

PSYCHOLOGICAL ATTACHMENT AND EATING DISTURBANCES
IN FEMALE ADOLESCENTS

by


KATE SCOTT-MONCRIEFF


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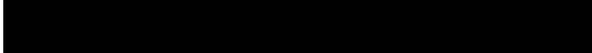
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We accept this thesis as conforming
to the required standard


Dr. Don Knowles, Supervisor (Department of
Psychological Foundations)


Dr. Walter Muir, Department Member (Department of
Psychological Foundations)


Mr. Jim Anglin, Outside Member (School of
Youth and Child Care)


Mary-Jane McLachlan, External Examiner
(Counselling Services)

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University of Victoria

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Supervisor: Dr. Don Knowles

ABSTRACT

The relationship between eating disturbances and psychological attachment to mother, father and peers was considered in this study. Eighty grade seven and eight female students from a public school and an independent school completed the Inventory of Parent and Peer Attachment (IPPA) and the Eating Attitudes Test (EAT). These tests present both general and specific questions regarding a) psychological attachment to mother, father and peers and b) eating behaviours and concerns.

Initially, the two schools were compared to elucidate any differences on the Inventory of Parent and Peer and the Eating Attitudes Test. There was no significant difference found between the two schools.

The sample was then pooled for the remaining analysis. Relationships between a) eating disturbances and b) psychological attachment to mother, father and peers were assessed with Pearson product-moment correlations. A significant negative relationship was found between psychological attachment to mother ($r = -0.23$) and father ($r = -0.33$) and the eating disturbances. There was no significant correlation between psychological attachment to peers and eating disturbances. In addition, a t-test was employed to determine if there was a significant difference between the correlations for mother

attachment scores and those for father attachment scores. There was no significant difference between these two correlations. In further consideration of the data, two groups were created - a low EAT scoring group and a high EAT scoring group. Differences between these two groups were examined through the use of a t-test. These differences were not statistically significant.

With these results in mind, the implications for counsellors and future research were considered.

Examiners:



Dr. Don Knowles, Supervisor (Department of Psychological Foundations)



Dr. Walter Muir, Department Member (Department of Psychological Foundations)



Mr. Jim Anglin, Outside Member (School of Youth and Child Care)



Mary Jane McLachlan, External Examiner (Counselling Services).

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Dedication

This thesis is dedicated to my parents, Gill and David, who never told me I couldn't, to my twin brother, Hewitt, who showed me I could and to my husband Neil who not only endured the process but supported me tirelessly and lovingly through it.

CHAPTER 1

Introduction

In almost every instance, even at an early period, the temper is irritable, the patient becomes obstinate and self-willed... the sleep is imperfect... emaciation soon shows itself, the patient steadily loses weight, the cheeks become thin, and she presents the appearance as though she were suffering from advanced phthisis (Fenwick, 1880, p. 154).

As this passage, written by Dr. Samuel Fenwick in 1876, indicates eating disorders have been recognized and defined for over one hundred years. Eating disorders initially were medically acknowledged in the early 1870's when two physicians, Sir William Gull of London's Guy's Hospital and Charles Lasègue of the Sorbonne in Paris (Silverman, 1992) independently but simultaneously diagnosed the disorder in several patients. Although relatively rare in the 1800's, the presence of eating disorders did allow for initial research, diagnosis and the subsequent creation of various therapeutic treatments. As Welbourne (1984) states, "The illness [eating disorders] had found a recognised place in the consulting rooms of Europe and papers had begun to appear from countries other than France and England. Everyone had their own angle" (p.16). Despite this early research, diagnosis and treatment, both the prevalence and severity of eating disorders has rapidly increased throughout the last century, especially within the latter half of the century.

One exception to this rapid increase in the prevalence of eating disorders was during World War II. In Italy during the War when there were dire food restrictions, no patients were hospitalized at the clinics for eating disorders. However, as the war ended

and the Italian economy began to re-emerge so did the prevalence of eating disorders (Selvini, 1974). It was at this time that researchers and physicians began to question the notion that the etiology of eating disorders were physical and redefined them as a psychological entities. (Bruch, 1982). By the 1970's the incidence of eating disorders had increased dramatically, and real concern began to emerge regarding the treatment of these disorders. One consequence of this concern was the creation of a classification system for eating disorders by the American Psychiatric Association.

Currently, eating disorders are classified into three distinct disorders. Anorexia nervosa, bulimia nervosa and eating disorders not otherwise specified. Anorexia nervosa has four main symptoms; 1) refusal to maintain body weight at or above a minimally normal weight for age and height (e.g., with loss leading to maintenance of body weight less than 85% of that expected); or failure to make expected weight gain during period of growth, leading to body weight less than 85% of that expected; 2) intense fear of gaining weight or becoming fat, even though under weight; 3) disturbances in the way in which one's body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or denial of the seriousness of the current low body weight; 4) in post-menarchal females, amenorrhea.

Anorexia nervosa is further delineated into two distinct types as well: restricting type and binge-eating/purge type. The restricting type of anorexic does not regularly engage in binge-eating or purging behaviour (i.e., self-induced vomiting or the misuse of laxatives, diuretics or enemas). Anorexics with binge-eating/purging behaviour regularly engages in self-induced vomiting or the misuse of laxatives, diuretics or enemas.

Bulimia nervosa involves five specific behaviours: 1) recurrent episodes of binge eating. An episode of binge eating is characterised by both the following; a) eating, in a discrete period of time (within any two-hour period), an amount of food that is definitely larger than most people would eat during a similar period of time and under similar circumstances and b) a sense of lack of control over eating during the episode (e.g., a feeling that one cannot stop eating or control what or how much one is eating); 2) recurrent inappropriate compensatory behaviour in order to prevent weight gain, such as self-induced vomiting; misuse of laxatives, diuretics, enemas, or other medications, fasting or excessive exercise; 3) the binge eating and inappropriate compensatory behaviours both occur, on average, at least twice a week for 3 months; 4) self-evaluation is unduly influenced by body shape and weight; 5) the disturbance does not occur exclusively during episodes of anorexia nervosa. As with anorexia nervosa, bulimia nervosa is separated into two distinct types: purging and non-purging type. Purging type involves the individual regularly engaging in self-induced vomiting or misusing laxatives, diuretics or enemas. In contrast, the non-purging individual uses other compensatory behaviours such as fasting or excessive exercise, but does not regularly engage in self-induced vomiting or the misuse of laxatives, diuretics or enemas.

The category Eating Disorders Not Otherwise Specified is for eating disorders that do not meet the criterion for any specific eating disorder. For example, an individual meeting all the criteria for anorexia nervosa but who has regular menses would be classified under this eating disorder or all of the criteria for bulimia nervosa are met except that the binge eating and inappropriate compensatory mechanisms occur at a frequency of

less than twice a week or for a duration of less than 3 months (American Psychiatric Association, 1994).

Over the years there has been a certain degree of controversy concerning the classification of anorexia nervosa and bulimia nervosa as two distinct disorders. Although currently classified as two disorders, with overlapping symptoms classified as Eating Disorders Not Otherwise Specified, many authors and researchers consider this distinction as erroneous and misleading (Bruch, 1986, Garfinkel, 1986, Welbourne, 1984). The rationale for conceptualizing these disorders as one entity concerns the fact that bulimics and anorexics share similar psychological and family psychodynamic characteristics (Carson & Butcher, 1992). Individuals with an eating disorder, in their pursuit for weight-loss and thinness, also often engage in behaviours that involve symptoms from both disorders. Furthermore, the underlying goal of the eating disordered behaviour, whether it is restricting or some form of purging (i.e. vomiting, exercise or misuse of laxatives or enemas), is similar - the behaviour is engaged in to lose weight. As Welbourne (1984) explains,

The difference between these three groups is in the effectiveness with which they achieve weight loss. What they are trying to do is essentially the same in each case (p.6).

The present classification system for eating disorders was used in this study.

However, it must be noted that, in some cases, eating disordered behaviour can and does involve both bulimic and anorexic symptoms.

Since the 1970's the incidence of eating disorders has rapidly increased and has now reached epidemic proportions (Garner and Garfinkel, 1985). It has been estimated

that a million American women every year are afflicted with anorexia and bulimia nervosa (Wolfe, 1991). Although some of the increased incidence may be justified by the additional exposure eating disorders have received in the last decade, it is generally agreed that the psychogenic disorder is experiencing a surge in frequency. Neuman and Halvorson (1983) maintain regarding anorexia nervosa, "...the medical evidence that does exist reveals significant increase, and practitioners widely hold that anorexia nervosa is increasing both in its identification by medical and mental health personnel, and in its actual frequency" (p. 56). Although estimates vary regarding the frequency of eating disorders, it has been calculated that at least 10 % or more of the population suffer from some form or degree of anorexia nervosa or bulimia nervosa (Wolfe, 1991; Garner & Garfinkel, 1985; Siegel, Brisman & Weinshel, 1988). This estimate doubles to between 15 and 20% within the college and university populations in North America (Brumberg, 1988, Carson & Butcher, 1992).

In addition to the increase in frequency, the mortality rate of eating disorders has also risen. Deter & Herzog (1994) estimate the mortality rate of anorexia nervosa to be as high as 11 % over a twelve year follow up period ; however, when examining the aggregated mortality rate of eating disorders this figure increases significantly. Sullivan (1995), looking solely at those individuals dying of anorexia while also taking into account the number of expected deaths in the general population, recently calculated the aggregate mortality rate to be .056% per year or 5.6 % per decade. This new estimated mortality rate suggests death from eating disorders such as bulimia and anorexia nervosa is actually significantly greater than previously thought As Sullivan (1995) states, "The aggregate annual death rate associated with anorexia nervosa is more than 12 times higher than the

annual death rate due to all causes of death for females 15-24 years old in the general population" (p. 1074).

While the mortality rate for eating disorders varies somewhat, these rates only substantiate the gravity of these eating disorders and the very real risk of mortality that is associated with eating disorders (Brumberg, 1988, Sullivan, 1995).

The seriousness of eating disorders becomes even more salient when the increasing diffusion of this disorder is elucidated. Initially, the increased prevalence of these disorders was purely restricted to affluent North American society; however, recently eating disorders have been reported in Russia, Austria, Sweden and Japan and beyond the middle and upper socio-economic classes. In addition, many Western cultures once free from such disorders are now experiencing a surge in incidence equaling the incidence experienced in the middle class North American Society. In the study authored by Smith and Krejci (1991) it was found that within their sample 13% of the Hispanic members and 14% of Native American members possessed some degree of eating disturbances.

Although not conceptually synonymous with eating disorders, eating disturbances can be considered as a broader conception of eating disorders. Furthermore, eating disturbances would certainly exist prior to any form of eating disorder. As a result, the findings in this study confirm that the rate of eating disturbance and possible eating disorders is as high in these populations as in the Caucasian North American population.

These studies demonstrate that eating disorders have experienced not only a global movement but also a socio-economic spread. As Naomi Wolfe (1991) states "it began as a middle-class disease in the United States and has spread eastward as well as down the social ladder" (p. 183). This verifies that eating disorders are not only affecting more

eating disorders, it does demonstrate that a large proportion of women are concerned about exercise, diet and weight loss, all of which can be salient behavioural symptoms of eating disorders.

The biological and physical consequences of anorexia and bulimia are devastating as well. Hypothermia, anemia, edema, hypertension, bradycardia (impaired heartbeat), lanugo (growth of body hair) and infertility are some of the physical problems associated with anorexia whereas the physical outcomes of bulimia include dehydration, electrolyte imbalance, epileptic seizures, and abnormal heart rhythm (Wolfe, 1991, Carson and Butcher, 1992). The physical consequences of eating disorders are experienced for life and therefore continually compromise the overall health of the effected individual.

Typically, onset of eating disorders usually occurs between 12 and 18 years of age. However, there is recent evidence to suggest the age of onset is more wide spread, appearing as late as the thirties, forties and fifties. Despite this recent occurrence of late onset eating disorders, it has been determined that disordered eating is for the most part, an adolescent phenomena. As Halmi, Casper, Eckert et. al. (1979) note, "adolescence is a major risk period for the development of this disorder (p. 209). Mary Pipher (1994) illustrates this very real risk for adolescents by noting,

I am struck by how intense and damaging these issues are every time I speak in a high school or college class. I ask 'how many of you know someone with an eating disorder?' Usually every hand goes up. After my talk girls come up to ask about their friends, their sisters or themselves (p. 57).

Other authors have linked the onset and maintenance of eating disorders to adolescence and the biological and psycho-social changes which occur during this period (Brooks-

Gunn & Petersen, 1983; Gunner & Collins 1988). As Attie & Brooks-Gunn (1989), concludes "Problem eating seems to develop during early to middle adolescence and these patterns influence later eating behaviors (p. 77). As a result, eating disorders and the devastating effects that follow these disorders are striking the very seeds of the approaching generation, limiting and possibly preventing these individuals from experiencing a long and functional life.

Statement of the Problem

Currently, there is a abundance of research on eating disorders and the factors involved with the onset and maintenance of such disorders. The research thus far, although confirming many theories, has not presented a definitive etiological answer nor has it clearly explicated the factors involved with eating disorders (Garfinkel and Garner, 1982, Brooks-Gunn & Attie, 1989). One of the most promising and widely accepted of these theories involves familial relationship patterns and contexts (Carson and Butcher, 1992, Cesari, J.P., 1987, Minuchin, 1978). The family context theory maintains that one's sense of self is facilitated through validation of the self by a certain reference group. An obvious and indeed important reference group is the family, especially for children undergoing the process of individuation and identity formation, an integral task experienced within the period of adolescence. As Minuchin, (1978) states, "And it is within the family that children develop a sense of themselves as autonomous individuals, who belong to and can depend on a certain group [the family]" (p. 52). It can be acknowledged, then, that the family assists in the formation of an identity, and that this identity incorporates a sense of autonomy. The familial context and the interactions

occurring within this context form the very matrix needed for psychological growth and identification of the self (Minuchin, 1978).

Through Minuchin's and other family studies it has been established that this important matrix is disturbed within families with an eating disordered member. On the whole, families with an eating disordered member display some form of dysfunction or increased incidence of psychoneurotic disturbances (Cesari, 1987). As White (1992) states, "in summary, particular characteristics that are dysfunctional exists in both anorexic and bulimic families" (p.367).

In general, the anorexic individual describes her mother in unflattering terms; for example, excessively dominant, intrusive, overbearing and markedly ambivalent whereas fathers are considered "emotionally absent" (Carson and Butcher, 1992). Minuchin, Rosman and Baker (1978) describe families of anorexics as being more enmeshed, overprotective and more rigid than "normal" families. In addition, Kay (1989) found that families of anorexics, generally avoid open expression of anger and aggression and lack the ability to deal with conflict. Families involving a member with bulimia also lack the ability to resolve conflict and possess rigidity and unbendable rules, and demonstrate high parental expectations (Carson & Butcher, 1992).

While anorexic and bulimic families differ in some regard, generally the psychodynamics involve an underlying power struggle and communication problem between the eating disordered individual and the parents. As O'Halloran (1993) states, "There is widespread agreement among researchers that a child with an eating disorder is often expressing an underlying family conflict and that problems in communication are in

these families” (p.70). As a result of this inherent conflict and disruption in family context, the opportunity for the development of an identity is inevitably diminished.

To date, the family contexts and related variables regarding eating disorders have been researched extensively. Currently, it is generally accepted that the family context is an important contributor to the onset and maintenance of eating disorders. This link is so strong that some authors have suggested that there is no other clinical syndrome more influenced by the family context than eating disorders (O'Halloran, 1993). Despite the extensive research within this area, the etiological picture in regards to the family context remains vague. As noted,

There is agreement that many family factors are important in the development and maintenance of eating disorders, but we cannot predict with certainty that a particular family pattern will produce a child with an eating disorder or that those families with an eating-disordered child will be of a particular type (O'Halloran, 1993, p. 7).

As a result, the manner in which the family is involved with the onset and maintenance of eating disorders remains unclear. In order to gain more insight into the reasons underlying the onset and maintenance of eating disturbances and disorders, more research involving the family context and the relationships involved with this context is needed. As Stern and Colleagues (1989) explain, "Other aspects of family functioning in eating disorders need to be scientifically studied as well" (p. 31).

Previous research concerning eating disorders has called for studies involving a developmental perspective. Developmentally-oriented research in the eating disordered area would be valuable and logical as not only does the onset of eating disorders commonly occur during adolescence but it has also been closely linked with the biological

and psycho-social transformations which occur during adolescence. As Attie and Brooks-Gunn (1989) point out,

With few exceptions, however, investigators have not brought a development perspective to the study of eating problems, such as dieting and binge eating, despite evidence that such problems are widespread among adolescents and may be a precursor to the more clinical syndromes of anorexia nervosa and bulimia (p. 70).

Despite this awareness, minimal research incorporating the developmental perspective and eating disorders exists to date.

Does this lack of developmental research on eating disorders within family studies indicate that developmental issues do not play a role in the onset and maintenance of this disorder? To believe this would be to negate the abundance of research and information which unequivocally links healthy social environments and family contexts to the development of functional well-balanced adolescents and subsequent adults. It would also contradict the existing body of knowledge put forth by the developmental psychology field. It would seem logical and valid to investigate additional and different perspectives about the family context while incorporating the developmental perspective. This would not only allow for further investigation into the role the family plays in the onset and maintenance of eating disorders, but also include important adolescent developmental aspects within the study of these disorders.

The purpose of this present study is to gain more insight into the connection between possible eating disturbances and the family context by examining more closely the relationship individuals reporting eating disturbances and disorders possess with her mother, father, and peers. Specifically, the degree of psychological attachment felt toward

mother, father and peers by adolescent girls indicating eating disturbances and disorders was examined.

It is necessary to note that the broader concept of eating disturbances was used within this study. While the concepts of eating disorders and disturbances are not analogous, it is assumed that eating disorders are a form of eating disturbance. The difference within these two notions is not necessarily in definition but in the conceptual breadth. As a result, conclusions regarding eating disturbances may be related and generalized to the narrower notion of eating disorders.

CHAPTER 2

Literature Review

Research Question and Scope of Review

The question under investigation in this thesis is "do female adolescent who report suffering from eating disorders or who report to possess some of the symptoms of eating disturbances also experience a dysfunction in attachment to parents - a concept which is inherent to the development of identity and autonomy in females ? Dysfunction within this thesis is interpreted as too little psychological attachment between the reported eating disturbed adolescent and her mother, father and peers.

