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MACARTHUR STORY-STEM BATTERY AND GENDER DIFFERENCES

BY

GINA ARNETT

A THESIS SUBMITTED IN PARTIAL FULFILLMENT

OF THE REQUIREMENTS FOR THE

MASTER OF ARTS

IN PSYCHOLOGY

MARSHALL UNIVERSITY GRADUATE COLLEGE

2000

MASTER OF ARTS THESIS

OF

GINA ARNETT

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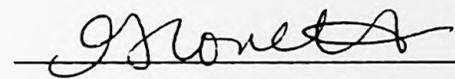
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2000

MacArthur Story-Stem Battery and Gender Differences

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Abstract

In this study the MacArthur Story-Stem Battery (MSSB; Bretherton, Oppenheim, Buchsbaum, Emde, & The MacArthur Narrative Group, 1990), an assessment tool that examines childrens' ability to cope with conflict laden situations, was used to study gender differences in avoidance and aggression. Forty-three children (22 girls, 21 boys) participated in the third phase of a longitudinal study when they were between 7.5 and 8 years old (mean = 7.8). Results showed that males scored significantly higher than females on the variable of aggression in their story completions on the MSSB; however, gender differences for avoidance, while in the hypothesized direction, did not reach significance. Implications for future research and psychometric properties of a new coding system for the MSSB are discussed.

Acknowledgments

I am very grateful to the many people who have helped with this endeavor. First and foremost, I would like to give special thanks to Greg Taliaferro for his most generous help in all aspects of this project. His patience and guidance are much appreciated. Special thanks as well goes to Diane Wille for her assistance with statistical analysis and access to the data. I would also like to take this opportunity to give thanks to Stephen O'Keefe, Gretchen Lovett, and Tony Goudy for participating on my thesis committee. I further wish to thank Christopher Weaver and Elizabeth Jackson for their support and encouragement, for helping to keep me focused, and for their editorial suggestions. Thanks also to Dean Deutsch for his assistance with the first draft of this manuscript. Finally, I would like to thank the children and parents who volunteered to participate in this study, without whom none of this would have been possible.

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MacArthur Story-Stem Battery and Gender Differences

The MacArthur Story-Stem Battery (MSSB; Bretherton, Oppenheim, Buchsbaum, Emde, & The MacArthur Narrative Group, 1990) is an assessment tool that examines childrens' ability to cope with conflict laden situations. As part of the initial convergent validation for a new coding system for the MacArthur Story-Stem Battery called the University of Liverpool, University College London & Menninger Clinic Revised Coding Manual for MacArthur Narrative Completion Task (Hill et al., 1998), this study investigated two of the variables measured by this instrument that are known to have empirically validated gender differences. These two variables were aggression and avoidance.

Childhood aggression has been the subject of a great deal of research in the past several decades due to its detrimental effects on children's development (Crick, 1997). Aggression can be defined as behavior that is intended to hurt or harm others (Crick & Grotpeter, 1995; Maccoby & Jacklin, 1974). Some researchers have divided aggression into two types: overt or direct aggression and relational or indirect aggression. Overt aggression can be explained as physical fighting or verbal threats (Crick, Bigbee, & Howes, 1996) while relational aggression involves inflicting mental or psychological pain through damaging relationships (Bjorkqvist, Lagerspetz, & Kaukiainen, 1992; Crick & Grotpeter, 1995). For the purpose of this study, only overt aggression was examined.

The research on aggression and sex differences clearly indicates that boys are more physically aggressive than girls (Block, 1983; Crick & Grotpeter, 1995; Feshbach, 1969; Hutt, 1972; Lewis & Volkmar, 1990; Maccoby & Jacklin, 1974; Tieger 1980;). This sex

difference in aggression has also been found across a variety of cultures (Maccoby & Jacklin, 1974; Lewis & Volkmar, 1990; Whiting & Whiting, 1962; as cited in Maccoby, 1966).

