters, Rodrigues, & Ridgeway, 1998).

Research has also demonstrated the usefulness of the narrative approach in regards to providing information on attachment (Oppeinheim & Salatas Walters, 1995). Information gained through the narrative process can offer the practitioner insight into the child's world view. That is, the way in which the child views the social world, as well as their interpretation of this social context can provide valuable information to the practitioner. Furthermore, the child's assignment of blame and feeling congruency can provide glimpses into the child's cognitive functioning and biases. Armed with this information, the practitioner is well-prepared to design preventative and intervention efforts.

Another practical implication of the current study is the role of narrative in teachers' identification of aggressive children. The early identification of aggressive children has received much recent attention from educational stakeholders, in response to the occurrence of several violent acts in schools. The results of the current exploratory study suggest that there is not much consistency in the participants' narrative performance across tasks. In addition, the current results suggest that the aggressive participants' narratives are slightly predictive of teacher's identification them as aggressive. Thus, it is hypothesized that given that there is not much consistency in narrative performance, teachers should perhaps not necessarily be alarmed if a student writes an aggressive story. It is possible that the student's interpretation of the aggressive or maladaptive story may be adaptive or appropriate, suggesting that their world view may be properly adjusted. Furthermore, this study found differences between fictional and non-fictional narrative tasks. The practical implication of this finding is that teachers should be aware of the context and demands of the narrative composition, and should perhaps question the child about the story's origins if

concern is felt to be warranted. For example, the teacher may want to address whether the story was totally fictional or relating an actual event that had taken place in the child's life. Narrative tasks that ask the child to relay a true event may be more personally meaningful and salient to the child, and thus may reflect a more accurate description into the child's world view. In addition, a child's interpretation of his/her story world is a valuable way to gain a glimpse of their interpretation of their social world.

Summary

This study was part of a larger cross-cultural study. The current study examined the similarities and differences in the content adaptiveness and developmental complexity across the narrative performances of males and females in grades four and seven in a community population sample. Three questions framed the study. The first two questions, related to adaptiveness as well as teacher's identifications of group membership, were as follows: "Can we use narratives to identify aggression in children? Is there consistency in children's performance across narrative tasks? Are there differences in grade, group, and gender?" and "Is the level of story adaptiveness consistent with group assignment based on teacher's ratings? Are there differences in group, grade, and gender?" The third question that served to frame the current study, related to developmental complexity, was as follows: "Are there differences in the complexity of the stories?"

There were no group differences in story adaptiveness or consistency in performance across narrative tasks. Nor was there consistency between the assignment of blame and the congruency of feeling with the conflict situation.

There was a slightly significant finding suggesting that the conflict story adaptiveness was slightly related to the teacher's ratings of group membership. That is,

group 2 (Aggressive) had a slightly significant higher percentage of maladaptive conflict stories.

The results of the third question, indicated developmental complexity differences. Specifically, group 3 (Other) had a higher proportion of interpretive T-units and a lower proportion of action T-units than group 1 or 2. It is unclear why group 1 (Non-Aggressive)'s complexity level was not more similar to that of group 3 (Other). Consistent with anticipations, on average, the grade four students had a higher proportion of action T-units, whereas grade seven students had a higher proportion of interpretive T-units. Although there was not a significant gender effect in the interpretive T-units across tasks, the females had a higher proportion of intentional T-units, whereas the males had a higher proportion of action T-units. On the feeling congruency question, females had a higher proportion of interpretive T-units.

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APPENDIX A

Teacher Consent Form

I understand that students must have the permission of a parent or guardian in order to participate in the study conducted by Dr. McKeough entitled "Narrative Knowing: A Comparison of Behaviourally Aggressive and Non-aggressive Children". I understand that the results of this study will eventually be used in a comparison to an Italian sample.

I understand that I will rate each participant twice using the checklist provided by Dr. McKeough. I understand that these ratings will occur two weeks apart before the onset of the research activities. I understand that participants will work on 4 activities, three of which involve writing stories about "real life" events, and one of which is interpreting situations. I understand that participants will be seen in groups and that all activities will be written. I understand that all research activities will be conducted either by Dr. Anne McKeough or by a research assistant who is working under her supervision.

I understand that all activities will be carried out over the course of one month during the regular school periods at a time that is convenient to both students and me. I understand that the four activities will require a total of approximately 4 class periods of 55 minutes to complete. I understand that if I wish, I can use participants' written work as an alternative to some other similar class project which I have assigned. I understand that participation in the research will not produce risks greater than those experienced ordinarily in daily life.