To assess the conceptual link between eating disorders and abnormal psychological attachment in adolescent females, a brief literature search was conducted. By examining some of the psycho-social characteristics common to individuals suffering from eating disorders, a connection between eating disorders/disturbances and developmental deficiencies was established. In addition, studies evaluating the connection between dysfunctional family relations and the presence of an eating disordered family member were examined. Finally, a survey of recent developments in the field of adolescent development was conducted. This survey focused mostly on research in the field of female adolescence and specifically on the notion of psychological attachment and its importance in both adolescent and female adolescent development (i.e. the development of

an identity) Through this survey of the pertinent research, both the relevance and importance of this research question was substantiated and justified.

It should be noted at this point that the feminine pronoun is used throughout this study as eating disorders are predominantly a female psychopathology. It is estimated that 19 out of 20 individuals suffering from this eating disorder are female (Carson and Butcher, 1992).

Eating Disturbances / Disorders and Developmental Deficiencies

There has been an abundance of research on the psycho-social characteristics of persons with eating disorders. Through this research it has been established that eating disorders have been associated with indications of poor psycho-social functioning. Commonly, an individual suffering from an eating disorder has difficulty with personal feelings. As Siegel, Brisman and Weinshel (1988) explain, "Feelings can be and often are, intense for the eating-disordered person, who fears being overwhelmed by them ,or worse, still, overwhelming others with them" (p.42). The individual suffering from an eating disorder, while trying to gain some control within her emotional world, learns to negate or completely omit her personal feelings. As Hilde Bruch, a leading expert in the field of eating disorders suggests, individuals suffering from disordered eating often do not feel in control of their own bodies or lives (1982). Through rigid control over body weight and weight loss, a temporary feeling of control and well-being is achieved. As Bruch (1985) explains

rigid discipline over their eating with visible weight loss gives these adolescents the experience of being effective and in control at least in one area- the more weight loss the more superior they feel (p.10).

Despite these feelings of temporary control, the eating disordered individual inevitably experiences a core sense of ineffectiveness and inadequacy.

In addition to feeling ineffective and inadequate, the eating disordered individual also experiences negative emotionality and low interoceptive awareness. So strong are these feelings that Leon (1993) found a strong relationship between the existence of negative emotionality and the inability to label personal emotional arousal and the prediction of eating disorder risk in adolescent girls. That is, the risk for the onset of an eating disorder could be strongly predicted through the presentation of high negative emotionality and low interoceptive awareness within the adolescent girl.

Another common psycho-characteristic found in eating disordered individuals is a pervasive sense of low self-esteem. As stated, "...patients with eating disorders - both anorexia nervosa and bulimia have low self-esteem" (Fisher, 1991, p. 378). This characteristic is so common in eating disordered individuals that researchers have in fact found that low self-esteem is also a strong predictor for future eating disorders in adolescent girls. Button (1996) found that girls aged 11 and 12 indicating low self-esteem were at a significant greater risk of developing the more severe signs of eating disorders by the age of 15. Establishing a healthy self-esteem is not only considered an important developmental task but it is also a consequence of a healthy sense of identity. The fact that individuals with eating disorders possess a pervasive sense of low self-esteem implies that the development of an identity has at least been interrupted and that until the individual manifests a consistent and healthy self-image, the development of a healthy self-image and self-esteem will continue to be disrupted. Furthermore, the predictive nature of low self-esteem found by Button (1996) indicates that the low self-esteem experienced

by eating disordered individuals may exist prior to the onset of disordered eating. This pre-existing low self-esteem would certainly interfere with the development of a healthy self-image and a subsequent identity.

The presence of these psycho-social characteristics within eating disturbed individuals suggests that individuals with eating disturbances experience a disruption in the development of a sense of self. The inability to be aware of and acknowledge personal emotions, feelings of personal ineffectiveness and the presence of a pervasive sense of low self-esteem would imply that eating disturbed individuals lack a healthy sense of self. Many authors propose that the eating disturbed individuals lack a sense of personal autonomy, and therefore are unable to initiate and maintain the development of a sense of self. This connection between personal autonomy, the development of a healthy sense of self and eating disturbances is supported by Strauss and Ryan (1987). While researching autonomy disturbances and sub-types of anorexia nervosa (anorexia and bulimia), Strauss and Ryan found that anorexic and bulimic patients, in general, possessed a pervasive sense of personal ineffectiveness and lacked a strong sense of personal autonomy. As stated, “Compared with controls both anorexic groups [anorexia nervosa and bulimia nervosa] exhibited a more controlling style of self-regulation, poorer self- and other differentiation” (Strauss and Ryan, 1987, p.257). The inability to differentiate between the self and other is an indication that there is a lack of a sense of personal autonomy within the individual. As a result, the notion that autonomy disturbances are associated with eating disorders is at least supported. These two studies collectively support the notion that disordered eating is linked to a disturbance in the formation of a healthy sense of self and the establishment of feelings of personal autonomy associated with this sense of self.

While these aforementioned characteristics of eating disturbances support a connection between disturbed eating and developmental deficiencies, this connection is further supported when one examines the definition of autonomy in relation to these psycho-social characteristics. That is, the very definition of autonomy also lends support for this link.

Autonomy is defined as "a struggle for control, for a sense of identity, competence and effectiveness" (Bruch, 1973, p. 251). It is what enables individuals to experience choice and freedom in relation to oneself and to others (Strauss and Ryan, 1987) and allows the individual to regulate and govern the self by inner standards (Ryan and Lynch, 1989).

The notion of autonomy has been separated into three dimensions: cognitive, behavioural and emotional. Cognitive, behavioural and emotional autonomy incorporate independence and self-governance of thoughts, actions and feelings respectively. While the existence of all three dimensions of autonomy allows for and facilitates the process of individuation and the development of a greater-sense of self-determination in thought, behaviour and affect within an individual (Montemayor, 1994), it does not preclude the notion of relationship. Accordingly, cognitive autonomy involves the ability to refer to one's own thought process with little interruption from other individuals thoughts. This does not mean to suggest that cognitive autonomy is established through vehement individualism and independent thinking. Rather, cognitive autonomy develops within a cooperative relational context where ideas and thoughts are accepted by the individual because they are validated through fair and open discussion (Montemayor, 1994).

Comparable with cognitive autonomy many researchers contend that individuals establish

a sense of emotional and behavioural autonomy in a relational context (Ryan and Lynch, 1989, Steinberg and Lamborn, 1992). That is, in order to develop a sense of autonomy, an individual's feelings and actions must to some degree be validated by another individual. A sense of autonomy is established by interacting with another individual who acts as a reference point.

One can extrapolate from these definitions that the ability to accept and deal with one's feelings not only requires a certain degree of interceptive awareness but also is an inherent component of individuation. Personal feelings of effectiveness and control, then, are not only pre-requisites of personal autonomy and individuation but are also by-products of the development of an individuated sense of self. The existence of feelings of lack of control and ineffectiveness and the action of omitting one's personal feelings, all salient symptoms of eating disturbances and disorders, do not evidence the existence of an autonomous and individuated sense of self within the person and would certainly not facilitate the establishment of a individuated and autonomous sense of self.

This connection between eating disorders and a disruption in the development of a healthy sense autonomy is directly validated by Becker (1987) who found that late adolescents who reported bulimic symptoms indicated significantly more insecure attachment on the Insecure Attachment sub-scale (IA) of the Bell Object Relations Inventory (Bell, 1986) than non-bulimics. Low scores on the IA sub-scale signify fears of abandonment and lack of autonomy in relationships rather than the need or desire for social isolation (Becker, 1987). As a result, it has been demonstrated that a relationship exists between the presence of eating disorders and autonomy disturbances.

Another important feature of eating disorders which suggests a link between disordered eating and a developmental deficit, is the age of onset. For the most part the onset of eating disorders, including anorexia nervosa and bulimia nervosa, appears during early to middle adolescence. As Halmi et. al. (1979) note, "adolescence is a major risk period for the development of this disorder" (p.209). It is within the adolescent years that personal feelings are acknowledged and a certain acceptance of these personal feelings is experienced (Rothchild, 1979). As Offer and Colleagues (1988) state regarding normative adolescent development, "they [adolescents] attain a self that can be recognized as their own, one with which there is a sense of comfort" (p.16). Is it purely coincidental that within the very stage where adolescents are given the task of developing a sense of autonomy and identity that eating disorders most commonly appear? The aforementioned research on eating disorders would suggest otherwise. Consequently, it is only logical to involve the notion of a disruption in the individuation process and the development of the self when looking at the etiology and maintenance of eating disorders.

Many authors have suggested a direct link between eating disorders and a disturbed sense of self. Bruch, (1983) says "The relentless pursuit of thinness represents an effort to compensate for underlying deficiencies in personality and self-concept...the core problem lies in a deficient sense of self and involves a wide range of deficits in body awareness, individuation and conceptual maturation (p. 304). Along the same lines Goodsitt (1977) suggests the sense of self is underdeveloped in individuals suffering from eating disorders and as a result, the individuals experience of autonomy and integrity is impaired to some degree. In direct relation to the sense of autonomy, Rothchild (1979) has observed, "A classic variant of defective autonomy is seen among girls who go

'overboard' in alternate eating binges and starvation, as lacking adequate internal regulatory command of the body" (p. 281).

Despite the awareness of the conceptual link between eating disorders and the development of an identity incorporating the notion of an autonomous sense of self, little research has focused on this connection. Although many authors have noted the absence of this kind of research, (Strauss & Ryan, 1987, Hsu, 1992, Bruch, 1982) the connection between individuation, autonomy disturbances and disorders in eating, for the most part, remains unconfirmed. In light of this, it would seem rational and appropriate to approach the subject of eating disorders from a developmental perspective, focusing mainly on the concept of the development or the lack of development of an autonomous sense of self.

Family studies and Eating Disturbances and Disorders

Family patterns and eating disorders have been widely studied. It is generally accepted that families with an eating disordered member exhibit more boundary problems than those families without an eating disordered individual (Carson & Butcher, 1992; Bruch, 1972). For example, it has been found that families of anorexics discuss less openly disagreements between parents and children and that the family in general has interpersonal boundary problems (Kog & Vandereycken, 1989). These boundary problems are known as enmeshment.

Siegel, Brisman and Weinshel (1988) explain a possible reason for this avoidance behaviour and enmeshment is

...they [the families] fear conflict among family members. If people say what they feel, they may not agree with each other and tension, arguing and conflict will result. To some, conflict calls into question the family closeness; it is interpreted to mean that people do not love one another...high value is placed on everyone getting along well (p.60).

It would seem then, that family interactions are somewhat inhibited and superficial, creating a situation in which expressing how one really feels is not provided for. Rather than experiencing acceptance and connection, the eating disordered individual within an enmeshed family system experiences feelings of betrayal and isolation (Steiner-Adair, 1990). This would certainly affect the development of a healthy sense of self within an adolescent as being aware and acknowledging personal feelings allows the adolescent to assume responsibility for the self and choose and initiate action in accordance with one's own independently set guidelines (Rothchild, 1979). In other words, being aware of personal feelings and feeling comfortable about expressing them are important components for the development of an autonomous sense of self. Therefore, feelings of attachment to others especially parents is an important component of the developmental process and one that is not experienced in an enmeshed family system. This notion of attachment will be addressed more fully below.

Stern et al. (1989) discovered that the environment in eating disordered families differed in important ways from "normal" families (i.e. families in which there was no eating disorders). Families with an eating disordered individual tended to rate themselves as less supportive of each other and less accepting of openly expressing feelings. Moreover, the eating disordered family was more likely to have conflictual interactions, yet, the eating disordered member consistently rated their family as being low in expressiveness. Despite the fact that family members often try to avoid conflict, it is evident that conflict remains high and the ability to express one's feelings remains low in families where disordered eating is an issue. This circumstance, once again, would not be

conducive to developing an autonomous sense of identity. Rather, with conflict embedded strongly within the family communication process, and this conflict being perceived as such, individuals within this scenario refrain from expressing feelings in order to lessen the perceived conflict. As Stern (1989) et. al state, "The most consistently abnormal finding among the eating disorder subjects was that they rated their families as being low in expressiveness" (p. 1989). Because expression of feelings is inhibited within the familial context, the individual's ability to acknowledge and subsequently refer to personal guidelines will again be significantly affected. This inability to refer to the personal guidelines would not promote or foster the development of an autonomous sense of self.

Studying the relationship between eating concerns and perception of family, Mueller et al. (1995) found that adolescents who expressed concerns regarding under-eating also portrayed themselves as having poor family relationships. That is, they experienced a lack of intimacy with both mother and father and, therefore, experienced a degree of social isolation or lack of psychological attachment. In contrast, those adolescents expressing over-eating-concerns stated that they had an intimacy problem with father but not with mother and consequently possessed less feelings of social isolation than those individuals with under-eating concerns. Both groups also scored lower on self-esteem than did the control group - those individuals not possessing over or under-eating concerns. In order to experience a sense of psychological attachment in a relationship a certain degree of intimacy must also be experienced. Because individuals with concerns about under and over eating expressed a lack of intimacy with both their parents, it is very likely that feelings of psychological attachment to parents were also absent.

It is important to note at this point that an eating disordered-prone individual may report that over-eating is a concern when in fact it is under-eating that is the underlying issue (Mueller, 1995, p.1024). Therefore, individuals who are expressing a lack of intimacy with father, the self-reported over-eaters, may in fact represent the eating disordered individuals within this study. If this is the case, it would seem reasonable to suggest that the eating disordered individuals within this study experience a lack of intimacy with father and ,therefore, a certain degree of social isolation and psychological detachment. While this is speculative in nature, the Mueller study does suggest some kind of a link between the degree of intimacy and therefore attachment and eating disturbances

Zakin (1989), in a study of eating disturbances, emotional separation and body image, found that individuals who possessed eating disturbances also experienced less emotional separation from mother and father. Emotional separation was measured by the Psychological Separation Inventory developed by Hoffman (1984), which elucidates different aspects of psychological separation from both mother and father. Zakin not only confirms the notion that there is some kind of interference in the relationships between the eating disturbed individual and her parents but also introduces the notion that eating disturbed individuals experience a lack of psychological attachment toward parents. As a result, there is some kind of disruption in the separation/attachment process between parents and their eating disturbed child.

It has long been recognized that the family unit and the healthy functioning of this unit is an important component for the development of an identity within an individual. As Guidano (1983) confirms, “parents, as a mirror, provide their children with a self-

image...[that] orients and coordinates children's self-perception until they are able to perceive themselves in keeping the image that is supplied to them (p.103). As a result, when there is an inherent dysfunction within this important matrix, the result is a disruption in the development of the self.

The aforementioned research regarding family and social contexts indicates a link between dysfunctional family patterns and the existence of eating disorders, but the existence of one "type" of family interaction has not been established (O'Halloran, 1993). A distinct family pattern, then, cannot explain the etiology of disordered eating. As Killian (1994) states, "Researchers continue to struggle to elucidate connections between eating disorders and family interaction patterns" (p. 313). Nevertheless it has been confirmed that the family patterns of eating disordered individuals differ significantly from those families without such disorders. Rather than continuing to look for one distinct familial pattern as the etiologic answer for disordered eating, it may be more germane to look at family relations from a different perspective. That is, look at how the family context and interactions have affected the development of the self which embodies a sense of autonomy within the adolescent suffering from an eating disorder. In order to consider this approach, a thorough understanding of adolescent and female adolescent development process is required.

Female Adolescent Development

At one time, adolescence was considered a time of separation and individuation. So firm was this belief that the period of adolescence was defined by the very task of separation. It was suggested that through the process of separation a mature sense of identity was established within the individual. Authors such as Anna Freud (1958), Peter

Blos (1967) and Erik Erikson (1968) suggested the development of an autonomous sense of self rested firmly on the process of separation of the self from familial and childhood ties. As Stern (1990) states, "Indeed, autonomy has been seen not only as the preoccupation of adolescence, but also as the distinguishing feature of the mature individual" (p. 74). Recently, the notion that independence and separation from others is an integral part of the individuation process and the establishment of an autonomous sense of self within adolescence has been called into question (Hill & Holmbeck, 1986).

It has been firmly established, that rather than separation, connection or attachment represents an essential part of the development of a healthy sense of self within adolescents. Many authors have noted that rather than separating from parents, individuals remain very much connected and somewhat supported by their parents not only throughout adolescence but also in adulthood. As Hill & Holmbeck (1986) note, "We need little in the way of new empirical evidence to demonstrate that close influential relationships commonly exist between adolescent and adult children and their parents" (p. 150). Further studies lend evidence suggesting a connection between this continued attachment to parents and healthy psychological development within the adolescent. Grotevant and Cooper (1985) found adolescent identity exploration and maturation are inherently linked to a familial context involving progressive and mutual redefinition of the parent-child relationship and not, as previously believed, to the complete disengagement and separation of the adolescent from the familial relationship. Attachment to parents is also essential in late adolescence as well. Bell (1985) found first year college students reporting closeness to parents was positively and significantly correlated with social competence measures.

In addition to this current information regarding attachment and adolescents, it has also been found that attachment plays an integral role in female adolescent development as well. For adolescent women, identity formation and the development of an autonomous sense of self involves defining oneself in relation to and in connection with others. That is, the female sense of self and the development of this notion are relational in nature. As Hotelling and Forrest (1985) state, "...female development is based on fusion with this figure [primary attachment figure]. As a result, the young girl's feminine identity is based on relationships to and connections with other people and is threatened by separation" (p.185).

This notion of connection being an important component of female adolescent identity formation seemingly sets up a conceptual paradox. Our society considers connection and separation to be diametrically opposed concepts; however, within adolescent development, especially with female adolescents, connection and separation are inherently linked. The confusion seems to rest on the society's tendency to consider autonomy and separation as equivalent terms. The conceptualization of these two notions is, in fact, incorrect and misleading. As Debold, Wilson and Malave (1993) explain, "Separation and autonomy are not equivalent terms; a person need not separate from others emotionally to be autonomous" (p. 18). As a result, the two concepts can and, in fact, are required to co-exist within the developmental process without creating a paradox.

Other authors have addressed this apparent paradox through the concept of dependence (Memmi, 1984). Although autonomy and dependence are seemingly diametrically opposed terms, the existence of a sense of autonomy within an individual does not exclude the existence of dependence and vice versa. An autonomous individual,

while self-reliant and governing, can also be dependent. As stated by Ryan (1989), “definitionally, it is clear that a person can be dependent on a provider without necessarily being controlled, that is, without lacking autonomy” (p.340). In fact, autonomy within an individual can be supported and fostered through a certain degree of dependence.