It was also reasonable to expect that this gender difference in aggression would manifest itself in the MSSB. In the new coding system, aggression is specifically defined in a rather complicated manner that lends itself to coding (Hill et al., 1998). If the MSSB is conceptualized as a behavioral assessment tool, this expectation logically follows from the research discussed above; however, the MSSB is sometimes conceptualized as a projective measure. To this end, research has shown that boys exhibit significantly more aggressive responses on projective tests than girls (Rosenzweig, 1970). Furthermore, several studies that utilized structured doll play consistently indicated that boys showed significantly higher levels of aggression than girls (Bach, 1945; Durrett, 1959; Moore & Ucko, 1961; Pintler, Phillips, & Sears, 1946; Sears, 1951; Sears, Lucy, & Alpert, 1965; all as cited in Maccoby, 1966.)

The second variable addressed in the current study was avoidance. As with aggression, there are different types of avoidance. Among these are social avoidance and conflict avoidance. For the purpose of this study only conflict avoidance was examined. Conflict avoidance can be defined as failure to address a presented problem. The research on avoidance is sparse and less consistent than that on aggression. In some situations, girls are more avoidant (Endler & Parker, 1990; Lagerspetz, Bjorkqvist, & Peltonen, 1988; Liu & Kaplan, 1999), while in different situations boys appear to be more avoidant (Moore & Ucko, 1961; as cited in Maccoby, 1966).

The new coding system definition for avoidance is in the revised manual (Hill et al., 1998). The results of the Moore & Ucko study cited above are more salient to the current study because of their application to avoidance in regard to doll play situations. Perhaps some contributing factors here are that boys are not socialized to play with dolls with the same frequency as are young girls and that sex-typing is more salient to young boys than it is to young girls (Maccoby & Jacklin, 1974).

There are several other theoretical reasons why boys may be more avoidant than girls in certain situations. Aggressive children have been found to be more avoidant in story-stems (Hill et al., 2000), and since research has consistently shown that boys are more aggressive than females, it follows that increased avoidance will accompany the aggression in males. It has also been suggested that girls are more likely to be rewarded for behavior leading to the resolution of conflicts (Davies, 1999) and that there are greater expectations for girls to respond in a manner that will alleviate distress than for boys (Oppenheim, Nir, Warren, & Emde, 1997). Both of these latter contingencies are incompatible with avoidant behavior and are present in administration of the story-stems when children are asked by the test administrator to "show me and tell me what happens next." Another theory suggests that females are found to score higher on measures of social desirability and, therefore, behave in socially approved ways to avoid disapproval from peers or adults (Block, 1983), potentially resulting in lower levels of conflict avoidance. Girls have also been found to show an orientation that places more emphasis on relationships and resolution of conflicts in the context of story-stems (Oppenheim, Nir, Warren, & Emde, 1997). Therefore, in situations most like the MSSB, it appears that

boys are not only more aggressive, but are more avoidant as well.

In this study the MSSB, in which children are asked to complete play narratives describing conflicts and emotional events, was used to study gender differences in avoidance and aggression. To provide for good concurrent validity, the University of Liverpool, University College London & Menninger Clinic Revised Coding Manual for MacArthur Narrative Completion Task measures of aggression and avoidance should differ by gender in a manner similar to the literature discussed above. The main purpose of this study was to develop detailed gender-specific norms for this coding system of the MSSB. Appropriate norms will aid in interpretation of test results, which may, in turn, add to the diagnostic accuracy of the measure. The resulting hypotheses were:

Ha1: Boys will score higher than girls on ratings of aggression.

Ho1: There will be no difference on aggression ratings between boys and girls.

Ha2: Boys will score higher than girls on ratings of avoidance.

Ho2: There will be no difference on avoidance ratings between boys and girls.

Method

Subjects

Forty-three children (22 girls, 21 boys) participated in the third phase of a longitudinal study when they were between 7.5 and 8 years old (mean = 7.8). Participants were initially recruited through a subject pool composed of parents who volunteered for "child development research" when their children were born. Mothers were contacted by phone and invited to be in a family study looking at how early attachment affects later psychosocial functioning. All subjects were Caucasian, middle-class children from Southern Indiana.