I understand that participants may withdraw from the study at any time without penalty, if they so wish. I also understand that Dr. McKeough may end participants' involvement if it is thought to be in the best interests of the participants or the study as a whole.

I understand that every effort will be made to ensure that confidentiality is maintained. I understand that all data will be securely stored in Dr. McKeough's office at The University of Calgary and that data will be destroyed 3 years after completion of the analysis. I understand that the work students produce will be reported anonymously in academic presentations and reports. I understand that some of the students' work will be used by a graduate student for her Master's research. I understand that when written samples of student's work are presented, all identifying material will be removed.

I understand that I can contact Dr. McKeough at 220-5723 for further information about the study. I also understand that, if I have questions concerning the ethics review of this project or the way my students or I have been treated, I may contact Dr. Michael Pyryt (Chair, Faculty of Education Joint Ethics Review Committee) at 220-5626, or the office of the Vice President, Research at 220-3381.

I have been offered a copy of the research proposal and its details have been explained to my satisfaction.

I understand the involvement being requested of me in this study is completely voluntary and I agree to participate.

Date _____ Signature of Teacher _____

APPENDIX B

Parent Letter of Information

Dear Parent(s) or Guardian(s):

Over the last several years I have been studying the ways in which students' story comprehension and composition change throughout the grades. Now, I am attempting to determine if behaviour characteristics, such as aggressive behaviour, changes the way in which students view and perform these tasks. It is my intention to use this current study as a comparison to a similar group of students in Italy. I am requesting that your daughter/son take part in this work. If you agree to allow your child to participate, you will be asked to complete a short Parent Information Sheet. When doing research of this type, we need to know parents' occupation and level of education to ensure that our comparison groups have similar backgrounds.

Students who are selected will be rated by their teachers on a Behaviour Checklist to distinguish aggressive from non-aggressive students. Because our goal is to work with two narrowly defined groups within these two categories, not all students who are rated by their teachers will be required to complete the research tasks. The selected students will participate in 4 activities. All four of the activities are hand written (or typed, if the participant prefers). Three of the tasks are oriented towards writing a story about about "real life situations" that are familiar to young people. The final task involves interpreting every day situations. Participation in the activities will not produce risks greater than those experienced in daily life.

All activities will be carried out over the course of one month during the regular school periods at a time that is convenient to both students and teachers. All of the activities will be completed in a group setting with students working individually. Activities will require approximately 4 class periods of 55 minutes to complete. If teachers wish, they can use participants written work as an alternative to a similar class project which they assign, thus minimizing the student's time away from school work. All research activities will be conducted either by me or by a research assistant who is working under my supervision. One of these assistants will use part of the students' work for her Master's thesis.

Students may withdraw from the study at any time without penalty, if they so wish. The researcher may also end a student's involvement if it is thought to be in the best interests of the participants or the study as a whole.

Every effort will be made to ensure that confidentiality is maintained. Participants' names will be removed from all work and replaced with number identification. The master list will be stored under lock and key in my office at The University of Calgary. All records will be similarly stored. Data access will be available only to me and my research assistants. All data will be destroyed 3 years after completion of the analysis. Additionally, the work students produce will be reported anonymously in academic

presentations and reports. When written samples of students work are presented in research reports, all identifying material will be removed.

If you wish further information about this research project, please contact me at 220-5723. If you have questions concerning the ethics review of this project or the way you or your child have been treated, you may contact Dr. Michael Pyryt (Chair, Faculty of Education Joint Ethics Review Committee) at 220-5626, or the office of the Vice President, Research at 220-3381.

If you are willing to have your child participate in the study, please sign the attached Parental Consent form and return it to your child's classroom teacher. Please retain this letter for your records. Thank you for considering my request.

Sincerely,

Anne McKeough, Ph.D.

APPENDIX C

Parental Consent Form

I agree to permit my child _____ to take part in the study entitled "Narrative Knowing: A Comparison of Behaviorally Aggressive and Non-Aggressive Children" conducted by Dr. McKeough of The University of Calgary.

I understand that participation in this study requires my child's teacher to rate my child for both pro-social and problem behaviour. I understand that participation will require me to answer questions related to my job and education. I understand that this information will be used only to ensure that the two groups of participants (with and without problem behaviours) are similar in this regard. I understand that I will be asked questions concerning my ethnic background and first language, and that these questions are optional. I understand that the results of this study will be used as a comparison to an Italian sample.

I understand that my child will work on 4 activities, three of which involve writing stories about "real life" events, and one of which is interpreting situations. I understand that all of the tasks are written, that require my child to work independently.