By allowing connection and psychological attachment to occur, the notion of autonomy is fostered in adolescents (Ryan, 1989). Connection allows for the establishment and maintenance of a "secure base" from which exploration and development of the self can occur (Bowlby, 1988). At the same time, independence facilitates the creation of new relationships. As Stern (1990) notes, “By decreasing the extent to which others must meet their needs, these women [adolescence] are able to perceive others in a new way that enables them to attend to the other as a person” (p. 83). Independence and connection in the context of female adolescent development are linked in such a way that neither is prior to the other. Independence and connection relate mutually with each other, enhancing and facilitating not only each concept but also the process of female identity. As a result, both concepts within female development are required for a healthy development of the self. As Stern(1990) states “Relationships without independence becomes just as problematic as independence without relationships (p. 84). These concepts, then, are not opposing notions but are inherently related to each other in the context of female adolescent development.

With the concept of connection established as central to female adolescent development, the notion of psychological attachment becomes a salient feature in the development of an autonomous sense of identity within female adolescent development. To feel connected to another individual, it is essential one must also feel a certain amount

of psychological attachment to that individual. Steiner-Adair (1990) supports this by stating, “the female personality develops through attachment to others” (p. 163).

Consequently, the notion of psychological attachment is central to female adolescent development.

Based on this literature regarding "normal" adolescent development, it is plausible that a conceptual link between the presence of eating disorder and a disruption of the female adolescent developmental process exists. That is, a disturbance within this attachment process, specifically too little psychological attachment, may very well be related to the onset and maintenance of disturbed and disordered eating.

Attachment or intimate relationships have been found to enhance psychological characteristics such as self-esteem (Rutter, 1987, Button, 1990, 1996). As stated, “...it would seem likely that developmental factors, such as quality of parenting and social environment also play a significant part [in the development of self-esteem]” (Button, 1996, p. 194). Because psychological attachment enhances self-esteem and low self-esteem is considered a common psycho-social characteristic in eating disordered individuals, it would seem logical to propose that the absence of psychological attachment to parents is related to eating disorders in some way. If this is the case, the conceptual link between psychological attachment to parents and peers and eating disturbances and disorders is substantiated.

A recent study conducted by Catherine Steiner-Adair (1990) lends support for this relationship. The study suggests the presence of eating disorders is related to girls' perceptions of cultural values that make it difficult for girls to integrate and value relationships (Steiner-Adair, 1990). Through a semi-structured interview of thirty-two

girls, ages fourteen through eighteen, two themes emerged. Sixty percent of the sample responded in the pattern labeled "Wise Woman." The "Wise Women" pattern involved;

1. A sequence of being aware that there are new cultural expectations and values toward women and then identifying specifically the new societal values of autonomy and independent achievement in career and looks;
2. Identifying the societal image that embodies these values and challenging or rejecting the images;
3. Differentiating one's own ideal image of women from the societal image and making a choice of an ideal that is self-defined and self-oriented;

In contrast, forty percent of the sample responded in a pattern labeled, "Super-Woman."

This pattern involves

1. Not identifying exclusively the new cultural values of autonomy and success in women but rather attributing to society the more traditional values of caring and sensitivity toward women and sometimes mentioning some of the newer values;
2. Identifying the independent and autonomously successful Super Woman as society's ideal image;
3. Identifying with the societal image of the Super Woman as their own ideal image (Steiner-Adair, 1990, p. 171).

This Super Woman theme inherently rejects the important developmental notion of relatedness, connectedness and attachment to others. As Steiner-Adair (1990) states,

Super women, who identify with the cultural image of an autonomous, independent woman, are unable to hold for themselves a vision of adulthood that integrates the relational aspect of themselves. For them maturation becomes a process of loss, not gain (p. 172).

In contrast, the wise woman pattern, not only enables but incorporates the notion of connectedness as being important and central to female identity and maturation.

The most salient and relevant finding of this study is that all the girls who related to the Super Woman theme were found to be at risk for developing an eating disorder. Twelve of thirteen girls in the Super Woman theme scored in the eating disordered range on the Eating Attitudes Test. The one girl who did not score in this range actually scored in the anorexic-like range. Although this study cannot establish an etiology for eating disorders, it does illuminate the possible role connection and psychological attachment may play in the presence and maintenance of disturbed and disordered eating. With this notion of attachment established, Steiner-Adair (1990) proposes that when thinness, body image concerns and dieting are linked to the image of the autonomous, career achieving female (the super woman category) important developmental and identity needs for women are rejected - such as the notion of psychological attachment.

This study suggests there is a conceptual link between the existence of eating disorder and the degree of psychological attachment an adolescent girl experiences. Because the Super Women theme does not embody the notion of relationship, girls who internalize the super-women theme will obviously reject such a notion. This indicates that those girls with eating disorders or with signs of the possibility of developing an eating disorders do not, in fact, enable themselves to experience a sense of psychological attachment. This inability to experience a sense of psychological attachment would certainly disrupt relationships that these girls have with their parents and peers and ,therefore, may very well inhibit the development of an autonomous sense of self.

A study reported by Kenny (1992) further supports this link between eating disorders and the notion of psychological attachment. Kenny, by using the Parental Separation Inventory developed by Ainsworth (1978), found family patterns characterized by secure parental attachment were associated with healthy psychological functioning and low levels of dysfunctional eating behaviour. More specifically, psychological functioning and low levels of eating disordered behaviour were correlated with freedom from guilt, anger, resentment and anxiety in parental relationships. A relationship free of guilt, anger, resentment and anxiety would certainly be considered supportive and would possess a certain degree of psychological attachment between the an adolescent and her parents. In contrast, a relationship involving guilt, anxiety and resentment is unlikely to foster the support and degree of attachment needed for healthy psychological and emotional development. As Kenny (1992) states, "Feelings of anxiety and guilt do not reflect a healthy relationship with parents but represent the kind of interpersonal connection that can interfere with the development of a confident sense of self "(p.8).

Research Question

This present study was based on the question, are eating disturbances in adolescent females related to low levels of psychological attachment to mother and father ?

CHAPTER 3

Method

In this study the relationship between psychological attachment to mother, father and peers and the possible presence of eating disturbances is examined. Of specific interest is whether individuals indicating eating disturbances also report low-levels of psychological attachment with mother, father, and peers.

Subjects

The subjects for this study consisted of 83 female grade seven and eight students from a public school (School A) and an independent school (School B). Specifically, there were 19 grade seven students and 45 grade eight students from School A and 14 grade seven students and 6 grade eight students from School B. Permission to access students from these schools was acquired from the School District Board Office, and the principals and counsellors from both school A and School B. Parental consent was obtained along with the students' assent.

School A is a recently built suburban school that provides education for students of lower to middle class families. School B, is an established suburban school that provides education to students from middle to upper class families.

Response Rate

At School A a total of 300 consent forms were sent out and 81 were returned for a response rate of 27 %. Of these 81 respondents, 64 consented to participate in the study and 17 chose not to participate (participation rate = 79 %).

At School B a total of 70 consent forms were sent out and 24 were returned to the researcher (response rate = 34 %), 19 of whom stated they would consent to participate in the study (participation rate = 79 %). In total, 83 girls and their parents from both School A and B gave their permission to participate in this study and all 83 adolescent girls completed the surveys.

Of the 83 subjects, two stated they did not know their biological father and did not know an individual they felt acted as significant father figure in their lives and, therefore, declined to complete that portion of the IPPA scale. In addition, one individual did not complete the EAT. As a result, the total number of completed surveys, that is surveys with complete information on psychological attachment to mother, father and peers and eating attitudes, was 80.

Instruments

Inventory of Parent and Peer Attachment. The Inventory of Parental and Peer Attachment Scale (IPPA) consists of three sub-scales of 25-items each. The instrument was designed to measure adolescent attachment to mother, father and peers. Participants are asked to respond to each item with one of the following; “always”, “very often”, “often”, “sometimes”, “rarely”, and “never.” The IPPA has a range of scores 0-125.

The IPPA has been established as a reliable self-report assessment for attachment to parents and peers and to date has been used in a number of studies (Lyddon et. al., 1993). The IPPA possesses the potential for response bias as it is a self-report measure.

Test re-test reliability coefficients over a three-week period were .93 for the parental attachment sub-scales and .86 for the peer attachment sub-scale (Armsden and Greenberg, 1987). The IPPA possesses a good concurrent validity with scores correlating with measures of psychological well-being such as self-concept, self-esteem, positiveness, life satisfaction, problem solving and locus of control (Armsden and Greenberg, 1987).

Eating Attitudes Test

The possible presence of eating disturbances and disorders was measured by the Eating Attitudes Test (EAT) (Garner and Garfinkel, 1979), which has been used extensively as a screening instrument to differentiate individuals with eating concerns through detecting attitudes and symptoms indicating eating disorders.

The 40 items within the EAT are answered on a six-point Likert scale. Participants are asked to respond to each item with one of the following; "always", "very often", "often", "sometimes", "rarely" or "never". The EAT has a range of scores from 0-60.

The EAT has been a useful screening device for attitudes and symptoms of eating disturbances such as anorexia nervosa. As Garner and Garfinkel (1987) state, "the EAT is an objective and valid index of symptoms frequently observed in anorexia nervosa" (p. 276). The EAT was also chosen as the indicator of eating disturbances in this study because of its reported reliability and validity. The EAT has good internal consistency, with a coefficient alpha of .94 for combined sample of anorexics and normals and .79 for

anorexic subjects alone (Williams, 1987). The eating disordered group scored significantly higher on the EAT than did the non-eating disturbed groups.

The EAT also possesses strong evidence of predictive validity (Garner and Garfinkel, 1979). With a 23-item prototype, concurrent validity was tested. That is, the validity of the EAT was confirmed by comparing eating disturbed individuals against non-eating disturbed individuals. There was a statistically significant difference between the scores of the two groups (Williams, 1987). These findings were replicated in a separate sample. In addition, through post hoc analysis of a group of recovered anorexics, it was confirmed that the EAT is also sensitive to change with the recovered group of anorexics scoring in the normal range (Garner & Garfinkel, 1979).

Despite the recognition of being a useful identification tool for eating disorders, the EAT does possess some limitations. As a self-report measure, the EAT relies heavily on accurate self-reporting. Consequently, the EAT is vulnerable to faking. Those students with eating disorders may respond uncooperatively, thereby producing a certain degree of response distortion (Cesari, 1987). This distortion is especially likely with eating disorders such as anorexia nervosa and bulimia nervosa as denial is often a common characteristic of these disorders. As Garner and Garfinkel (1979) state, "this [response bias] may be of particular concern for patients with anorexia nervosa since they often display significant denial surrounding their disorder" (p. 277). Regardless of the potential for response bias, the EAT has been accepted as a useful tool for detecting cases of primary anorexia nervosa (cases which have not been previously been detected) (Garner & Garfinkel, 1987) and has been deemed as a useful tool in a "non-clinical setting to indicate the presence of disturbed eating patterns" (Garner et al. 1982, p. 7).

While Garner and Garfinkel (1979) established the minimum cut-off point for anorexia nervosa as a score of 30, in the present study, a cut-off score was arbitrarily established at 20 due to low numbers of subjects scoring above the original cut-off 30. Since the EAT has most frequently been used as a general index for eating disordered characteristics such as fear of weight gain, drive for thinness' and restrictive eating patterns, a higher score on the scale would indicate a tendency toward eating disordered behaviours (Williamson, 1990). A score of 20 on the EAT may not indicate a full blown eating disorder but was considered an indication of possible significant eating disturbances. An individual scoring 20 or above on the EAT may be considered to be demonstrating a certain degree of eating disruption and therefore the pre-requisites or initial stages of an eating disorder.

Procedure

Once consent from the School Board District Office, the School Principals and the parents and assent from the students was received, the researcher contacted the students through the school counsellors within classroom setting. Those students participating in the study were asked by the counsellor of the school to meet in groups of approximately ten members in the school library and/or the board room. Initially, a brief introduction to the research was given to the subjects, followed by a brief description of the two scales used in the study. The researcher remained in the room throughout the completion of the surveys to answer any questions.

All subjects were instructed not to place their name anywhere on the tests. The time required to fill out both the IPPA and the EAT was approximately fifteen minutes. The entire exercise took a maximum of twenty-five minutes

Student reaction to the surveys was positive with no student approaching the researcher with concerns or problematic reactions regarding the research. When questions arose they frequently concerned the definition of some of the words used in the scales such as “laxatives” and “preoccupied”. The researcher answered them with consistent definitions.

Analysis of Data

After the respondents answered the two questionnaires (IPPA and EAT), the tests were scored by the researcher. The scores from each test were entered into a database using Systat. The means and standard deviations for the EAT and the IPPA were calculated together with intercorrelations between variables.

Because the sample included both public and independent school students, an initial comparison was conducted between schools. A t-test was used to determine whether there were differences in the mean scores of the EAT score and the IPPA scores for mother, father and peers, between the two school groups. One test of the research question was provided by calculating the variables to determine whether a relationship existed between eating disturbances and degree of attachment to mother, father and peers. A t-test was used to determine if the differences found between the IPPA Scores between mother, father and peers were significant. In a second consideration of the data, two groups were established on the basis of the EAT scores. Group I (High EAT scoring group) consisting of those individuals reporting attitudes and behaviours indicating disturbed eating patterns (EAT score ≥ 20) and Group II (Low EAT scoring group) consisting of those individuals lacking behaviours and attitudes indicating disturbed eating

(EAT score ≤ 19). Comparisons between Group I and Group II for the three psychological attachment scores were conducted by t-tests.

Finally, in order to ensure that the internal consistency of the two measures was sufficient, Cronbach's coefficient alpha was calculated on the IPPA subscales and the EAT. The EAT reported an internal consistency of .75 whereas the internal reliability for the three subscales on the IPPA (mother, father and peers) was reported as .96, .94, .92 respectively. These are comparable figures to the internal reliabilities reported by the authors of the instruments.

CHAPTER 4

Results

The relationship between attachment to mother, father and peers and the possible presence of eating disturbances was examined. It was expected that individuals scoring in the eating disturbed range would be less psychologically attached to mother, father and peers than those girls scoring in the “normal” eating range.

Comparison by School Membership on the Eating Attitudes Test (EAT) and the Inventory of Parent and Peer Attachment (IPPA)

The preliminary analysis was conducted to test for the possibility of school differences on the EAT and all three of the psychological attachment scales on the IPPA - mother, father and peers is reported in Table 1. No significant differences in the degree of eating disturbance or attachment to mother, father and peers existed between schools. As a result, the data from both schools was pooled for the remaining analysis.

Students at both schools scored in the 2 to 40 range on the EAT measures. Scores on the EAT for School A students were somewhat higher, but not at a statistically significant level. Attachment scores were somewhat higher for School B students for mother, father and peers but ,again, the difference between schools was not statistically significant.

These findings suggest that eating disturbances are no more prevalent among students in the independent school system than in the public school system. In addition,

these findings also imply that the degree of psychological attachment felt toward mother, father and peers is not significantly different between independent and public schools.

Table 1

Comparison by School Membership on the Eating Attitudes Test (EAT) and the Inventory of Parent and Peer Attachment Scale (IPPA)

Scale	Group		t-value	df	significance
	School A	School B			
<u>Eating Attitudes Test</u>					
<u>M</u>	12.5	11.0	.80	80	ns
<u>SD</u>	7.9	5.2			
<u>n</u>	63	19			
<u>Attachment to Mother</u>					
<u>M</u>	102.4	106.4	.99	81	ns
<u>SD</u>	15.1	16.6			
<u>n</u>	64	19			
<u>Attachment to Father</u>					
<u>M</u>	90.2	98.8	1.45	79	ns
<u>SD</u>	23.8	19.5			
<u>n</u>	62	19			
<u>Attachment to Peers</u>					
<u>M</u>	102.8	108.2	1.36	81	ns
<u>SD</u>	16.2	11.8			
<u>n</u>	64	19			

ns- non significant

Correlations Among Variables

The data gathered on eating disturbances through the Eating Attitudes Scores (EAT) were correlated with scores on attachment to mother, father and peers obtained from the Inventory of Parent and Peer Attachment Scale (IPPA) from both schools by Pearson product moment correlations. As may be seen in Table 2, modest but statistically significant relationships exist between EAT scores and attachment to both parents. No relationship was found between psychological attachment to peers (IPPA peer sub-scale) and EAT scores.

Each of the correlations between the EAT and IPPA obtained was negative. The strongest correlation was between father attachment and the EAT. High scores on the EAT, indicating possible eating disturbances, were associated with lower feelings of psychological attachment to father. Similarly psychological attachment to mother and EAT scores were associated. Again, the higher EAT scores tended to go with lower feelings of psychological attachment to mothers.

The significance of the difference between two correlation coefficients for correlated samples was calculated between the correlation coefficients for attachment to mother and the EAT scores versus attachment to father and the EAT scores ($t = 0.42$, $df = 77$, $p > .05$). This suggests that psychological attachment of the subjects to mother and father are similarly associated to eating disturbances/disorders. Although negative as well, the relationship between peer attachment and self-reported eating disturbances was not statistically significant. It had been expected that attachment to peers would also be negatively correlated with the presence of eating disturbances.

Table 2

Correlation Between Eating Attitudes Scores and Attachment Scores

Scale	Variable		
	Eating Attitudes Test	Attachment to mother	Attachment to father
Attachment to Mother n=80	- 0.23 (p = 0.04)		
Attachment to Father n=80	- 0.33 (p = 0.003)	0.500 (p = 0.000)	
Attachment to Peers n=80	- 0.13 (p = 0.27)	0.17 (p = 0.13)	0.22 (p = 0.048)

Comparisons of High EAT Scoring Female Adolescents and Low EAT Scoring Female Adolescents on the Inventory of Parent and Peer Attachment Scale (IPPA)

The comparison between the High EAT scoring adolescent females and Low EAT scoring adolescent females on each of the psychological attachment scales is reported in Table 3. The subjects were grouped into two separate categories - High EAT scoring adolescents and Low EAT scoring adolescents through an arbitrary cut-off score of 20 on the EAT established by the researcher. The significant relationship between attachment to parents and reported eating disturbed attitudes and behaviours shown in the correlation matrix (Table 2) was diminished within this analysis.

Psychological attachment to mother scores were lower in the High EAT scoring group when compared to attachment to mother in the Low EAT scoring group. Similarly, psychological attachment to father was lower in the High EAT group when compared to attachment to father in the Low EAT scoring group. Subjects in the Low EAT scoring group scored higher on peer attachment than those in the High EAT scoring group. Not one of these differences, however, were found to be statistically significant.