Procedure

The MacArthur Story-Stem Battery was individually administered to each subject by Greg Taliaferro, Ph.D., a University of Louisville graduate student, or an Indiana Southeast University undergraduate student who was specifically trained to administer the test. The story-stems were administered in the children's homes and the entire procedure was videotaped. The videotapings of the administrations were then coded by Greg Taliaferro.

Instrument

Eight story-stems from the MacArthur Story-Stem Battery were used to elicit children's narrative completions to emotionally laden, conflictual family interactions (Hill et al., 1998). The child was presented with a dilemma within the context of a story using dolls, play furniture, and toys. The examiner began by describing the task to the child, explaining that he would tell the child the beginning of a story about a family and would then ask the child to finish the story, to "show me and tell me what happens next." Each character to be used was then introduced to the child, with the examiner explaining who that person was and what his name was. The gender of the child dolls was matched to the gender of each participant. Following this introduction, a warm-up birthday party stem was presented where the examiner encouraged the child to become a participant. For instance, if the child described what happened, the examiner then asked him/her to show it happening with the dolls. This initial birthday party story-stem was not included in coding or analyses and was only used to establish rapport and familiarize the child with the procedure. The stems were presented in an animated, dramatic manner, and all ended with

the invitation "show me and tell me what happens next." Nondirective comments such as "Does anything else happen in the story?" were also used to facilitate children's narratives. The examiner moved from one story-stem to the next after children addressed the main issue in the stem and brought the narrative to an end.

Results

Analysis of Data

The study was a quasi-experimental design that employed two t-tests for data analysis. For aggression, mean scores were 2.07 for males ($SD = 1.93$) and 1.15 for females ($SD = .32$). Aggression differences were significant ($t(41) = 2.89, p = .04$) in the predicted direction with males scoring higher than females (see Figure 1). For avoidance, mean scores were 2.35 for males ($SD = 1.20$) and 1.89 for females ($SD = 1.13$). While demonstrating a trend in the predicted direction with males scoring higher than females, avoidance scores did not reach significance ($t(41) = 1.28, p = .20$). Means and standard deviations are represented in Table 1. Mean scores are shown in Figure 1.

Discussion

It was well established in the literature that males are more aggressive than females. It was even demonstrated more specifically in doll play situations. Therefore, as hypothesized, males scored significantly higher than females on the variable of aggression in their story completions on the MSSB. It is important to note, however, while the difference was statistically significant, the clinical significance is as yet undetermined as the overall difference between groups was small. Furthermore, both genders scored low on the aggression variable.

Research literature discussed how the sex difference in avoidance varies in different situations and how it is possible that some of the functional aspects of a variety of those situations were functioning in the story-stem. While the results for gender differences in avoidance did not reach significance, it still gives important information interpretively in regard to the story-stems. For aggression, results of the current study add to concurrent validity of the measure. For avoidance, it doesn't necessarily contribute to knowledge of the construct of validity, other than to say that if there is an effect for gender, it probably is not a large effect. It would be inappropriate to interpret avoidance any further, because although there is a trend in the expected direction, it cannot be ruled out that the trend is not due to a chance occurrence. It is with regard to the psychometrics of this measure that this study may have the most to offer by providing normative data. For instance, higher aggression scores for a male child may be less significant than a similar score for a female child; however, at least as suggested by the current data, boys and girls can be expected to score similarly on the avoidance variable.

There are limitations in this study which need to be addressed. The results cannot be generalized from this subject sample, which was all Caucasian, middle-class children, to other racial or ethnic individuals from different social classes. While there are different coding systems and sets of story-stem presentations that are sometimes utilized, results of the current study will only generalize to the MSSB when administered and coded in this specific manner. Furthermore, the current study employed highly trained test administrators and coders, limiting generalizability to those with similar training only. Future research may address other coded variables in a similar manner.