I understand that all activities will be carried out over the course of one month during the regular school periods at a time that is convenient to both students and teachers, and that the 4 activities will require a total of approximately 4 class periods of 55 minutes to complete. I understand that all research activities will be conducted either by Dr. Anne McKeough or by a research assistant who is working under her supervision.

I understand that if teachers wish, they can use participants' written work as an alternative to some other similar class project which they assign. I understand that participation in the research will not produce risks greater than those experienced in daily life.

I understand that my daughter or son may withdraw from the study at any time without penalty, if he/she so wishes. I also understand that Dr. McKeough may end my son's or daughter's involvement if it is thought to be in the best interests of the participants or the study as a whole. I understand that not every volunteer will be chosen to participate and that this depends on meeting the criteria for pro-social and aggressive behaviour.

I understand that every effort will be made to ensure that confidentiality is maintained. I understand that all data will be securely stored in Dr. McKeough's office at The University of Calgary and that data will be destroyed after completion of the analysis. I understand that the work students produce will be reported anonymously in academic presentations and reports. I understand that some of the students' work will be used by a graduate student for her Master's research. When written samples of student's work are presented, all identifying material will be removed.

I understand that I can contact Dr. McKeough at 220-5723 for further information about the study. I also understand that, if I have questions concerning the ethics review of this project or the way my child or I have been treated, I may contact Dr. Michael Pyryt (Chair, Faculty of Education Joint Ethics Review Committee) at 220-5626, or the office of the Vice President, Research at 220-3381.

Date _____ Signature of Parent
(Guardian) _____ Parent/Guardian

APPENDIX D

Parent/Guardian Information Sheet

1. The parent(s) and/or guardian(s) present in this home are _____.
(example: mother and father, single mother, single father, father and stepmother, etc.)

2. The occupation of the mother/guardian of this child is _____.

The occupation of the father/guardian of this child is _____.

3. The education level currently held by the mother/guardian is:

Please check ONE

- _____ a) university/college program completed
- _____ b) technical/trade school program completed
- _____ c) grade 12 completed
- _____ d) grade 9 completed
- _____ e) other (please specify) _____

4. The education level currently held by the father/guardian is:

Please check ONE

- _____ a) university/college program completed
- _____ b) technical/trade school program completed
- _____ c) grade 12 completed
- _____ d) grade 9 completed
- _____ e) other (please specify) _____

The following questions are optional.

It is recognized that each different ethnic background may make special contributions to the way people develop their story telling skills. Therefore, in research studies like this one, it is helpful to have the following information:

5. The predominant ethnic background of the mother/guardian is _____.
(e.g. Chinese, First Nations, African, Scottish, etc.)

6. The predominant ethnic background of the father/guardian is _____.
(e.g. Chinese, First Nations, African, Scottish, etc.)

7. The predominant language spoken in the home is _____.

APPENDIX E

Caprara and Pastorelli Behaviour Checklist for Children

Prosocial Behaviour Scale

- PB1. S/he tries to make sad people happier.
- PB2. S/he spends time with his/her friends.
- PB3. When s/he has to do things that s/he doesn't like s/he gets mad.*
- PB4. S/he tries to help others.
- PB5. S/he is gentle.
- PB6. S/he cries about things that don't matter.*
- PB7. S/he shares things s/he likes with his/her friends.
- PB8. S/he feels annoyed.*
- PB9. S/he helps others with their homework.
- PB10. S/he lets others use his/her toys.
- PB11. S/he has bad dreams.*
- PB12. S/he likes to play with others.
- PB13. S/he trusts others.
- PB14. S/he bites his/her fingernails.*
- PB15. S/he hugs his/her friends.

Aggression Scale

- A1. S/he gets into fights.
- A2. S/he watches a lot of television.*
- A3. S/he kicks and hits or punches.
- A4. S/he gets even when s/he is mad.
- A5. S/he hurts others.
- A6. S/he likes to be with others.*
- A7. S/he threatens others.
- A8. S/he bites others to harm them.
- A9. S/he is afraid of the dark.*
- A10. S/he argues with older children.
- A11. S/he is envious.
- A12. S/he tells lies.
- A13. S/he says bad things about other kids.
- A14. S/he feels sure of him/herself.*
- A15. S/he insults other kids or calls them names.
- A16. S/he pushes and trips others.
- A17. S/he tells jokes.*
- A18. S/he teases other kids.
- A19. S/he uses bad words (S/he swears).
- A20. S/he likes to fist-fight.

Note: * control items that do not contribute to the total score.