Table 3

Comparison Between Eating Disturbed Female Adolescents and Non-Eating Disturbed Female Adolescents on the Inventory of Parent and Peer Attachment Scale

Scale	Group		t-value	df	sig
	High EAT Scoring group	Low EAT Scoring group			
<u>Attachment to Mother</u>					
<u>M</u>	96.1	104.1	1.63	80	ns
<u>SD</u>	16.7	14.9			
<u>N</u>	11	71			
<u>Attachment to Father</u>					
<u>M</u>	82.8	93.1	1.33	78	ns
<u>SD</u>	28.2	22.0			
<u>N</u>	10	70			
<u>Attachment to Peers</u>					
<u>M</u>	101.6	104.1	.49	80	ns
<u>SD</u>	17.6	15.0			
<u>N</u>	11	71			

ns- non significant

Post Hoc Analysis

In order to understand the data in table 3 further, a t-test for paired samples was used to elucidate whether there were significant differences between attachment to mother and father, attachment to father and peers, and attachment to mother and peers within both the Low EAT scoring group and High EAT scoring group.

The mean score for attachment to mother in the Low EAT scoring group was higher than the mean score for attachment to father in the Low EAT scoring group. This difference was statistically significant ($t = 4.62$, $df = 69$, $p < .001$). The mean score for attachment to mother in the High EAT scoring group was higher than the mean score for attachment to father in the same group. This difference was not statistically significant.

The mean score for attachment to father in the Low EAT scoring group was lower than the mean score for attachment to peers in the Low EAT scoring group. This difference was statistically significant ($t = 4.07$, $df = 69$, $p < .001$). The mean score for attachment to father in the High EAT scoring group was also lower than the mean score for attachment to peers in the same group; however, this difference was not statistically significant.

Attachment to mother within the Low EAT scoring group was identical to attachment to peers in the same group. Consequently, there was no statistical significance found between the two means. Within the High EAT scoring group the mean score for attachment to peers was higher than the mean score for attachment to mother although the difference between these two means was not statistically significant.

Interestingly, the comparisons of the means between each attachment score (mother-father, father-peer and mother-peer) for the High EAT scoring group did not

reach statistical significance. It should be noted that this lack of statistical significance may be due to the low number of subjects in the High EAT scoring group ($n < 12$). As a result, caution must be used when interpreting and discussing these specific results.

Discussion

The research findings answer the research question of this study. Adolescents with high scores on the EAT tended to report a lower degree of psychological attachment to mother and father than those adolescents with lower EAT scores. Those individuals reporting eating disturbances and disorders report somewhat less psychological attachment to mother and father than might be required for the development of a healthy sense of self. Although not a strong correlation, the results suggest that the degree of psychological attachment felt toward parents is related to eating disturbances and disorders. This indicates that a healthy degree of attachment to an important figure such as mother or father is related to the development of healthy eating patterns and behaviours. It may be that psychological attachment to parents is related in some way to the onset and maintenance of the eating disturbances/disorders when associated with additional factors such as specific parental behaviours, psychological or biological dispositions or environmental components.

More specifically, these results demonstrate that psychological attachment (IPPA) to father is as strongly correlated with the EAT as is psychological attachment to mother. The finding that low psychological attachment scores to father are associated with eating disturbances/disorders is consistent with the family studies concerning the role of fathers. The mean score of psychological attachment to father for the Low scoring EAT group was 82.8 out of a possible 125. This mean score indicates that those individuals reporting

to experience eating disturbances/disorders also feel less psychologically attached to father. This research suggests that individuals with eating disturbances/disorders may have emotionally absent fathers. A context in which a father is perceived as being emotionally absent by the adolescent would certainly not engender a sense of psychological attachment between father and adolescent. These findings confirm that there may be some validity to this familial research (Minuchin, O'Halloran, Stern, White).

The finding that the correlation for the attachment to father score is as equally significant as the correlation with mother attachment contradicts some of the previous literature regarding family studies and the role mother plays in the onset and maintenance of eating disorders. Family studies have tended to focus on the role of mother and the dysfunctions within the mother-daughter relationship. As Rabinor (1994) states, "When a female develops an eating disorder, poor mothering is often cited as the critical etiological factor" (p.274). The findings of the present study suggest that the adolescent-father relationship is modestly related to the presence of eating disturbances/disorders and when compared to attachment to mother, is equally as related to eating disturbances/disorders as the adolescent-mother relationship. Although the correlations were only modest, these findings bring into question the previous belief that "mothering" has a greater influence on the presence of eating disturbances and disorders. Through this study, it is reasonable to suggest that the whole family system must be examined when looking for the correlates of eating disturbances and disorders, and not solely the role of mother and the influence mother plays.

The low score demonstrated on the father sub-scale of the IPPA by individuals with eating disturbances supports Mueller's (1995) research in which adolescents with

over-eating concerns and, therefore anorexic-like issues and behaviours, felt a lack of emotionally intimacy with their fathers. As a result, the present study also lends support for this notion of lack of intimacy and adds to the literature by approaching the concept through notion of psychological attachment.

Within this study adolescents reporting eating disturbances/disorders indicated that they felt a moderate degree of psychological detachment toward mother while they felt less attached to father. The finding that High EAT scoring adolescents (self-reported eating disturbed and disordered adolescents) felt a higher degree of psychological attachment to mother than father is, in some respects, contrary to the previous family research. Family studies, in the past, have suggested that mother-daughter relationships where an eating disorder is an issue, are enmeshed and ,therefore, lack a healthy degree of separation. If this was the case, one would expect to observe this lack of separation as a high degree of attachment on the IPPA mother sub-scale. This was not the case with eating disturbed individuals scoring lower on the attachment to mother sub-scale. As a result, one of two things maybe occurring. Either the concept of “enmeshment” is misdefined and must be examined more closely to elucidate how it relates to the concept of psychological attachment or these findings contradict the previous family research by suggesting that rather than an over-attachment to mother, a lack of psychological attachment exists between the eating disturbed adolescent and mother. It is the researcher’s belief that the former is valid and that enmeshment manifests itself as lack of psychological attachment and not over-attachment. While this can only be confirmed through additional research, these findings suggest that the concept of enmeshment should be re-evaluated with this notion of lack of attachment to mother in mind.

In addition to moderately confirming the family studies, this research provides support for the autonomy disturbance theory. Adolescent females tend to define themselves in relationship to and with others. It is through relationships, and therefore attachment to others within these relationship, that an identity is formed. In the absence of these important relationships, the development of a healthy sense of self is impaired allowing the individual to become vulnerable to eating disorders. With the absence of essential reference points for development of the self, the cultural ideals that are known to be so unhealthy and detrimental may be referred to for the development of the self rather than significant figures such as mother and father. While the association between lower levels of psychological attachment to parents and adolescents suffering from eating disturbances/disorders was only moderate, these findings suggest that these adolescents are missing the important developmental concept of psychological attachment to parents. It is fair to speculate at this point that diminished psychological attachment to parents when in context with additional circumstances such as biological or psychological constitutes, or environmental context may disrupt the development of a healthy, autonomous sense of self and identity. As a result, degree of psychological attachment to parents may be one of the essential constituents for healthy adolescent development and therefore acts ,in combination with other specific circumstances, as an important preventative measure to eating disturbances.

CHAPTER 5

Conclusion and Implications

General Statement of the Findings

A modest but statistically significant negative correlation was found between eating disturbance/disorder scores and psychological attachment to parents. Although there was an apparent difference between the correlation for psychological attachment to father and psychological attachment to mother, the difference between the coefficients was not statistically significant. In conclusion to this finding, it can be stated that psychological attachment to mother and father are equally related, in some way, to eating disturbances and disorders in adolescent females. That is, psychological attachment to father is not more related to eating disturbances/disorders in adolescents than psychological attachment to mother and vice versa. Rather, both psychological attachment to mother and father are related in the same degree to eating disturbances and disorders in adolescent females.

Through the awareness that a certain degree of psychological attachment is related to healthy eating patterns, both parents and professionals such as counsellors are in a better position to not only assist but also educate the public on eating disturbances and disorders. The following discussion includes suggestions for strategies counsellors may use with the results of this study in mind, a discussion of the limitations involved with this study, and suggestions for future research.

Implications for Counsellors

By knowing the potential importance of psychological attachment to parents in relation to eating disturbances and disorders, counsellors may have a more comprehensive understanding of the issues concerning clients with eating disturbances and disorders.

These findings, as stated previously, suggest that rather than the role of and relationship with mother being identified as the dominant factor in the etiology of eating disorders, both the relationship with mother and father must be considered. The fact that the correlations between attachment to father and attachment to mother are equally as significant suggests that both relationships should be explored when dealing with a client with an eating disturbances or disorder.

Although the relationship between the EAT scores and psychological attachment to peers was not statistically significant, the tendency was for eating disturbed individuals to be less and not more psychologically attached to peers. It may be pertinent to explore additional important relationships such as friends and other significant relationships to get a comprehensive picture regarding the client's relational world.

In exploring the notion of psychological attachment, three concepts may be used. Armsden and Greenberg (1987), the authors of the IPPA measure, through factor analysis, suggest that three components make up the concept of psychological attachment - "communication", "trust" and "alienation" (Lyddon, Bradford & Nelson, 1993). By asking questions about relationships the client has with mother and father concerning trust, communication and alienation, the counsellor may be able to understand the client's world more comprehensively and sooner. The client, in turn, may also gain insight into the

notion of psychological attachment and how it relates to their world thereby facilitating a more rapid and holistic recovery.

Because the findings in this study suggest only a moderate correlation between psychological attachment to mother and father and potential eating disturbances/disorders, it is essential that the counsellor not solely focus on the parental role and/or relationships. This study suggests psychological attachment to parents is related to eating disturbances/disorders but in no way does it confirm a definitive etiological answer or even a sizable relationship. Rather, this study only lends more evidence to confirm the notion that eating disturbances/disorders are multifaceted disorders with many correlates originating from many different sources and not just one. With this to consider, it is essential that counsellors approach therapy from a broad perspective and with the knowledge of all the factors involved with eating disturbances and disorders. To do anything else would be to treat only a part of the presenting problem rather than all of it.

Limitations

In this study negative correlations were found between degree of psychological attachment to mother and father and scores on the EAT. The strength of this finding was lower than expected by the researcher and may, in fact, be due to some of the limitations within the study.

One such limitation was the sample size. The sample size of those individuals indicating eating disturbances was relatively small ($n=11$) and therefore may not have been truly representative of the population. A small sample can create problems. For example, the group reporting eating disruptions may have not possessed enough heterogeneity in eating disturbed/disordered behaviours causing the obtained correlation to be spuriously

low. As Borg and Gall (1989) state, “As the sample becomes less heterogeneous and less representative, however, the general significance of the findings diminishes (p. 181). That is, the full range of adolescent eating problems may not have been adequately represented within this group, affecting the subsequent findings. As a result of these limitations, the true relationship between psychological attachment and eating disturbances/disorders may not be demonstrated sufficiently.

Another factor affecting the outcome of the results may be the use of self-report measures. While the EAT has proven to be an effective and widely-used assessment tool for eating disorders, the self-report nature of this instrument may add to the limitations of the study. Eating disorders, by nature, are very denying disorders. As a result, when an individual who is eating disordered is asked about eating concerns through a pencil and paper measure, the potential for “faking” or guarded answer may be higher than with other psychometric measures (Williamson, 1990). However, this effect would be somewhat diminished within this study as the measure was not being used to assess the subjects for treatment but rather for anonymous group membership only. In addition, the subjects were fully aware of this use of the EAT. Regardless, “faking” is still a potential limitation within this study and must be considered when interpreting the results. As Raymond (1994) states, “...patients with anorexia nervosa are frequently uncooperative with research” (p.232).

Another limitation within this study involves the volunteer aspect of the participation. Due to essential ethical and legal considerations, informed consent had to be obtained from each human subject prior to participating in the research project. This requirement makes participation within a study voluntary. Because volunteers differ

significantly from non-volunteers, the results of the research can only be applied to groups resembling the volunteer group. As a result, this limitation must also be considered when interpreting the present results.

Finally, while it is tempting to interpret these results as a possible component of the etiology of eating disturbances and disorders, it cannot be overlooked that the relationship between the presence of eating disturbances/disorders and lack of psychological attachment to parents may be a consequence of the eating disturbance/disorders and not the precursor. Although these findings add to the current literature on the etiology of eating disorders, they do not establish definitive confirmation regarding the etiology of eating disruptions or disorders.

Suggestions for Future Research

It may be helpful in the future to conduct a replication of this study with several modifications. A replication would not only assist in confirming or disconfirming the validity of the evidence found within this present study but it would also check the validity of the research findings across different populations. In an attempt to increase the heterogeneity of the sample, it would be appropriate, in a replication study, to use two or more school districts and a broader range of schools within these school districts. The researcher attempted to gain access to more schools within the two districts used within the study but schools were generally very reluctant about participating in research involving students and personal questions. A broader range of schools would afford a more heterogeneous sample and a greater sample size. Although this present study had 80 subjects, a larger sample size would ensure greater statistical power. As Borg and Gall (1989) verify, "Statistical power is enhanced by a large sample size" (p. 235). As a result,

with a larger sample size, the researcher has the potential of finding greater statistical significance.

Finally, adding a qualitative component to the present study would be valuable. Through open-ended questions, the researcher would be able to explore further the relationship and the degree of psychological attachment the subjects have with parents and peers and important information regarding eating patterns and behaviours. While the quantitative component provides the basic research evidence, the qualitative component lends a more comprehensive picture by providing examples (Borg and Gall, 1989). As a result, by adding a qualitative component to this study, one would be certain to gain a more comprehensive and extensive idea about eating disruptions/disorders and psychological attachment to parents and peers. Furthermore, through a qualitative component the psychological construct of enmeshment could have been examined, allowing the researcher to elucidate how this construct relates to the notion of psychological attachment.

Bibliography

Alexander, J.F. (1973). Defensive and supportive communication in the family system. Journal of Consulting and Clinical Psychology, 40, 223-231.

American Psychiatric Association. (1994). Diagnostic and statistical manual of mental disorders (4th ed. Rev.). Washington, D.C.: Author.

Armsden, G.C., & Greenberg, M.T. (1987) The inventory of parent and peer attachment: individual differences and their relationship to psychological well-being in adolescence. Journal of Youth and Adolescence. 16 (5), 427 - 454.

Attie I., & Brooks-Gunn, J., (1989) Development of eating problems in adolescent girls: a longitudinal study. Developmental Psychology, 3 (1), 70-79.

Becker, B., Bell, M., & Billington, R. (1987). Object relations ego deficit in bulimic college women. Journal of Clinical Psychology, 43 (1), 92-95.

Bell, N., Avery, A.W., Jenkins, D., Field, J., & Schoenrock, C.J. (1985) Family relationships and social competence. Journal of Youth and Adolescence, 14, 109-119.

Blos, P. (1967) The second individuation process. Psychoanalytic Study of the Child, 72, 162-186.

Bowlby, J. (1988) A secure base. New York: Basic Books.

Brooks-Gunn, J., & Petersen, A.C. (1983). Girls at puberty: Biological and psycho-social perspectives. New York: Plenum Press.

Brown, C., & Jasper, K. (Eds.). (1993). Consuming passions: Feminist approach to weight preoccupations and eating disorders. Toronto: Second Story Press.

Bruch, H (1973). Eating disorders. New York: Basic Books.

Bruch, H.(1982). Anorexia nervosa: Therapy and theory. American Journal of Psychiatry, 139, 1531-1538.

Bruch, H. (1985). Four decades of eating disorders. In D.M. Garfinkel (ed.), Handbook of psychotherapy for anorexia nervosa and bulimia. (pp. 7-18). New York: Garfield Press.

Brumberg, J. (1988). Fasting girls. New York: Penguin.

Button, E.J., Sonuga-Barke, E. J. S., Davies, J., & Thompson, M.(1996). A prospective study of self-esteem in the prediction of eating problems in adolescent schoolgirls: questionnaire findings. British Journal of Clinical Psychology, 35, 193-203.

Carson & Butcher. (1992). Abnormal psychology. New York: Harper Collins Publishers.

Cesari, J.P. (1987). Assessment of eating disorders. In R.G. Harrington (Ed.), A Reference Guide for Comprehensive Psychological Assessment (pp. 147-175). Kansas City: Test Corp of America.

Chodrow, N (1978). The reproduction of mothering. Berkeley: University of California Press.

Debold, E. W., & Idelisse, M. (1993). Mother daughter revolution: from betrayal to power. New York: Addison-Wesley Publishing company.

Deter, H. & Hertzog, W. (1994) Anorexia nervosa in a long-term perspective: results of the heidelberg-mannheim study. Psychometric Medicine 56: 20-27.

Erikson, E. (1968). Identity: youth and crisis. New York: Norton.

Fallon, P., Katzman, M., & Wooley, S.C. (Eds.). (1994). Feminist Perspectives on Eating Disorders. London: Guilford Press.

Fisher, M., Schneider, M., Pegler, C., & Napolitano, B. (1991). Eating attitudes, health-risk behaviours, self-esteem and anxiety among adolescent females in suburban high schools. Journal of Adolescent Health, 12, 377-384.

Freud, A. (1958). The Psychoanalytic Study of the Child. New York: International Universities Press.

Garner, D.M., & Garfinkel, P.E. (1979). The eating attitudes test: an index of symptoms of anorexia nervosa. Psychological Medicine, 9, 273-279.

Garner, D.M. Garfinkel, P.E., & Bemis, K.M. (1982). A multi-dimensional psychotherapy. International Journal of Eating Disorders, 1, 3-46.

Garner, D.M., & Garfinkel, P.E. (1985) . Handbook of psychotherapy for anorexia nervosa and bulimia. New York: the Guilford Press.

Goodsit, A. (1977) Narcissistic disturbances in anorexia nervosa. In S. Feinstein & P. Giovacchini (Eds.), Adolescent Psychiatry, 5, 304-312.

Grotevant, H.D., & Cooper, R. (1985). Patterns of interaction in family relationships and the development of identity exploration in adolescence. Child Development, 56, 415-428.

Guidano, V.F., & Liotti, G. (1983) Cognitive process and emotional disorders. New York: Guilford.

Gull, W. (1874). Anorexia nervosa (apepsia hysteria, anorexic hysteria). Transactional Clinical Society, 7, 22-28.

Gunnar, M. & Collins, A. (Eds), (1988). Development During Transition to Adolescence; Minnesota Symposia on Child Psychology, 21, Hillsdale, N.J.: Erlbaum.

Hall, P., Driscoll, R. (1993) International Journal of Eating Disorders, 14(4), 497-499

Halmi, K.A., Casper, R.C., Eckert, E.D. Goldberg, S.C. & Davis, J.M. (1979). Unique features associated with age of onset of anorexia nervosa. Psychiatric Research 1, 209-215.