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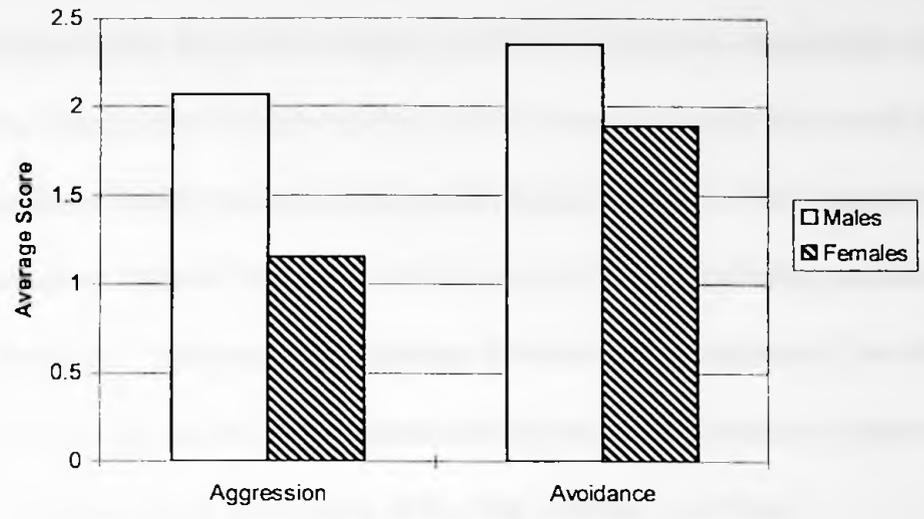
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Table 1Means and Standard Deviations for Males and Females by Dependent Measure

Variable	<u>Males (N=21)</u>		<u>Females (N=22)</u>	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Aggression	2.07	1.93	1.15	0.32
Avoidance	2.35	1.20	1.89	1.13

Figure 1

Mean Aggression and Avoidance Scores for Males and Females



Appendix A

MacArthur Story-Stem Battery and Gender Differences

MacArthur Story-Stem Battery

The MacArthur Story-Stem Battery (MSSB; Bretherton, Oppenheim, Buchsbaum, Emde, & The MacArthur Narrative Group, 1990) is an assessment instrument that examines children's ability to cope with conflict laden situations. The measure utilizes story beginnings or "stems" that cover a wide range of events including parental fighting and moral dilemmas. Although the beginning of each story is structured, the children are asked to complete the narratives themselves in any way they choose, by "showing and telling" what happens next while using dolls, play furniture, and toys.

Several studies have used the story-stem battery of play narratives to tap into children's thoughts and feelings and assess their developing understanding of family relationships, conflicts, and emotional situations (Buchsbaum, Toth, Clyman, Cicchetti, & Emde, 1992; Macfie, Toth, Rogosch, Robinson, Emde, & Cicchetti, 1999; Oppenheim, Emde, & Warren, 1997; Oppenheim, Nir, Warren, & Emde, 1997; Warren, Oppenheim, & Emde, 1996).

As part of the initial convergent validation for a new coding system for the MacArthur Story-Stem Battery called the University of Liverpool, University College London & Menninger Clinic Revised Coding Manual for MacArthur Narrative Completion Task (Hill et al., 1998), this study investigated two of the variables measured by this instrument that are known to have empirically validated gender differences. These two variables were aggression and avoidance.

Gender Differences in Aggression

Aggression is defined by Vander Zanden (1989) as “behavior that is socially defined as injurious or destructive” (p. 290). Childhood aggression has been widely researched in the past several decades due to its harmful influence on children’s development (Crick, 1997). The recent rash of child and adolescent homicide across the nation illustrates this point all too well. Regarding the relationship between gender and aggression, Block (1983) best summed it up by saying “Research findings surrounding aggression are perhaps the most consistent in the literature and indicate that males are more aggressive than females, and from an early age” (p. 1337). The research on aggression and sex differences does indicate that boys are more physically aggressive than girls (Crick & Grotpeter, 1995; Feshbach, 1969; Hutt, 1972; Lewis & Volkmar, 1990; Maccoby & Jacklin, 1974; Tieger 1980). This sex difference in aggression has also been found across a variety of cultures (Maccoby & Jacklin, 1974; Lewis & Volkmar, 1990; Whiting & Whiting, 1962; as cited in Maccoby, 1966).