Harter, S. (1983) Developmental perspective on self-system. In Hetherington (Ed.). Handbook of Child Psychology: Socialization, Personality and Social Development, vol. 4. New York: Wiley.

Hill, J.P. & Holmbeck, G.N. (1986). Attachment and autonomy. Annals of Child Development, 3, 145-189.

Hotelling, K., & Forrest, L. (1985). Gilligan's theory of sex-role development: a perspective for counselling. Journal of Counselling and Development, 64, 183-186.

Hsu, G, Crisp, A.H., & Callender, J.S. (1992) Recovery in anorexia nervosa - The patients perspective. International Journal of Eating Disorders, 11(4), 341-350.

Kagan, R. (1982). The evolving self: problem and process in human development. London: Harvard University Press.

Kastenbaum, Robert. (1993). The encyclopedia of adult development. Phoenix: The Oryx Press.

Kenny, M.E. (1990). College seniors' perceptions of parental attachments: The value and stability of family ties. Journal of College Student Development, 31, 39-46.

Kenny, M.E.(1992) Parental attachment, psychological separation and eating disorders among college women. Paper presented at the Annual meeting of the American Psychological Association, Washington, D.C.

- Killian, K.D. (1994). Fearing fat; a literature review of family systems understanding and treatments of anorexia and Bulimia. Family Relations, 43, 311-318.
- Kog, E., & Vandereycken, W. (1989). Family interactions in eating disorder patients and normal controls. International Journal of Eating Disorders, 8 (1) 11-23.
- Korb, M. (1994). Anorexia as symbolic expression of a woman's rejection of her mother's life. Western Journal of Nursing, 16 (1), 69-80.
- Leon, G.R., Fulkerson, J.A, Perry, C., & Cudek, R. (1993) Personality and behavioural vulnerabilities associated with risk status for eating disorders in adolescent girls. Journal of Abnormal Psychology, 102 (3), 438-444.
- Lopez, F.G. (1993) Self-report measures of parental-adolescent attachment and separation-individuation: a selective review. Journal of Counselling and Development, 71, 560-568.
- Lyddon, W.J. & Alford, D.J. (1993). Constructivist assessment: A developmental-epistemic perspective. In G.J. Neimeyer (Ed.), Casebook of Constructivist Assessment (pp. 31-57). Newbury Park, CA: Sage.
- Lyddon, W.J., Bradford, E. & Nelson, J.P. (1993). Assessing adolescent and adult attachment: review of current self-report measures. Journal of Counseling & Development. 71, 390-395.
- Macoby, E. & Martin, J. (1983). Socialization in the context of the family: parent-child interaction. In E.M. Hetherington (Ed.) Handbook of Child Psychology: Socialization, Personality and Social Development, vol. 4. New York: Wiley.
- Memmi, A. (1984). Dependence. Boston: Beacon.
- Minuchin, S., Roseman, B.L., & Baker, L. (1978). Psychosomatic families: anorexia nervosa in context. Cambridge: Harvard University Press.
- Montemayor, R., Adams, G., & Gullotta, T. (1994). Personal relationships during adolescence. Sage publishing: London.
- Mueller, C., Field, T., Yando, R., Harding, J., Gonzalez, K., Lasko, D., & Bendell, D. (1995) Under-eating and over-eating concerns among adolescents. Journal of Child Psychiatry, 36 (6), 10019-1025.
- Neuman, P.A., & Halvorson, D.B. (1983). Anorexia nervosa and bulimia: handbook for counsellors and therapists. New York: Van Norstrand Reinhold.

Offer, D., & Offer, J. (1975). From teenager to young manhood: a psychological study. New York: Basic Books.

O'Halloran, S.M. (1993). Focus on eating disorders. Oxford: ABC-CIO Publishing.

Petersen, A.C. (1988) Adolescent development. Annual Review of Psychology, 39:583-607.

Raymond, N.C., Mitchell, J.E., Fallon, P., & Katzman, M. (1994). A collaborative Approach to the Use of Medication. In P. Fallon, M. Katzman & S.C. Wooley (Eds.), Feminist Perspectives on Eating Disorders, pp. 231-250). New York: Guilford Press.

Rothchild, E. (1979). Female power: lines to development of autonomy in adolescent girls. In Ax Sugar, Female Adolescent Development (pp. 274-295). New York: Brunner/Mazel Publishers.

Rutter, M. (1987). Psychosocial resilience and protective mechanisms. American Journal of Orthopsychiatry, 57, 317-331.

Ryan, R.M. & Lynch, J.H. (1989). Emotional autonomy versus detachment: revisiting the vicissitudes of adolescence and young adulthood. Child Development, 60, 340-356.

Selvini, M.P. (1974). Anorexia nervosa. Chaucer: London.

Siegel, M., Brisman, J., & Weinshel, M. (1988). Surviving an eating disorder. New York: Harper Perennial.

Smith, J.E., & Krejci, J. (1991) Minorities join the majority: eating disturbances among Hispanics and Native American Youth. International Journal of Eating Disorders, 10, 179-186.

Steiner-Adair, C. (1990) The body politics; normal adolescent development and the development of eating disorders. In Making Connections: The Relational Worlds of Adolescent Girls at Emma Willard School. Cambridge, Mass: Harvard University Press.

Steinberg, I., & Silverman, S. (1986). The vicissitudes of autonomy. Child Development, 57, 841-851.

Stern, S, Dixon, K.N., Jones, D., Lake, M., Nemzer, E., & Sansone, R. (1989). Family environment in anorexia nervosa and bulimia. International Journal of Eating Disorders, 13, (4), 43-48.

Stern, L. (1990). Conceptions of separation and connection in female adolescents. In Making Connections: The Relational Worlds of Adolescent Girls at Emma Willard School. Cambridge, Mass: Harvard University Press.

Strauss, J., & Ryan, R.M. (1987). Autonomy disturbances in subtypes of anorexia nervosa. Journal of Abnormal Psychology, 96 (3), 254-258.

Striegel-Moore, R.H., Connor-Greene P.A., & Shime, S. (1991) School milieu characteristics and disorders eating in high school graduates. International Journal of Eating Disorders, 10 (2), 187-192.

Sullivan, P. (1995) Mortality in anorexia nervosa. Brief Reports, 152 (7), 1073-1074.

Welbourne, J., & Pugold, J. (1984). The eating sickness: anorexia, bulimia and the myth of suicide by slimming. Brighton: The harvester Press

White, J.H. (1992). Women and eating disorders, part II; developmental, familial and biological risk factors. Health Care for Women International, 13, 363-373.

Williams, R.L. (1987). Use of the eating attitudes test and eating disorders inventory in adolescents. Journal of Adolescent Health Care, 8, 266-272.

Williamson, D.A. (1990). Assessment of eating disorders: obesity, anorexia, and bulimia nervosa. New York: Pergamon Press.

Wolfe, N. (1991). The beauty myth. Toronto: Vintage Books

Zakin, D. (1989). Eating disturbance, emotional separation and body image. International Journal of Eating Disorders, 8 (4), 411-416.

APPENDIX A

Initial Cover Letter

Dear Parent(s):

September 7th, 1996.

I am a graduate student in the Department of Education - Psychological Foundations at the University of Victoria. I am researching the issue of eating patterns/concerns and how these concerns relate to an individual's sense of relationships. To understand the correlation between these two issues, my thesis supervisory committee had recommended I survey grade seven and eight students. This will involve approximately twenty minutes. In order to survey grade students, I require your permission as a parent. Participation in this research is completely voluntary and confidentiality and anonymity will be protected at all times. Under no circumstances will your child's name appear on any data, survey or completed research.

A complete copy of the finished thesis will be given to the school. In addition, upon your request I will send you a copy of the results. This research will add to the current literature and therefore benefit many in the future. Please find enclosed the parental and student consent form. Please ensure these forms are signed and sent back to the school within the next seven days.

Thank you for your time and cooperation.

Yours sincerely,

Kate Scott-Moncrieff

APPENDIX B

Parental Consent Form

Pattern of Attachment and Eating Concerns in Female Adolescents.
Graduate Research in the Department of Psychological Foundations

Researcher: Kate Scott-Moncrieff
Telephone # 727-6230
Supervisor: Dr. Don Knowles
Telephone # 721-7792.

I understand this research project is studying the pattern of attachment adolescent females experience and eating patterns. I understand my daughter will be asked about her impressions about the attachment experienced to her parents and peers through one questionnaire. In addition, through another questionnaire, she will be asked about her opinions regarding her eating patterns.

I understand my daughter's participation is completely voluntary and that she can withdraw from the study at any time, without explanation. Withdrawal from this study will not affect her grade or standing in this course or in another course being taken. I understand that participation or non-participation in this study will not involve any negative consequences for my daughter.

I understand that any data collected in the study will remain confidential and completed questionnaires will be kept in a locked filing cabinet at all times. Furthermore, I understand that my daughter's name will not be attached to the questionnaires, the data collected or any published results, and that her anonymity and privacy will be protected at all times. Furthermore, no teacher will have access to the information gathered and at no time will the researcher discuss the result with the teacher. The only individuals who will have access to the data collected are the researcher, Kate Scott-Moncrieff, the researcher's Supervisor, Dr. Don Knowles, and the committee members, Dr. Walter Muir, Jim Anglin and Mary Jane McLachlan.

The information collected from the questionnaires will be destroyed once the study is complete. Information from the questionnaires will appear in the researchers thesis but no student will be identified within the thesis. If a student withdraws from the study, the information collected to date will be destroyed immediately.

I give my consent/do not give my consent (CIRCLE ONE PLEASE) for my daughter _____ to participate in this study and I understand the information contained within this consent form.

Parent's signature : _____

Experimenter signature : _____

Date : _____

APPENDIX C

Student Consent Form

Pattern of Attachment and Eating Concerns in Female Adolescents.
Graduate Research in the Department of Psychological Foundations

Researcher: Kate Scott-Moncrieff
Telephone #727-6230
Supervisor: Dr. Don Knowles
Telephone # 721-7792.

I understand this research project is studying the pattern of attachment adolescent females experience and eating patterns. I understand I will be asked about my impressions about the attachment I have experienced to both my parents and my peers through a questionnaire. In addition, through another questionnaire, I will be asked about my opinions regarding my eating patterns.

I understand my participation is completely voluntary and that I can withdraw from the study at any time, without explanation. Withdrawal from this study will not affect my grade in this course or in another course being taken. I understand that participation or non-participation in this study will not involve any negative consequences for me.

I understand that any data collected in the study will remain confidential and completed questionnaires will be kept in a locked filing cabinet at all times. Furthermore, I understand that my name will not be attached to any questionnaires, data or the published results, and that my anonymity will be protected at all times. Furthermore, no teacher will have access to the information gathered and at no time will the researcher discuss the result with the teacher. The only individuals who will have access to the data collected are the researcher, Kate Scott-Moncrieff, the researcher's supervisor, Dr. Don Knowles, and the committee members, Dr. Walter Muir, Jim Anglin and Mary Jane McLachlan.

The information collected from the questionnaires will be destroyed once the study is complete. Information from the questionnaires will appear in the researchers thesis but no student will be identified within the thesis. If a student withdraws from the study, the information collected to date will be destroyed immediately.

I consent/do not consent (CIRCLE ONE PLEASE) to participate in this study and understand the information contained within this consent form.

Student's signature : _____

Experimenter signature : _____

Date : _____

APPENDIX D

Recruitment Speech

I am a student at the University of Victoria and I am presently completing my Masters degree in Counselling Psychology. Part of the requirements for this degree is to complete a thesis. I have decided to research eating behaviors and concerns and psychological attachment to parents and peers. What I am looking at specifically is if there is a relationship between eating concerns and a type of attachment to parents and peers. I have chosen grade eight female students as my age group and that is where this group can help. I will be giving you two scales to fill out and it will take a maximum of 20 minutes. Please do not put your name or any identifying mark on these scales. This is to ensure your privacy and anonymity. If you decide at any time through this process to withdraw, this withdrawal will not affect your mark or standing within any course you are taking. Also, I will not discuss any of the data with any of your teachers, nor will your name be used when discussing the data with my committee members or while defending the thesis.

If any issues are brought up during or after this process, I will be free to talk with you at any time. If you have any questions before I hand out the two scales please feel free to ask them now.

I would like to thank you for participating in this study and if any one would like a finished copy of the thesis - I would be willing to share it with you once it is finished.

VITA

Surname: Scott-Moncrieff (nee Roberts)

Given names: Mary Kate

Place of Birth: North Vancouver, British Columbia, Canada

Educational Institution Attended:

University of Victoria 1994 to 1996

McGill University 1988 to 1991

University of Victoria 1986 to 1988

Degrees Awarded

B.A. (First Class Honors) McGill 1991



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Title of Thesis:

Psychological Attachment and Eating Disturbances in Adolescent females

Author:


Kate Scott-Moncrieff
March, 30th, 1997


**The coordination of perspectives and development of empathy in
children: An integrative review.**

by

Douglas Hilton Mollard
B.A., University of Saskatchewan, 1977
Adv. Cert. in Arts (4th year certificate), University of Saskatchewan, 1984
B.Ed., University of Saskatchewan, 1985
M.Ed., University of Saskatchewan, 1987

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Dr. Morgan Baker, Supervisor (Department of Sociology)

Dr. David Gattrell, Departmental Member (Department of Sociology)

Dr. Christopher Lalonde, Outside Member (Department of Psychology)

Dr. Valerie Kuehne, External Examiner (School of Child and Youth Care)

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University of Victoria

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Supervisor: Dr. Morgan Baker

Abstract

An integrative review of research related to the coordination of social perspectives and the development of empathy was conducted. A meta-analysis involving 51 studies of children aged 3- to 18-years was included within the integrative review. It was hypothesized that self-disclosure and socio-cognitive conflict are more likely to occur under conditions of communicative symmetry. It was further hypothesized that self-disclosure and socio-cognitive conflict provide a stimulus for the coordination of social perspectives, the development of empathy, and the occurrence of prosocial behavior. Evidence was found in support of both hypotheses, although the findings were uncertain regarding the development of empathy. Empathy was, however, found to have a moderate positive relationship with prosocial behavior.

Examiners:

Dr. Morgan Baker, Supervisor (Department of Sociology)

Dr. David Gartrell, Departmental Member (Department of Sociology)

Dr. Christopher Lalonde, Outside Member (Department of Psychology)

Dr. Valerie Kuehne, External Examiner (School of Child and Youth Care)

GRADUATE ADMISSIONS

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Introduction

Individuals enter social relationships with different social histories, sensitivities, and values. Individuals have different social perspectives and perceive and interpret the social interactions that they are in, in differing ways. Understanding how individuals coordinate their social perspectives within relationships is of theoretical and practical relevance. Of particular interest is the manner by which individuals coordinate their social perspectives such that *compassion* emerges within the relationship. Working professionally as a teacher/counselor, I have mediated hundreds of interpersonal conflicts with children and youth. I have observed a subtle turning point within the mediation process from which stable collaborative resolutions can evolve. Following an exploration of conflict from the viewpoint of each participant in a dyad, there is often a compassionate understanding of ego with alter that evolves and with it a genuine desire to resolve the conflict in the best interests of both participants.

I have developed both a theoretical understanding of this phenomenon and a knowledge of practical methods to facilitate its occurrence. Such knowledge is of direct relevance for developmental work with children and youth (i.e., socialization, psychopathology, youth violence). Such understanding is also of relevance for the conscious development of caring communities.

Child development involves not only individual processes, but social ones as well. Child development occurs within immediate personal relationships (i.e., family, peer group, school, etc.) as well as within the context of broader social relations. At an individual level, children form schemata which serve as interpretive frameworks to make sense of their social world. These interpretive frameworks exist at the level of both the mind and the brain (The actual nature of the mind-brain link is a source of considerable ambiguity and controversy. see: Borst, 1970). Children elaborate existing schemata in order to accommodate novel experiences and information. Children are often able to generalize or transfer such learning to new contexts.

Children are challenged to adapt to, and master, their social environment. Socially they need to coordinate their actions with those of others. To do so children must consider others. Children's depth of social awareness increases with age enabling increased perspective taking ability and more autonomous social functioning.

Children have a private subjective reality within which they have unique individual representations of their social world. In order to coordinate social relations with others it is necessary to have collective social representations which bring intersubjective agreement and common understanding to social relationships. Collective social representations refer to concepts and categories which a collectivity share and use to define their social interactions. Martha Augoustinos defines social representations:

Social representations refer to the ideas, thoughts, images, and knowledge which members of a collectivity share: consensual universes of thought which are socially created and communicated to form part of a 'common consciousness.' Social representations constitute the stock of common knowledge and information which people share in the form of common-sense theories about the social world. They comprise both conceptual and pictorial elements. Through these, members of a society are able to construct social reality. (Augoustinos, 1998, p. 156)

Moscovici states: "social representations ... concern the contents of everyday thinking and the stock of ideas that gives the coherence to our religious beliefs, political ideas and the connections we create as spontaneously as we breathe. They make it possible for us to classify persons and objects, to compare and explain behaviors and to objectify them as parts of our social setting" (Moscovici, 1988, p. 214).

Collective social representations form an intersubjective interpretive cultural framework. Collective social representations make salient certain aspects of social reality while minimizing or excluding other aspects. Collective social representations are intersubjectively held as universal abstract concepts which have been stripped of the particulars of contexts and individual representations from which they evolved. While

subjective realities and individual social representations may be congruent with collective social representations, subjective realities and individual social representations possess and embody grounded contextual aspects of an individual's phenomenal and social reality which collective social representations do not. Oyserman and Markus state: "On an individual level, social representations are meaning-making structures; at the group level, they are the framework which allows individuals from the same social context to be able to predict or make sense of social interactions with the others" (1998, p.124).

Some collective social representations dominate the interpretive social processes of groups. Hegemonic collective social representations reflect or support the interpretive social frameworks of those with the most social influence or power. Social sanctions in the hands of those in power maintain the hegemonic dominance of congruent collective social representations. Social representations, however, are not all hegemonic and may be emancipated or polemic representations of societal subgroups (Flick, 1998).

Larger structural relationships in society are maintained not only through power relations, but also through social processes such as exchange (i.e., money; see Simmel, 1990). In exchange, non-linguistic action consequences serve to prioritize collective social representations relating to those aspects of social relationships which are central to the exchange process. Consequently, particulars of individual subjective realities and individual social representations may be unacknowledged or not fully incorporated within relationships related to exchange processes (Braaten, 1991; Habermas, 1987, 1990). This includes a multitude of social relationships related to exchange processes such as labour, production, transportation, government, socialization, etc. .

Dominant collective social representations are often unreflectively held by individuals. Dominant collective social representations in dialect relationship with individual social representations, subjective realities and personal agency influence individual social interpretation at the core. Individuals construct meaning and interact with others within

their social world on the basis of their interpretive frameworks. Such interpretive schemata form frameworks for social analysis, evaluation, and action.

Reminiscent of C. H. Cooley's "looking-glass self" (Cooley, 1964), as individual identity evolves there is an incorporation of self-awareness, and inferences made regarding the perspectives of significant others related to self, into a unitary decentered self-structure. Through this process collective social representations--which are present in social interpretation and in inferred evaluations of others regarding self--become embedded within the formation of an individual's own self-concept and interpretive social schemata. As individuals evolve, some develop awareness of the constructed nature of collective social representations held by others or reflexive awareness of collective representations held within personal interpretive frameworks [See Kegan (1982) for related discussion of evolving social awareness within interpersonal relationships]. Reflexively aware, such individuals have the potential to assess and change their interpretive frameworks.

Change at an individual or subgroup level may threaten the dominance of social representations held collectively if the particulars of individual subjective realities and individual (or subgroup) social representations challenge the abstract universal characteristics of collective dominant social representations. Collective dominant social representations thwart the reconstructive challenges of non-conforming individual (or subgroup) social representations and subjective experience through asymmetries of communication. Asymmetry of communication privileges dominant collective social representations in the public domain. Conflicting individual or subgroup social interpretations (emancipatory or polemic social representations) threaten status quo perquisites and are marginalized. Status and position may be used to prioritize and amplify social representations that reflect and maintain support for the status quo.

With symmetry of communication social reconstruction of collective social representations becomes possible. Symmetry of communication involves a relationship in

which social perspectives and interpretations may be expressed, reflected upon, and negotiated. When particulars of subjective realities and conflicting individual social representations are present in the public domain they may stimulate the elaboration of existing intersubjective collective social representations to accommodate the diverging perspectives.

Reconstruction of personal interpretive schemata may occur as an accommodative outcome of novel information which is in the public domain--or present at an interpersonal level. It is co-construction at the interpersonal level that is the focus of this thesis. Of particular interest is co-construction related to moral development that occurs within children as they coordinate social perspectives. Children enter social interactions with their own individual social perspectives. Through discussion and negotiation, they are able to express and consider each others social perspectives, and are able to coordinate their social interactions.

Broader social relations--reflected within dominant collective social representations--may generate asymmetries of communication in the lifeworlds of children, thus limiting the interpersonal communication necessary for children to develop awareness--and accommodation--of the perspectives of others in a new coordination of social perspectives. With symmetry of communication, accommodation of other children's social perspectives within an elaborated coordination of social perspectives is made possible. Understanding factors related to children's development of coordinated social perspectives is central to my thesis.

This thesis begins with a theoretical overview and clarification of key concepts related to my research problem. The central problem addressed in this thesis is: what variables facilitate the coordination of social perspectives, the development of empathy, and the occurrence of prosocial behavior (these are the dependent variables) in children? I propose a model in which communicative symmetry (antecedent variable), self-disclosure

(independent variable), and socio-cognitive conflict (independent variable) are considered in relation to the dependent variables.

Literature related to the antecedent, independent, and dependent variables is surveyed. I discuss strategies to obtain a thorough enumeration of the research literature in this field and to aggregate the obtained information. The need for, and advantages of, an integrative research review are discussed. I argue that an integrative review which incorporates meta-analysis and narrative review promises to be the most effective strategy given the nature of the problem under study. A meta-analysis of research literature relating to the relationships among the antecedent, independent, and dependent variables is reported. Relationships among these variables are further analyzed through a narrative review of related studies.

Sex differences and age differences are intentionally not considered in detail within this integrative review. While both variables are considered as potentially important mediating variables within the data considered, to include them within the integrative review would only introduce further complexity to the model being considered. Furthermore, and importantly, it was not possible to disaggregate and cumulatively consider data that were reported without clear consideration of sex and age differences. Where data clearly report sex and age as variables, that data are reported where relevant to do so.

The intent of this integrative review is to develop greater clarity regarding the nature of, and relations among, variables related to moral development of children. Such theoretical understanding in the context of current research provides the basis upon which to identify and evaluate intervention strategies which can facilitate children's moral development.

Chapter 1

Coordination of Perspectives in Children: Concepts and Theories

Theoretical Overview and Background to the Problem

The central focus of my thesis is the examination of constructive processes involved in the development of coordinated social perspectives and the development of empathy. Symmetry of communication is the antecedent variable which facilitates constructive processes through the occurrence of self-disclosure and socio-cognitive conflict. The coordination of social perspectives and the development of empathy which occurs involves an integration of affect and context within an elaborated cognitive structure.

This thesis is based on a model of the self that is decentered and socially constructed. Models proposed by Mead (1930, 1934) and Piaget (1932) are central to understanding the coordination of social perspectives, empathy, and prosocial behavior.

Mead, building on the work of Cooley (1933, 1964, 1969; Jandy, 1969), argued that it is in the context of others that individuals encounter themselves. Through understanding the perspectives and organized systems of meaning others hold, individuals reflexively encounter themselves as an object, an object that others are in relationship with. Mead extended Cooley's formulation of the social self ('looking-glass self') through a consideration of the 'generalized other' in which the self is defined not only by the perspective of a dyadic other, but in addition, the self is reflexively considered in its embeddedness within group role structures (Reck, 1964, p. 265).

As children mature there is an increased awareness of the separation and interrelationship between themselves and others. This awareness is found in the images that children hold of themselves and others. The images that children hold of themselves and others are for Cooley (1933) *the solid social facts*: "The intimate grasp of any social fact will be found to require that we divine what men think of one another" (p. 47).

As language and ideational abilities develop, children are increasingly able to perform more sophisticated, abstract, intellectual processes. Within the theory of the looking-glass self, is a description of the interaction between self and others that occurs as intellectual sophistication evolves. The looking-glass self assumes that the ideational levels of individuals have evolved to the stage that they can make inferences regarding the images that others hold in their minds--in particular inferences regarding images and judgments that others hold relating to themselves. The three key elements of the looking-glass self are: "the imagination of our appearance to the other person; the imagination of his judgment of that appearance; and some sort of a self-feeling, such as pride or mortification"(Cooley, 1964, p. 184).

A more detailed description of the looking-glass self involves: the unknowable actual reality of the self; self's self-conception; self's inference of other's perception of its self-conception, and of itself; and other's actual perception of self's self-conception, and of self. There are a corresponding number of elements when other is considered as a self. Underlying many of these elements are concomitant self-feelings (i.e., pride, mortification, etc.). The concomitant self-feelings result from the reflexive consideration of self in the context of the inferred perception of self by others which the looking-glass self enables. Clearly, many complex interrelationships can exist between any two individuals within the context of the social perceptual possibilities present in the looking-glass self.

The self does not exist in isolation, but rather in relation to others. Perceptions related to self and others form unitary images with concomitant self-feelings. These images, states Cooley (1964)--particularly those relating to individuals we are most identified with--move into memory and become connected with specific emotions or sentiments:

As regards one's self in relation to other people...there is no view of the self, that will bear examination, which makes it altogether distinct, in our minds from other persons. If it includes the whole mind, then, of course it includes all the persons we think of, all the society which lives in our thoughts. If we confine it to a certain

part of our thought with which we connect a distinctive emotion or sentiment called a self-feeling, as I prefer to do, it still includes the persons with whom we feel most identified. *Self and others do not exist as mutually exclusive social facts.* (Cooley, 1964, p. 126)

The looking-glass self implies a cluster of dyadic relationships between self and others with concomitant self-feelings--feelings that form the strongest sentiments when we are in relationship with significant others. The resulting self-structure implies a decentered social fusion in which society is within the mind, yet the mind is social. Cooley states:

A separate individual is an abstraction unknown to experience, and so likewise is society when regarded as something apart from individuals. The real thing is Human Life, which may be considered either in an individual aspect or in a social, that is to say a general aspect; but always, as a matter of fact, both individual and general. In other words, "society" and "individuals" do not denote separable phenomena, but are simply collective and distributive aspects of the same thing. (Cooley, 1964, pp. 36-37)

While Mead extended Cooley's work through his incorporation of role-taking and the development of the generalized other, he neglected Cooley's consideration of subjectivity in general and affect in particular. Cooley had posited the formation of a decentered social self which synthesized self-feelings and sympathetic insight into socialized feelings or sentiments. For Cooley (1964, p. 136) sympathetic insight implies: "entering into and sharing the minds of other persons. To converse with another, through words, looks, and other symbols, means to have more or less understanding or communion with him, to get on common ground and partake in his ideas and sentiments." Theorists such as Kohlberg, who followed Mead, have--like Mead--tended to neglect a holistic consideration of cognitive and affective aspects of identity formation. The bifurcation between cognitive and affective aspects of moral development has persisted and has led to contemporary

efforts to develop a synthesis. For example, Johnson (1992) has extended Mead's role-taking into a model of emotional development.

In addition to Mead, Piaget was the other key foundational theorist who analyzed the coordination of perspectives. Piaget argued that children are initially egocentric. As they grow older, they come into contact with opposing points of view and varied social institutions. Their thought goes through a process of "decentering" (Ginsburg & Opper, 1969). "As the child becomes able to decenter his attention, as he begins to focus on various aspects of reality simultaneously, as he comes to understand another person's point of view, then he gains a more objective knowledge of reality" (Ginsburg & Opper, 1969, p. 228).

Piaget (1932) theorized that constraint and cooperation represent two different forms of social relations. Young children are characteristically egocentric and their moral reasoning, which is based on the asymmetrical constraining influences of adult authority figures, is heteronomous in nature (Leman & Duveen, 1996). Through communication with others, children move from authority-based moral reasoning to autonomous reasoning characterized by social cooperation. Given developmental readiness, through communication, children develop an increasing ability to understand the subjective motivations of others and to incorporate this deeper level of awareness within their social reasoning.

Piaget in his work on moral development was interested in clarifying core developmental processes which are expressed in the moral reasoning of children. Durkheim's earlier theoretical work relating to the construction of group and individual norms (Durkheim, 1972) was a foil for Piaget. Piaget sought to distance himself from the position that moral reasoning was based on the formation and enforcement of group norms. Piaget labeled such a position as heteronomous. Piaget saw heteronomous reasoning as indicative of an early immature stage of moral reasoning. Piaget observed that through the give-and-take of peer interaction, social norms and rules are open to

examination and renegotiation. Cooperative relationships emerge through the elaboration and equilibration of reciprocal mutual social agreements. Through interaction with peers children become less dependent on adults for unilateral *heteronomous* direction and move from egocentric functioning to develop their own *autonomous* cooperative social relations.

Mead, in his consideration of role taking, also examined the process by which children develop autonomous coordinated relationships with others. Children initially take the individual roles of others in play. As children develop, through contexts such as social games, they are able to coordinate their own role with those of others. Children become less dependent on the direction of adults and more autonomous through their incorporation and enactment of social roles.

Kohlberg's doctoral dissertation was an extension of the work of Piaget. Kohlberg sought to more finely consider the move from heteronomous behavior to autonomous behavior. Kohlberg was interested in forms of moral reasoning. Within the developmental elaboration of moral reasoning, Kohlberg sought a deeper cognitive structure that could be evidenced through the occurrence of discrete sequential stages of reasoning. Higher stages involve a less egocentric consideration of others and an expanded consideration of broader social relationships. From the perspective of a detached objective observer, higher stages are based on a broader frame of reference and a greater reciprocity of moral reasoning. Kohlberg, like Piaget saw peer interaction and role-taking opportunities as catalysts for the elaboration of more cooperative and just social relations.

What is noticeable in its absence from the work of Piaget, Mead, and Kohlberg is an in-depth consideration of subjectivity and the coordination of subjective perspectives. Piaget's use of the term perspective taking is deceptive and was based on his work relating to the understanding and coordination of visuo-spatial perspectives between children--not social perspectives (Mounoud, 1996). Mead, on the other hand, was interested in the coordination of role behaviors between children and did not engage in a discussion of

subjectivity and the coordination of social perspectives. Kohlberg's cognitive focus on the elaboration of moral reasoning is based on the development of symmetrical cooperative relationships between individuals with little reference to the coordination of subjective social perspectives.

It is Selman and the Harvard structuralists who have sought to clarify the nature of social perspective taking and the coordination of social perspectives within moral development. Selman has attempted to articulate a developmental stage sequence of social perspective taking. The work of Selman extends the work of Kohlberg.

Selman's developmental model of moral reasoning (1980; Selman, Watts & Schultz, 1997) involves a refined consideration of the manner in which social perspective taking is coordinated. Selman's model is firmly grounded in the work of Mead, Piaget, and Kohlberg. Selman states: "In our own early work on perspective taking, we *attempted* to follow Mead's social-conceptual model more closely while still operating *within* a Piagetian structural model of developmental psychology" (1980, p. 29).

The central purpose of Selman's work is to clarify the developmental processes involved in the coordination of social perspectives. Selman has developed a theoretical model that describes a number of distinct developmental levels involved in the coordination of social perspective taking:

Level 0: Undifferentiated and Egocentric Perspective Taking (about ages 3 to 6). Young children do not clearly differentiate physical and psychological characteristics of persons.

Level 1: Differentiated and Subjective Perspective Taking (about ages 5 to 9). The key conceptual advance is the clear differentiation of physical and psychological characteristics of persons.

Level 2: Self-reflective/Second-person and Reciprocal Perspective Taking (about ages 7 to 12). Key conceptual advances at Level 2 are the growing child's ability to step mentally outside himself or herself

and take a self-reflective or second-person perspective on his [or her] own thoughts and actions *and* on the realization that others can do so as well.

Level 3: Third-person and Mutual Perspective Taking (about ages 10 to 15). The critical conceptual advance is toward ability to take a true third-person perspective, to step outside not only one's own immediate perspective, but outside the self as a system, a totality.

Level 4: In-depth and Societal-Symbolic Perspective Taking (about ages 12 to Adult). Actions, thoughts, motives, or feelings are understood to be psychologically determined, but *not necessarily* self-reflectively understood. (Selman, 1980, pp. 37-40)

In a series of studies Selman (1980; Selman & Schultz, 1990) has found strong empirical support for the presence of sequential, developmental levels of perspective taking as defined above. It has been suggested that there are definite links between social perspective taking as articulated by Selman, and moral reasoning as articulated by Kohlberg:

[Social perspective taking] involves decentering from one's own exclusive point of view and coordinating the perspectives of others (anticipating what each person wants and values, how each person is aware of the internal states of others, and how each person is aware of mutual understandings and agreements); so also schemes of cooperation [moral reasoning] involve balancing each participant's interests and establishing a shared basis of mutually beneficial interaction. (Rest, 1983, p. 594)

Selman (1973, as cited in Rest, 1983, p. 594) examined longitudinal cases in which both social perspective taking and moral judgment were assessed. He found no cases where moral judgment was at a higher level than social perspective taking though there were cases where it lagged behind. "In general, a number of studies using a number of

approaches support the hypothesis that certain Piagetian logical operations and certain Selman stages of perspective taking are prerequisite components of certain Kohlbergian moral development stages" (Rest, 1983, p. 594).

Given the prominence of Kohlberg's work in the area of moral development (1981), his model of moral reasoning has been subjected to extensive scrutiny and critique. Interestingly, the first four stages of his multi-stage model most closely approximate the work of Piaget, are the most aligned with Selman's model of social perspective taking, and have received the least critique (Kavathatzopoulos, 1991).

Criticism of Kohlberg centers on the nature of his formulation of moral reasoning--particularly of post-conventional reasoning--as a conceptual and abstract individual endeavor (Habermas, 1990). Gilligan (1982, 1998) critiques Kohlberg in this regard, as well as for his lack of a consideration of affect. Gilligan states that what is required is a consideration of moral reasoning within a contextually grounded intersubjective ethic of care. While an elaborated cognitive coordination of social relationships is involved in the development of moral reasoning, it is also important to develop a deeper empathic consideration of others.

Habermas notes that both Piaget and Kohlberg have developed models which propose irreversible developmental levels of moral reasoning:

Along similar lines Piaget and Kohlberg lay down a hierarchy of distinct levels or "stages" of learning, with each defined as a relative equilibrium of operations that become increasingly complex, abstract, general, and reversible. Both theorists make assumptions about the logic of an irreversible learning process (Habermas, 1990, p. 34).

There is a need to more fully consider subjective aspects of the relations between self and others through which *social* perspective taking occurs. There is also a need to reconsider work such as Cooley's in which there is a constructive relationship between self-other, and affect-cognition. The interrelationship between cognition and affect related

to the coordination of social perspectives and the development of empathy will be a central integrative concern in my review of the literature.

The cognitive-structuralist theory of moral development of Kohlberg and his associates has neglected affect, context, social representations of meaning, and macro relations (Roebben, 1995). A constructivist approach addresses these concerns and provides a more holistic consideration of the dialectical integration of subjective, contextual, and larger social relations within the development of self and other. It is at the interpersonal level in the formation of self and other that larger social relations become embodied within interpersonal relationships. The cognitive-structural insights of Kohlberg and his associates are enriched rather than ignored within a constructivist approach (i.e., Cooley, Mead, Piaget). The formation of self in relation to others as articulated by Mead and Piaget provides a model of identity formation which is fleshed out through interpersonal construction of meaning.

Piaget, Mead, and Kohlberg have highlighted aspects of the developmental elaboration and coordination of cooperative social relations. Selman has articulated the need to consider not only the elaboration and coordination of social relations, but also the need to consider the increasing depth of subjective perspective taking within this context. At an interpersonal level increasing subjective depth of social perspective taking implies an increasing empathic awareness of others. It is through the coordination of social perspective taking that intersubjective awareness is integrated and empathy enhanced.

There are a variety of facets that may be considered in the coordination of social perspectives. The social perspective of other must be expressed or at least inferred. This involves making present to self both cognitive and affective qualities of the phenomenal experience of other. Symmetrical communication provides the opportunity for such an exchange of social perspectives to occur. Even within conditions of symmetrical communication, collective and individual social representations act as interpretive filters which have the potential to focus attention and either enhance or diminish the extent to

which the social perspective of other is considered or valued. Prior experience (and related level of self and social awareness) of self is a factor in self's ability to understand and construct the viewpoint or social perspective of other. Inferences made regarding the social perspectives of both actors may or may not be checked, validated, and refined. The potential for misunderstanding is considerable.