Although there has been some argument about the age that gender differences in aggression first appear, many researchers agree that there is a lack of significant sex differences found in toddler aggression (Keenan & Shaw, 1994). Clear gender differences appear to emerge in preschool years, with more boys than girls displaying physical aggression (Loeber & Stouthamer-Loeber, 1998).

While increased levels of physical aggression in males are clearly indicated through observations of behavior, this sex difference has also been found with other measurement procedures. Research has shown that boys exhibit significantly more aggressive responses

on projective tests than girls (Rosenzweig, 1970), and that boys received higher scores of aggression than girls in peer ratings (Toigo, Walder, Eron, & Lefkowitz, 1962; as cited in Maccoby, 1966). Increased scores of physical and verbal aggression were also found in boys when rated by peers in 5 different ethnic groups studied (Osterman et al., 1994). Furthermore, several studies that utilized structured doll play consistently indicated that boys show significantly higher levels of aggression than girls (Bach, 1945; Durrett, 1959; Moore & Ucko, 1961; Pintler, Phillips, & Sears, 1946; Sears, 1951; Sears, Lucy, & Alpert, 1965; all as cited in Maccoby, 1966.)

The specific operational definitions of aggression vary greatly from study to study and some now claim that previous literature has been biased. Crick & Grotpeter (1995) argued that forms of aggression exhibited by girls have been neglected in past literature and that past estimates of prevalence have been tainted by the failure to assess those forms of aggression that are salient to girls. While it was once believed that males were more physically aggressive and females were more verbally aggressive (Maccoby & Jacklin, 1974), this past differentiation between verbal and physical aggression is not necessarily the best indicator of what separates male from female aggression (Lagerspetz, Bjorkqvist, & Peltonen, 1988). This belief has recently been challenged due to newly classified categories of aggression. Some researchers have divided aggression into two types: overt or direct aggression and relational or indirect aggression. Overt aggression can be explained as physical fighting or verbal threats (Crick, Bigbee, & Howes, 1996) while relational aggression involves inflicting mental or psychological pain through damaging relationships (Bjorkqvist, Lagerspetz, & Kaukiainen, 1992; Crick & Grotpeter, 1995).

Research has found that boys use more direct or overt means of aggression, which includes physical as well as verbal aggression (Crick & Grotpeter, 1995), while girls typically use indirect means of aggression, or relational aggression (Bjorkqvist et al., 1992; Crick, 1997; Lagerspetz et al., 1988). Past research explains that while boys are more likely to exhibit overt aggression because it is consistent with the types of goals (such as physical dominance) that are important to boys, girls are more likely to demonstrate relational aggression because it damages goals that are particularly important to them (such as building close, intimate connections with others) (Crick & Grotpeter, 1995). Lagerspetz et al. (1988) also found that the social network of peer groups was tighter among girls, which makes it easier for them to manipulate relationships and harm their victims through indirect means of aggression. More recent research further dividing aggression into reactive and proactive types, in both children (Poulin & Boivin, 2000) and adults (Hart & Dempster, 1997), may also help to increase our understanding of the aggression construct.

While it has recently been revitalized in current literature, it is important to note that the idea that there is more than one type of aggression is not a new topic. As early as 1969, Feshbach had described indirect aggression as being more prevalent in females. Females were observed as using social exclusion and rejection which, like more direct methods of aggression, were also used to fulfill hostile motives.

A possible explanation as to why those forms of aggression that are more typical of females have been neglected in the past could be explained by the difficulty found in measuring indirect aggression. Lagerspetz et al. (1988) stated:

“Unfortunately, measurement techniques do not, for the most part, detect indirect aggression - precisely because it is indirect; the perpetrator will try to disguise his aggression. An individual who uses indirect aggression and who is asked about his or her own aggression (e.g., in a questionnaire) probably will deny being aggressive. Items used in tests of aggression, both in questionnaires and in peer nominations, and also the types of behaviour observed in field studies and experimental contexts, reflect mainly measurements of direct aggression.