Through dialogue self and other have the potential to develop a deeper awareness of both self and other; intentions, meaning, and actions may be clarified and negotiated. While the social perspectives of self and other will not be fully transparent to both parties, they can be coordinated. Within the process of social interaction the individual social schemata of self may be elaborated through the processes of viewpoint construction and coordination with the social perspective of other.

Individual and collective social representations may be renegotiated within social interaction. Existing social representations may serve to "anchor" the accommodation of novel social data within elaborated individual social schemata. Existing social representations may thus serve as organizing principles for the integration of new social knowledge. It is through social perspective taking and coordination of social perspectives that awareness of the phenomenal reality of other emerges within the consciousness of self and is present as a subjective reality which self may empathetically respond to.

Hoffman (1975) provides a model relating to the development of empathy. Interestingly, Hoffman holds that empathic awareness of feelings is possible prior to the development of social perspective taking ability. Such an empathic awareness occurs prior to the awareness of a distinction between self and other. Affective states of other are able to stimulate a similar response in self through a confusion, or lack of ability to discriminate the location of the stimulus (predominantly auditory) related to the affective response. As cognitive skills and social perspective taking abilities develop they provide the potential for greater awareness of factors such as social meaning and context which contribute to the affective states of others.

Hoffman's (1975, 1991) inductive model of the development of social understanding may be viewed as a constructive process in which cognition and affect are integrated within a social context. Hoffman states that conflict, decentering of awareness, and empathy play different but complementary roles in this process. "Namely, peer conflict may *force* children out of their egocentric mode and compel them to attend to others; decentration may *enable* them to attend to multiple claims and balance multiple perspectives; and empathy may *motivate* them to take the other's claims into account" (1991, p. 109).

Gibbs (1991a, 1991b) has attempted to synthesize Kohlberg and Hoffman's theories. Gibbs considers the cognitive justice principles of Kohlberg and the inductive elaboration of social knowledge and empathy of Hoffman to be stabilizing "conserving principles" which bring a deeper integrative order to a multi-faceted interpersonal reality. Justice and empathy are conceived of as providing core stabilizing cognitive and affective integrative references within the expanding decentering and increasing depth of interpersonal awareness that develops with moral maturity. Justice serves as a central principle which is used to organize personal schemata related to social understanding. Gibbs states that empathic awareness is also a central organizing principle. It might be noted at this point, that previously held social representations may also serve as organizing principles for elaborated structures of meaning.

The above theoretical overview has briefly outlined key theorists who have contributed to the conceptual development of the antecedent, independent, and dependent variables in my study. They provide the background for a model of self and other that is decentered and socially constructed. It is within this context that perspective taking and the coordination of social perspectives related to the development of empathy may be analyzed.

Definition of Terms

What follows is a clarification of variables involved in the construction of coordinated social perspectives and the development of empathy and prosocial behavior. Theory and research in moral development is plagued by inadequate and conflicting definition, operationalization, and measurement of central terms. Simply clarifying such terms has been the sole focus of doctoral dissertations (e.g., Weyl, 1992). In attempting to provide an integrative synthesis of existing research, this lack of agreement in definition, operationalization, and measurement is of no small consequence. The intent of the following discussion is to provide greater clarity regarding the central terms being utilized. While the following definitions of terms may be arbitrary, there is a need for systematic usage of terms given the integrative task at hand. The following discussion will first clarify terms relating to the antecedent (symmetrical communication) and independent variables (self-disclosure and socio-cognitive conflict). A clarification of terms relating to the dependent or outcome variables will follow (coordination of social perspectives, empathy, and prosocial behavior).

Antecedent and Independent Variables

Symmetrical Communication.

Symmetrical communication is a key antecedent variable for the construction of cooperative relationships. Symmetry refers to uninhibited two-way conversation between people such that subjective thoughts, feelings, and needs are made known to each other in an atmosphere of trust and security. "Only with autonomy in thought are moral rules conceived independently of the status attributes an authority figure may possess. ...When authority does not influence the character of the relation, the child can engage in the intersubjective exchange of perspectives which is necessary for the construction of knowledge" (Leman & Duveen, 1999, p. 558). Symmetrical communication implies a communication environment in which there is a balance of power and participants feel

unrestrained and free to express personal thoughts, feelings, and needs without fear of adverse consequences. Such an environment implies a high level of interpersonal trust and respect. Central to symmetry of communication is the true consideration of other perspectives. Trust and open-mindedness facilitate fuller self-disclosure and consideration of the perspectives of others. Clearly, given the ubiquitous presence of sanctions and implicit status differentials within society, the ideal of symmetrical communication occurs most frequently in personal contexts among people at the same or similar status level and age.

The coordination of social perspectives and the social construction of meaning in interpersonal relationships occurs within the context of larger society. Social representations provide interpretive frames of reference integrating micro and macro social relations (Duveen, manuscript in preparation; Flick, 1998; Moscovici, 1981, 1993, 1998). Social representations reflect the history of a culture as well as its current evolution. Not all members of the culture are equally conscious of this reified universe of social meaning or of its reconstructive possibilities (Berger & Luckmann, 1967). Asymmetry in communication thwarts democratic reconstructive processes while symmetry provides the opportunity for critical reflection and renegotiation of social relations and social meaning. Asymmetrical communication is prevalent in many macro relations such as civic and corporate bureaucracies as well as electronic and print media sources (Chomsky, 1992; Weber, 1968). Such macro communication asymmetries--particularly in the labour market--serve to define the interpretive frames of reference for micro relations and the extent of participants' expression, power, and involvement in construction at a micro level. While resistance is possible, associated sanctions serve to maintain status quo interpretive frames and power relations.

Symmetry of communication is a condition which enables individuals to share perspectives and engage in negotiating social relationships and constructing social meaning. While symmetry of communication is of importance in the construction of

meaning at an interpersonal level, it is a key variable in understanding the link between macro relations and the interpersonal manifestation of hegemonic social representations. Habermas (Braaten, 1991; Habermas 1987, 1990; see also Simmel 1990) theorizes that macro social relations are implicit and embedded within interpersonal communicative actions in lifeworld contexts. While language is used in relationships to negotiate and construct social meaning, non-linguistic media of money and power may also shape the nature of relationships between individuals. This is particularly true of relationships in larger society related to exchange and production of goods and services. In these contexts, non-linguistic media of money and power are embedded in the intentions and instrumental action consequences of individuals as they interact. Money and power might be operationalized at the interpersonal level in the context of status differentials and asymmetries in communication. In asymmetrical communication, dominant social representations are privileged through the marginalization and silencing of minority perspectives. Within privileged systems of meaning, incongruent personal needs and subjective realities may not be heard or validated. Such silence marginalizes individuals who are at risk of being dissociated from their own being and voice (Gilligan, 1982; Gilligan, Rogers, & Tolman, 1991).

Symmetrical communication and the coordination of social perspectives occurs within a larger societal background of relationships and meaning; it is also understood that the interface of micro and macro processes is of significant theoretical interest. It is necessary, however, to limit the scope of this thesis. To do so, I will focus primarily on research and theory related to symmetrical communication, self-disclosure, socio-cognitive conflict, the development and coordination of social perspectives, the development of empathy, and the occurrence of prosocial behavior during childhood and early adolescence.

Self-disclosure.

In the context of the moral development of children, *self-disclosure* is necessary if children are to develop deeper intersubjective awareness of the subjective states of others (i.e., feelings, motivations, etc.). Self-disclosure is the sharing of thoughts, feelings, and needs, etc. so that subjectively held states can become public and objectively considered. Such disclosure is the data from which perspectives of others are understood and coordinated with one's own.

It should be noted that there are avenues other than self-disclosure which permit individuals to develop awareness of the subjective states of others. Subjective states such as feelings are often inferred from non-verbal cues. Social context, body posture, actions, facial expressions, tone of voice, hesitations in speech, etc., communicate information relating to the subjective states of others. Sensitive individuals can be skilled in making inferences relating to the subjectivity of others and incorporating these insights into a response. For the purpose of this review, self-disclosure will be understood to mean communication regarding the subjective state of self that occurs through any information provided within the context of social interaction. It is understood that nonverbal information may enrich such communication and that sensitive individuals may draw deeper insights from information that is present (verbal and nonverbal).

Socio-cognitive Conflict.

Socio-cognitive conflict is a catalyst to cognitive development. Socio-cognitive conflict is present when there is a mismatch between subjective information that is presented within a relationship and the previously held subjective understanding or interpretive frame of reference that self brings to the interaction. Socio-cognitive conflict implies a lack of fit such that interpretive schemata must be changed to accommodate novel information.

Piaget studied socio-cognitive conflict within children's games. The peer conflicts and negotiation of rules present in a game of marbles was well interpreted by Piaget. Piaget's study of moral judgment was seminal for Kohlberg's work (Gibbs, Basinger and Fuller, 1992, p. 5). Kohlberg stated: "If moral development is fundamentally a process of the restructuring of modes of role-taking, then the fundamental social inputs stimulating moral development may be termed 'role-taking opportunities,' ...The more the social stimulation [i.e., the greater the potential for socio-cognitive conflict], the faster the rate of moral development" (Kohlberg, 1984, pp. 74-78, as quoted in Gibbs et al., p.12). "Social interaction is the source of cognitive progress because of the socio-cognitive conflicts which it generates. It is the simultaneous confrontation of different approaches or individual centrations during a social interaction which necessitates and engenders their integration in a new organization" (Doise, Mugny & Perez, 1998, p. 78; see also Doise & Mugny, 1984).

In social interaction, socio-cognitive conflict can be present when interpersonal data is not integrated into an equilibrated structure of meaning coordinated between social actors. The dissonance of interpersonal data may be present to the awareness of the actors involved and has the potential to create intra-psyche cognitive dissonance. A reconceptualization of the relationship between self and others provides a reorganization of the interpersonal data into a new coordination of social perspectives which serves to resolve the conflicting data through a higher level of organization. It is recognized that individuals may have differing awareness of conflicting interpersonal positions, different tolerance levels for conflict in social relationships, and be in contexts in which pressures for social integration of relationships may differ. As such, the need or motivation to resolve socio-cognitive conflict may vary given various individuals and social contexts. There are a variety of mechanisms which individuals may employ to disengage rather than coordinate perspectives.

At the interpersonal level, communicative symmetry provides the context within which self-disclosure and socio-cognitive conflict may occur. The impetus to resolve socio-cognitive conflict and to incorporate new subjective information is a catalyst to the formation of new integrative conceptual structures which coordinate the social perspectives of self and others. While this coordination of social perspectives implies a cognitive-structuralist shift, it also indicates a reconstruction of social meaning through the integration of subjective data and contextual information. Through an integrated elaboration of cognition and affect, increased empathy and prosocial behavior may be facilitated. In the context of Cooley's non-dualistic looking-glass self, self and other are a unitary construction. Included in this construction is an integration of affect and cognition related to social relationships.

Dependent Variables

The dependent variables are coordination of social perspectives, empathy, and prosocial behavior. It is hypothesized that when symmetrical communication is present there will be increases in self-disclosure and therefore increases in the potential for socio-cognitive conflict. Self-disclosure provides the potential for novel information to enter relationships and challenge previous intersubjective agreements of meaning. Socio-cognitive conflict is potentially generated as the participants face the challenge of accommodating novel social information. Socio-cognitive conflict serves as a catalyst for the formulation of elaborated cognitive-affective structures which serve to integrate new interpersonal data which has been disclosed within relationships. Such new structures serve to equilibrate or coordinate social perspectives and diminish the dissonance that may be present.

The increase in self-disclosure which is hypothesized to occur within symmetrical relationships makes public subjective information that was previously privately held by individuals within the relationship. Such self-disclosure may stimulate socio-cognitive

conflict within the relationship and facilitate the elaboration of coordinated social perspectives. Self-disclosure by self and other may provide a greater depth of empathy and intimacy within relationships. Consequently, it is hypothesized that given the presence of the antecedent and independent variables (communicative symmetry, self-disclosure, and socio-cognitive conflict) not only will there be an increase in the coordination of social perspectives within the relationship, there will also be an increase in the depth of empathic understanding between individuals. It is further hypothesized that the combination of an elaborated coordination of social perspectives coupled with an increase of empathy will lead to conditions favorable for an increase in prosocial behavior.

Coordination of Social Perspectives.

Within this thesis the coordination of social perspectives implies an integration of the relationships between individuals that occurs at a number of levels. Fundamentally, in the context of Cooley, the coordination of social perspectives implies the process of the 'looking-glass self' in which the structure of the self is formed through the context of interpersonal social action. The coordination of social perspectives involves a consideration of the perspective of other and a cognitive accommodation of that perspective by self.

Following on Mead's developments, however, there is also an integration of social roles which occurs in the context of broader society. Such an integration of social roles implies the coordination of structural roles which may have little inherent interpersonal content in themselves. It is in the context of interpersonal relationships that the personal and subjective sides of social relationships are coordinated with the more crystallized systemic role structures of broader society. There is an interpersonal coordination of social perspectives as well as an integration with social roles.

Cognitively, the extent of coordination and level of cooperation present between individuals can be analyzed within the context of Kohlberg's discussion of justice,

reciprocity, and symmetry. In the context of Kohlberg's levels of moral reasoning there is an implicit consideration of the move from heteronomous and egocentric functioning to a decentered consideration of self within the context of broader social relationships.

Kohlberg is clearly discussing the development of increased levels of coordination within social relationships. Kohlberg is interested in the extent to which individuals are aware of the cooperative interrelationships between the individual and broader social relationships as well as the extent to which this awareness informs the moral reasoning of individuals. Kohlberg's theory focuses on expanding moral reasoning with less attention given to depth of subjectivity in social perspective taking. In this regard, Kohlberg's consideration of role taking is akin to Piaget and Mead, neglecting the coordination of subjectivity that is present within the work of Cooley.

It is Selman who more fully includes subjectivity within his consideration of the coordination of social perspectives. Selman is not interested simply in how individuals coordinate their roles with others. Nor is he interested solely in how individuals reason about the relationships of self and others within the context of the broader community. Selman is interested in the phenomenological experience of self in relation to others. He is interested in the extent to which self is aware of the subjectivity of other--including other's awareness of self. Furthermore, he is interested in the manner in which this reciprocal awareness can be coordinated at higher levels of awareness. The work of Selman could be considered as paralleling the work of Cooley relating to the 'looking-glass self' and as extending Cooley's work through a consideration of discrete stages of development that the evolution of such awareness might progress through. In this context Selman--through his concern with developmental stages--is closely allied with Kohlberg.

Empathy.

Empathy has been defined as the response of one person to the affective state of another (Strayer, 1980). There is a need, however, to qualify this definition to recognize

that empathy involves the awareness of the subjective state of other and includes a congruent emotional response by self. There are two components to empathy. First, empathy implies social perspective taking in which self develops a phenomenological awareness of the cognition and feelings of other(s). Secondly, empathy implies a cognitive, emotional, and somatic response to that awareness of other. While direct apprehension of the phenomenal reality of other is not possible, individuals are able to refer to similar intrapersonal states and make inferences regarding the subjective experiences of other. Implied within social perspective taking is the ability to make inferences regarding the subjectivity of other based on personal subjective awareness and prior experience. Similarity between self and other aids social perspective taking and enhances the quality of empathic response. Cues relating to the subjectivity of other are both verbal and nonverbal. Assumptions regarding the subjective reality of other can be clarified through requesting more information and can be validated by checking one's understanding with the other. While perfect correspondence is not possible, accuracy in social perspective taking, increased self-awareness and a prior history of similar subjective experiences can support the development of deeper, more accurate levels of empathic awareness.

Prosocial Behavior.

Prosocial behavior is respectful of the needs and feelings of others. Prosocial behavior is not guided by social obligation or norm based behavior. Prosocial behavior may be demonstrated through the avoidance of doing harm, or through help giving behavior. Lowered physical and/or verbal aggression may be viewed as a prosocial outcome as may an increase in helping behavior.

An extensive consideration of the relationship between the coordination of social perspectives and empathic awareness as factors affecting prosocial behavior is complex and beyond the focus of this thesis. Moral motivation, group norms, contextual sanctions,

level of perceived personal responsibility, moral disengagement, etc., are all factors which influence prosocial behavior.

Altruism may be considered as a subtype of prosocial behavior that is defined by the fact that altruism is motivated by a desire to aid another and not by pursuit of self-gain. In contrast prosocial behavior may be based on mixed motivations and reflect a cooperative effort oriented toward mutual benefit. Motivation is clearly a defining factor in determining what behavior is judged to be altruistic. Motivation is difficult to operationalize in naturalistic studies. Prosocial behavior is generally operationalized as overt behavior that is cooperative or supportive.

Explanatory Model

The following is a heuristic model indicating the direction of relationships among variables considered. It is recognized that there are many other possible relationships among the variables. This simple model is meant to orient the reader to the organization of the thesis. This model articulates how individuals coordinate their social perspectives such that empathy and prosocial behavior might emerge within relationships. In relationships characterized by unconstrained communication (symmetrical communication), participants are able to share personal thoughts, feelings, and needs (self-disclosure). As the information base within symmetrical relationships increases in depth and breadth, participants are challenged to incorporate new information about each other which may conflict with previously held understandings (socio-cognitive conflict). To resolve conflicts between previous perspectives and new understandings (i.e., incorporate new subjective information), participants are stimulated to develop a new level of awareness that reorganizes existing frameworks of understanding into a higher level of organization, a coordination of social perspectives which has a greater degree of fit with each participant's subjective experience (coordination of social perspectives). Empathic

awareness can serve as an organizing principle around which a new coordination of social perspectives forms.

It is hypothesized that in the presence of symmetrical communication (antecedent variable) there will be increases in self-disclosure and socio-cognitive conflict (independent variables). Given these increases, participants will be stimulated to develop a new level of cognitive organization through a coordination of social perspectives (dependent variable). This coordination of perspectives facilitates a deeper empathic understanding (dependent variable) of the subjectivity of alter and enhances the potential for prosocial behavior (dependent variable) (see Figure 1).

Overview of Thesis

In Chapter Two, theory and research relating to the antecedent, independent, and dependent variables is reviewed in closer detail to clarify relationships between the variables. In Chapter Three, the methodology of my integrative review and methodological concerns relating to meta-analysis are explored. Meta-analyses of relationships between the antecedent, independent, and dependent variables are conducted and the results presented. In Chapter Four, the findings of the meta-analyses are discussed and implications and limitations of my integrative review are explored.