Although some items regarding indirect aggression may be included in the questionnaires, the measures tap principally behaviour that we suggest is typical of male but not of feminine aggression. Therefore, female aggression often may go unnoticed in psychological investigations” (p. 404).

There has also been some argument as to the causation of gender differences in aggression. While Tieger (1980) argued that aggression is learned through sex typing behaviors, in accordance with social learning theory, Maccoby and Jacklin (1974) contended that males are also biologically predisposed toward aggressive behavior. One of Maccoby and Jacklin’s (1974) arguments for a biological foundation was that sex differences in aggression occur too early in life to be influenced by socialization pressures. Individuals of different sexes do indeed differ in their play almost as early as they begin to play. In kindergarten, boys are typically more involved in active games requiring more intense physical activity, while girls are more interested in dolls, paper activities, and games utilizing skillful movements. There are similar gender differences in preferred themes of leisure activities such as reading, watching movies, and listening to the radio,

where girls are usually more interested in sentimental and domestic stories, whereas boys favor stories of violent action (Tyler, 1976).

Some social learning theories as to why gender differences occur in aggression may be explained by cultural expectations. Physical aggression is not as acceptable for girls in our culture and is often discouraged, while physical aggression is expected and permitted, sometimes even encouraged and rewarded, for boys (Davies, 1999; Mischel, 1966). Children also learn and model male and female gender stereotypes that are presented by their culture. While many cultures emphasize values for males such as aggressive and assertive behaviors, for females there is more importance placed on empathy, compassion, and other characteristics that are of significance to and affect the quality of interpersonal relationships (Davies, 1999).

It was reasonable to expect that the gender difference in aggression would manifest itself in the MSSB in a manner similar to the literature discussed above. In the new coding system, aggression is specifically defined in a rather complicated manner that lends itself to coding (Hill et al., 1998).

Gender Differences in Avoidance

Researchers study many different types of avoidance, and one such type is social avoidance. This can be explained as withdrawal from social situations. Another type of avoidance that is examined in the present study is conflict avoidance. Conflict avoidance can be defined as failure to address a presented problem. Research on the topic of gender differences and conflict avoidance is sparse and less consistent than that on aggression. The literature that is available states that in some situations, girls are more avoidant

(Endler & Parker, 1990; Lagerspetz et al., 1988; Liu & Kaplan, 1999), while in different situations, boys appear to be more avoidant (Moore & Ucko, 1961; as cited in Maccoby, 1966).

The new coding system definition for avoidance is in the revised manual (Hill et al., 1998). The results of the Moore & Ucko study cited above are more salient to the current study because of their application to avoidance in regard to doll play situations. Perhaps some contributing factors here are that boys are not socialized to play with dolls with the same frequency as are young girls and that sex-typing is more salient to young boys than it is to young girls (Maccoby & Jacklin, 1974).

There are several other theoretical reasons why boys may be more avoidant than girls in certain situations. Aggressive children have been found to be more avoidant in story-stems (Hill et al., 2000), and since research has consistently shown that boys are more aggressive than females, it follows that increased avoidance will accompany the aggression in males. It has also been suggested that girls are more likely to be rewarded for behavior leading to the resolution of conflicts (Davies, 1999) and that there are greater expectations for girls to respond in a manner that will alleviate distress than for boys (Oppenheim, Nir, Warren, & Emde, 1997). Both of these latter contingencies are incompatible with avoidant behavior and are present in administration of the story-stems when children are asked by the test administrator to "show me and tell me what happens next." Another theory suggests that females are found to score higher on measures of social desirability and, therefore, behave in socially approved ways to avoid disapproval from peers or adults (Block, 1983), potentially resulting in lower levels of conflict

avoidance. Girls have also been found to show an orientation that places more emphasis on relationships and resolution of conflicts in the context of story-stems (Oppenheim, Nir, Warren, & Emde, 1997). Therefore, in situations most like the MSSB, it appears that boys are not only more aggressive, but are more avoidant as well.

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Appendix B

University of Liverpool, University College London & Menninger Clinic

Revised Coding Manual for MacArthur Narrative Completion Task

Aggression Scale

This scale is rated on the basis of severity of aggression, and its context. Thus clear aggression to deal with the scary dog would rate in the middle of the scale, but marked aggression such as killing it would probably rate higher. It is important to take into account the context of the story - if there is a threat to the child's safety, then a higher level of aggression will be as appropriate as a lower level of aggression if the threat is less. The highest rating will be made usually where the aggression was extreme and inappropriate to the demands of the situation.

(1-3) Minimal Aggression

This will usually reflect aggression at a verbal level with threats and verbal conflict between characters of similar status and/or power; that is between children and between adults. This may also include harsh verbal discipline from parents.

Physical contact, such as pushing and shouting "out of my way!" would also be included here. In some cases this will be seen as a child standing up for themselves.

Example: A typical "2" would involve characters arguing and pushing in a story such as "Three's a crowd".

(4-6) Moderate Aggression

This will involve more sustained verbal aggression between children or between adults, or physical aggression between children where no one is portrayed as being

injured. Adaptive responses could also be included here, such as a parent or child fighting with the burglar. We expect ratings in this band to be quite common in those stories that present conflict or danger, and may represent robust handling of the situation.

Example: A "5" would involve a story such as, Dave fighting with George in "Three's a crowd", parent getting angry and threatening quite severe punishment such as taking all his/her toys away would rate in this quadrant.

(7-9) Significant Aggression

Marked physical aggression between children, and most physical aggression between adults will rank in this quadrant. Verbal aggression from a parent to a child will rate here where it is threatening. For instance, the parent threatens to kill or injure the child or to send him/her away. Physical aggression from a child to an adult that knocks the adult over or leads to injury is likely to rate in this quadrant. Appropriateness to the stem as well as intensity should always be borne in mind. There needs to be a clear sense that it is inappropriate to the demands of the situation and may include physical injury and/or damage to property at the top end of the band. In general, violence towards an attachment figure should score higher than an equivalent act towards another character.

(10-12) Marked Aggression

This category is for stories where there is uncontained physical aggression resulting in serious injury or death. The top score is reserved for death of several characters, where there is a sense of total destruction.

Coding for Denial/Avoidance

This has cognitive and affective components. It may be manifest in what the child says ("The dog isn't scary", "I don't know"), what the child does with the dolls (the portrayed child plays with the dog), or the portrayed action (the child goes to sleep when the burglar appears). It may appear in relation to the original dilemma or to events portrayed within the narrative. The prompts are particularly important in relation to this scale, as the higher scores are made where the avoidance is maintained in spite of prompts that remind the child of the task. Equally, prompts in the face of avoidance should not be so insistent that the child becomes focused on pleasing the examiner rather than addressing the story. Similarly, the examiner should avoid prompts that in effect complete an avoidant narrative, for instance, "and what did the mom do next?" Around two prompts will usually be appropriate. It is important, and at times difficult, to distinguish between an avoidant maneuver in the story and an incoherent shift from a highly charged scene which appears to serve the purpose of avoidance. For instance, a child is portrayed as attacking and knocking over a parent and then picks up and continues with another activity. This would not rate avoidant unless there was evidence of actively denying the implications of the action such as say "they are good friends now".

(1-3) Low Avoidance

These scores reflect absent or minor elements of avoidance. A score of "2" or "3" will often accompany a rating of 8-11 on coherence where the "full story" is not told. Equally, these ratings may be made where very low coherence has been rated because of a tangled, involved, fragmented story.

(4-6) Some Avoidance

The avoidance is evident but is not significant and does not predominate. This may reflect a rating of 7 for coherence where the elements are in place but lacking much elaboration, or where any of the types of avoidance referred to above can be identified without affecting the overall direction of the story. For instance, the “dog is not scary” but subsequent events clearly show that the appraisal has been of a scary dog.

(7-9) Definite Avoidance

Here avoidance is definite and significant. Generally it does not predominate in the story. For instance, in spite of saying “I don’t know” several times, with prompting the child tells a story that is relevant. Or the avoidance allows the child to bypass the dilemma and then reach a solution that should have been “worked for”, for instance, the child makes friends with the dog. Or where avoidance gives way to another response such as aggression.

(10-12) Marked Avoidance

Here the avoidance is strong, and generally pervasive. For instance, the child’s insistence that he/she “does not know” reduces the narrative to a few fragments, or at the extreme there is no narrative. Or a story that is told loosely, and at the extreme not at all, connected in spite of prompts that refer to the dilemma. Occasionally where the avoidance is very marked, it may be rated in this band without occupying the predominant part of the narrative.

Appendix C

MacArthur Story-Stem Battery

Note: Stems are described for boys. If the participant is a girl, the characters are mom, dad, big sister Susan, younger sister Jane, and Susan's best friend Laura.

1. Mom's Headache

"Mom and George are sitting on the couch watching TV."

(Mom turns to George.)

Mom: "Oh George, I have such a headache! I just have to turn this TV off and lie down. (Mom gets up and turns the TV off.) George, can you find something quiet to do for a while?"

George: "Okay, mom, I'll read a book."

"Mom lies on the couch and George sits on the chair to read a book." (Make a doorbell sound and move child figure to go answer the door.)

"It's George's best friend Dave."

Dave: "There's this really good TV show on, can I come in and watch TV with you?"

2. Three's a Crowd

"Mom and dad are talking to the neighbors. George is playing with his best friend Dave and his new ball. Show me how they play with the ball. They're playing with Dave's new ball, then Bob runs out of the house and calls..."

Bob: "Can I play with you?"

George: "Sure!"

Dave: "No way! If you let your brother play, I won't be your friend anymore!"

3. Burnt Hand

"Mom and George are at the stove. Dad and Bob are sitting at the table."

Mom: "We're going to have a good supper, but it's not ready yet. Don't get too close to the stove."

George: "Hmmm, that looks good. I don't want to wait. I'd like some now.

(George leans over the stove and knocks the pot of soup off the stove onto the floor.)

George: "Owe [sic]! I've burnt my hand! It hurts!"

4. Scary Dog

"Mom, dad, George, and Bob are in the park. George is playing with his ball and kicking it further and further away. Then..." (Bring out the dog and make it bark loudly.)

George: "Oh no! I'm so scared."

5. Lost Keys

"Mom and dad are facing each other and they look angry. (George is facing both of them sideways.) George come into the room and sees mom and dad looking at each other like this. Look at my face...(makes an angry face.)

Mom: (angrily) "You lost my keys!"

Dad: (angrily) "I have not!"

Mom: "Yes you have, you always lose my keys!"

Dad: "Well, I did not lose them this time."

6. Burglar in the Dark

“It’s nighttime and mom and dad are downstairs. George is playing in his room.

Suddenly the lights go out and George hears a sound...(scratch under the side of the table.) George walks a few steps, then...”

George: “Gasp! (Pause.) It’s a burglar! (in a soft and eerie voice.)”

7. Sweet Shop

“Here we have the shop, here is the shop keeper, and over here are the shelves. You know what’s on the shelf? Sweets. Here comes mom and George.”

George: “Oh sweets, can I have some?”

Mom: “No, you already had some today. Let’s go home.” (Mom walks away.

George takes a sweet and walks away.)

Shopkeeper: “Hey, what are you doing there?”

(Mom turns around to look.)

8. Fight with a Friend

“George is playing with his ball and this time it’s George’s ball. His best friend Dave comes over.”

Dave: “I want to play with that ball.”

“Dave pushes George over and takes the ball.”

George: “Owe [sic]! You hurt my hand. Give me that ball.

Dave: “No! I want to play with it!”