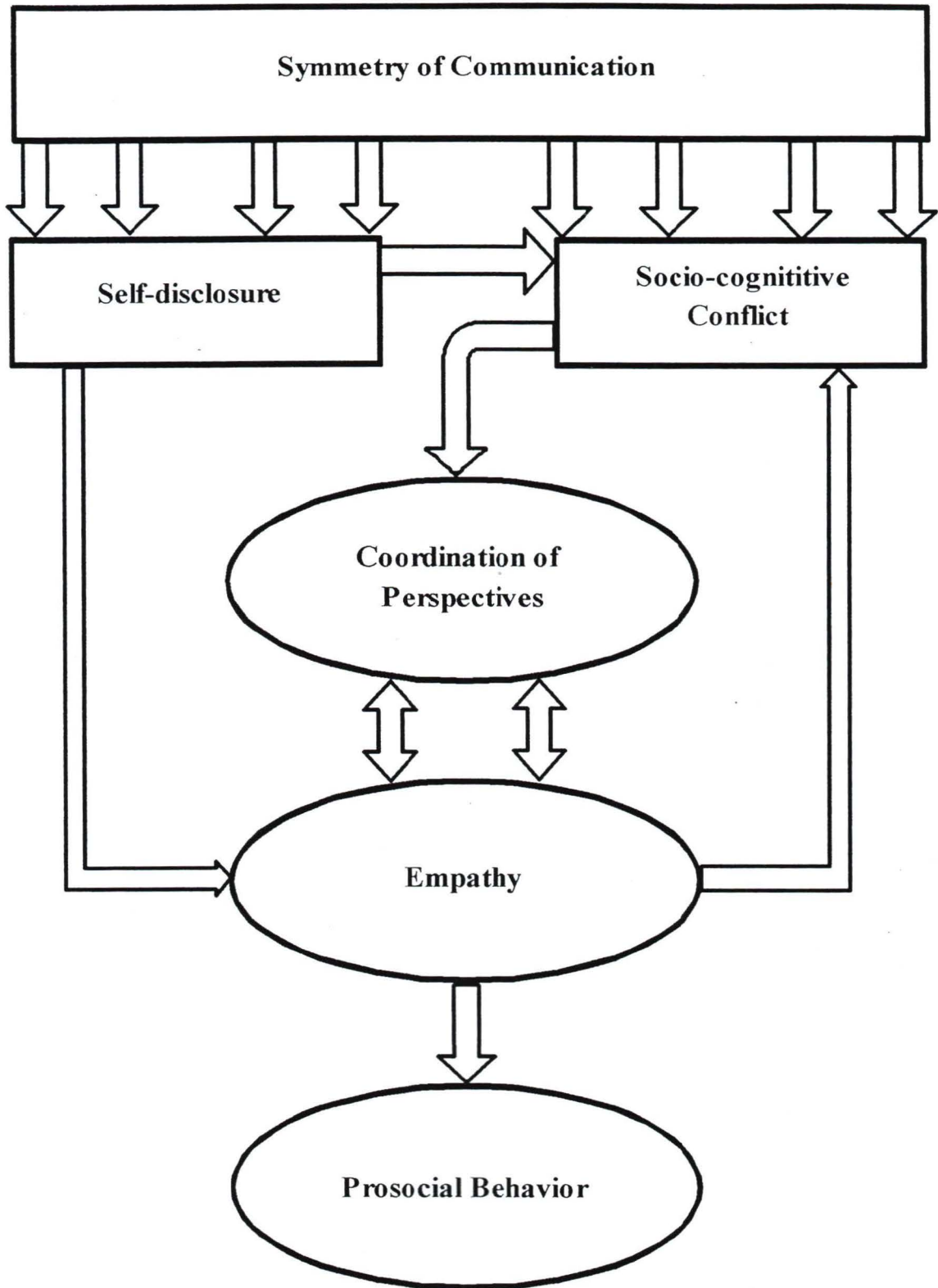


Figure 1. Explanatory model: Antecedent and independent variables in relation to dependent outcome variables.

Chapter 2

Integrative Review of Major Studies

Research Rationale

It is hypothesized that in the presence of symmetrical communication (antecedent variable) there are increases in self-disclosure and socio-cognitive conflict (independent variables). It is further hypothesized that given these increases, children are stimulated to elaborate their coordination of social perspectives, increase the depth of their empathic awareness, and demonstrate increases in prosocial behavior (dependent variables). Within my thesis I have examined existing research to determine what support there is for these hypotheses and examined relationships among the variables.

My thesis is an “integrative review.” This method was chosen because rarely do “single experiments or individual studies provide sufficiently definitive answers upon which to base policy” (Hedges and Olkin, 1982, as cited in Wolfe, 1986, p. 9). Hunter, Schmidt, and Jackson (1982, pp. 26-7) note that “in many areas of research, the need today is not additional empirical data but some means of making sense of the vast amounts of data that have been accumulated.”

“Literature reviews of empirical studies...are [however] notorious for depending on the subjective judgments, preferences, and biases of the reviewers” (Wolfe, 1986, p. 10). While literature reviews permit a sensitivity to qualitative detail, a fundamental problem with literature reviews is the “inability of the human mind to address this task reliably and validly given the enormous amount of data that must be gathered, processed, assimilated, and synthesized” (Wolfe, 1986, p. 11).

Where there is a large body of research related to the relationship between an independent and a dependent variable, meta-analysis may be employed as a strategy for integrating quantitative data (e.g., Taveggia, 1974). Meta-analysis, however, has limitations in that it requires a large body of research related to the relationships in

question, and furthermore, qualitative data and interpretation are largely ignored. In an area of study in which new theoretical formulations are evolving, a large body of literature does not exist. Clearly, the research methodology should be responsive to the emerging research problem and not unduly constrain the study of the problem through an extensive focus on previous research which may be out of step with current issues. Within an integrative review the inclusion of qualitative data and theoretical interpretation enhance the depth of analysis.

Within a smaller body of research, it is still possible to conduct a thorough integrative review. Integrative reviews triangulate quantitative meta-analytic strategies--where sufficient similar research data exists--with a careful review of qualitative aspects of the studies. Integrative reviews: "go beyond traditional literature reviews in that studies are examined in combination rather than one at a time, and they involve rigorous and systematic theoretical, conceptual, and methodological analysis" (Kaplan, 1997, p. 11). Through triangulation, a more complete understanding of the problem under study can emerge as the strengths and weaknesses of quantitative meta-analytic strategies are balanced with qualitative and theoretical analysis.

Antecedent and Independent Variables

Symmetrical Communication

Symmetrical communication appears to be a necessary antecedent condition if self-disclosure and socio-cognitive conflict are to occur. In a study of socio-cognitive conflict involving 5- to 7-year-olds, Bearison, Magzamen, and Filardo (1986) analyzed the resolution of spatial perspective taking conflicts between pairs of children. The balance of the conversation was observed and a ratio calculated to indicate the extent to which both children were able to express their viewpoint and have it considered by their peer. Children from balanced (i.e., symmetrical) dyads, which were characterized by a moderate degree of socio-cognitive conflict, demonstrated greater cognitive growth on the spatial

perspective taking posttest than children from unbalanced dyads (i.e., communicative asymmetry). The authors conclude that it is optimally a: "cooperative social context in which each partner is able to contribute equally to the social dialectic that structures the coordination of interindividual perspectives." (Bearison, Magzamen & Filardo, 1986, p. 69) While such a study supports the conclusion that symmetry of communication is related to the coordination of interindividual perspectives related to spatial relations, other studies have provided evidence supportive of the conclusion that symmetry of communication is also a necessary condition for the coordination of social perspectives (e.g., Leman and Duveen, 1996, 1999).

Inequities between genders in regard to power and resources are well documented within the work place and larger society (Connell, 1987). Gender inequities in power--as evidenced by asymmetries of communication--have been observed between boys and girls (Leman and Duveen, 1996). Such gender based inequities related to communication between boys and girls have been used to operationalize communication symmetry/asymmetry.

Research on epistemic authority by Leman and Duveen (1996) highlights the role of communicative symmetry as an antecedent condition for epistemic authority. In a study of 246 children from two age groups (6-7 and 11-12 years) Leman and Duveen operationalized epistemic authority by training some of the subjects in an optical illusion task relating to the length of lines on a stimulus card. Children were placed in conversation pairs in which only one child had received training and the pair were asked to agree on the equality or inequality of the length of lines in optical illusions. Symmetry of communication was operationalized through the gender composition of the pairs. Children were placed in same sex dyads and in dyads with members of the opposite sex. It was hypothesized that epistemic authority would have greater ease in persuasion under conditions of communicative symmetry (same gender pairs) or when the expert was male.

Female experts took a longer time to convince untrained male partners than male experts took in convincing untrained female partners. The difficulty that the female experts had in convincing an untrained partner was not evident when that partner was female. In such a condition, symmetry of communication facilitated the incorporation of knowledge held by the epistemic authority into the joint agreement of the pair.

Subjective realities are easily diminished or dismissed within interpersonal interactions. One could speculate that the influence of communicative asymmetry would be even more pronounced when epistemic authority relates to more subtle subjective realities such as experienced needs and feelings.

Further research by Leman and Duveen on representations of authority and children's moral reasoning supports the assertion that symmetry of communication is a necessary condition for intersubjective constructive relations. They state:

Whether a claim to knowledge is held to be legitimate can be determined only through processes of social interaction, discourse and debate. Hence epistemic authority possesses a power to influence judgment because it reveals a truth which can be assessed for its legitimacy only within an intersubjective framework. (Leman and Duveen, 1999, p. 560)

In a study of 191 children (average age: 9 years-6 months) Leman and Duveen (1999) had children agree on solutions to moral dilemmas. In a pretest the children were identified as either heteronomous or autonomous (operationalized as epistemic authority) in their manner of moral reasoning. Asymmetry/symmetry of communication was again operationalized through the gender composition of the pairs. In conditions of symmetrical communication, persuasion through epistemic authority occurred with relative ease (i.e., same gender dyads). Children with epistemic authority took longer to convince their partners in conditions of asymmetry (i.e., when the autonomous child was female and the heteronomous member of the dyad was male).

Self-disclosure

Self-disclosure has been defined as any information about oneself that an individual communicates to another person (Collins & Miller, 1994). Emotional self-disclosure has been defined as voluntary intentional verbal utterances which convey information about the emotional state of the individual (Papini & Farmer, 1990). Self-disclosure is typically assessed along the dimensions of depth (quality) and breadth (quantity). Depth refers to the level of intimacy involved in self-disclosure with greater levels of intimacy involving discussion of personal thoughts, feelings, and needs. Breadth refers to the extent to which individuals talk about themselves or make self-revealing comments regarding themselves during a conversation.

Since Jourard's (1964) pioneering work self-disclosure has been a focus of considerable theoretical and research interest. Jourard claimed that self-disclosure permits others to respond more realistically to the self-disclosing person. Altman and Taylor (1973; Collins & Miller, 1994) consider self-disclosure to be a key variable in the development of relationships. Their theory of social penetration holds that relationships develop through gradual increases in the depth and breadth of self-disclosures. The level of intimacy within the reciprocal processes of self-disclosure becomes an indicator of the closeness of the relationship.

Self-disclosure has received considerable attention within therapeutic literature and training (Carkhuff, 1969). The therapist's sharing of personal thoughts and feelings is viewed as a way in which trust and intimacy are encouraged and supported within the therapeutic relationship. Many interpersonal skills training programs teach self-disclosure through the form of "I messages" which are personal statements of feelings and needs (see for example Grossman et al., 1997). Such self-disclosure serves to articulate and make salient aspects of subjective being which might otherwise be unacknowledged or unrecognized. Self-disclosure gives voice, ownership, and public presence to subjective experiences. As stated feelings and needs are made salient it makes it possible for others

to validate and incorporate the disclosed material within the ongoing process of negotiating social relations and formulating social meaning.

Ongoing self-disclosure is held to stimulate relationship involvement while enhancing the depth and breadth of relationships. Self-disclosure is seen as stimulating reciprocal disclosure (“dyadic effect”) in which the reciprocal disclosure is at a similar level of intimacy. Cohn & Strassberg (1983) examined self-disclosure reciprocity with 96 third and sixth grade boys and girls. They found that children who heard intimate self-disclosures spent more time in intimate self-disclosure than children who had not heard intimate self-disclosures. Interestingly, it was not the breadth of self-disclosure that was different between the two groups, it was the duration of intimate self-disclosure (i.e., its depth).

While Cohn & Strassberg (1983) found no age differences for the duration or intimacy of self-disclosure, other researchers have found age differences. Collins and Gould (1994) examined self-disclosure between older and younger women who were matched in same age, or different age pairs. The younger women disclosed more to other younger women than to older women, and their self-disclosure tended to be more intimate and express more negative affect than the self-disclosure patterns observed between younger and older dyads. This supports the hypothesis that young women would disclose more to women who were similar to them on a salient dimension, in this case age.

Collins and Miller (1994) examined the hypothesis that individuals who self-disclose are more likable and are valued as relationship partners. Such liking and valuing of each other as relationship partners serves to motivate individuals to engage in further self-disclosure which extends and deepens the relationship. Collins and Miller conducted a meta-analytic review of 50 related research articles and found support for their hypotheses. They found that people who engage in intimate disclosures tend to be liked more as relationship partners than those who engage in less personal self-disclosure. They also found that individuals disclose more to others that they initially like, and that

individuals like others more if they have disclosed to them. They note, however, that there appear to be strong social rules governing what information is appropriate to reveal at a given stage of a relationship and in given contexts. Inappropriate self-disclosure which ignores these social rules adversely affects the quality of the relationship.

Brems and Fromme (1992) in a study of 36 female first year university students found that self-disclosure within a group gave the other group members a better understanding of the thoughts and perceptions of the individual who self-disclosed. This permitted a more accurate appraisal of the self-disclosing person by others. Conversely, individuals who engaged in extensive self-disclosure were found to be lower in social perspective taking ability compared to those who disclosed less often. This was interpreted as indicating that excessive self-disclosure can result in an individual being self-centered, rather than other oriented, with a consequent negative impact on the individual's social relationships. The subjective information that is provided through self-disclosure can enhance the ability of others to empathize with the self-disclosing individual. There needs to be a balance, however, in the quality and breadth of self-disclosure if both individuals within the relationship are to have an enhanced empathic understanding of each other.

Papini and Farmer (1990) examined patterns of self-disclosure in 174 students between the ages of 12 and 15. Younger adolescents preferred to disclose emotional information with their parents while older adolescents preferred to share with their friends. Female adolescents were more likely than males to engage in emotional self-disclosure with their parents. Furthermore, adolescents who perceived both openness of family communication and family cohesion, and moreover were satisfied with family relationships were more likely to share information regarding their emotional state with their parents.

These findings are consistent with the research of Snoek and Rothblum (1979) who found that adolescents who find their parents to be warm and nurturing engage in significantly more self-disclosure with both parents and peers. This indicates that behavior related to self-disclosure may be shaped in the family and then generalize to other

relationships. Such a family environment brings private subjective experiences to public awareness. Roberts and Strayer (1996) report that moderate levels of emotional expressiveness enhance the development of empathy. A nurturing family environment provides children and adolescents with a supportive context in which they can learn to appropriately express, label, and discuss emotions and other subjective experiences. In such family cultures, prosocial behaviors are more likely to be modeled and shaped which leads to more effective social relationships both in the home and through transfer to peer relationships.

Increased social awareness permits children the choice of more effective prosocial behaviors. Prosocial behavior is related to greater peer acceptance and the increased likelihood of establishing reciprocally reinforcing intimate interpersonal relationships. Supporting this interpretation, Papini and Farmer (1990) found that emotional self-disclosure to parents was significantly associated with the affective and communicative quality of the family. Emotional self-disclosure was also found to be significantly associated with adolescent psychosocial competence. Mutual self-disclosure helps children understand more clearly how they are perceived by others (Cohn and Strassberg, 1983). Such feedback from others may act as a catalyst which challenges the egocentric thought of children and stimulates decentered perspective taking of self in relation to others.

Dindia and Allen (1992) conducted a meta-analysis of 205 studies to examine sex differences in self-disclosure. Women were found to disclose slightly more than men. Women tended to disclose more to female partners. The authors caution, however, that given the large number of subjects involved in the meta-analysis ($N = 23,702$) the effect size for sex differences is small ($d = .18$). Whether such differences are theoretically meaningful or practically important is debatable. Sex differences appear to be very stable: Dindia and Allen found no significant difference in effect sizes for sex differences in self-disclosure over the three decades between 1960-1989.

Ohbuchi and Ohno (1993) examined the relationship between self-disclosure and aggression with 60 female Japanese university students. They theorized that under certain social circumstances self-disclosure facilitates empathic understanding by others. They examined the possibility that such empathic awareness may result in prosocial behaviors or ameliorate aggressive behaviors directed toward the self-disclosing individual. The study they conducted was similar to Milgram's (1974) studies of obedience and involved a learning task in which electric shocks were ostensibly given to a female confederate for wrong answers.

Three experimental conditions examined whether self-disclosure by the confederate would inhibit aggression (electric shocks). In the three conditions the subject first interviewed the confederate who either: disclosed personal information about herself; was not given an opportunity to disclose information; or refused to disclose information when provided with an opportunity. Furthermore, the confederate either made a fearful appeal, or no appeal to the experimenter creating six different conditions within the experiment. Consistent with the research hypothesis subjects used lower levels of shock on a confederate who had disclosed personal information than on subjects who either had not had an opportunity to disclose information or had refused the opportunity. Furthermore, the subjects used lower levels of shocks against the confederate in the appeal conditions. This is consistent with research literature which indicates that pain feedback inhibits aggression when the aggressor is not angered (Baron, 1971).

Socio-cognitive Conflict

Theory related to child development has examined the role of social interaction in social development. The majority of these studies, however, focus on modeling and processes of imitation (Mugny & Doise, 1978). The common assumption of these studies is that interaction owes its effectiveness to imitation processes. The Geneva school of developmental psychology (including G. Mugny, W. Doise, J. A. Pérez) stresses different

aspects of social interaction which facilitate development. In particular, the Geneva school hypothesizes that:

- 1) Social interaction is characterized by its constructive nature; this can be seen in the originality of performances produced by a group ... as well as in the progress made by individuals after a simple conflict of centrations belonging to the same schema.
- 2) Socio-cognitive conflict is an important factor in all restructuring, whether collective or individual. (Mugny & Doise, 1978, p. 183)

To study these hypotheses, Doise and Mugny generated socio-cognitive conflict through pairing children (aged 5 to 7) who were at different developmental levels on a spatial reasoning task. The children were required to agree to a response regarding a spatial problem solving task which involved the rotation of perspective. The children were then individually re-tested.

The pairings included students who were able to totally compensate (TC) for a 180° rotation; those who were able to partially compensate (PC); and those who were able to offer no compensation (NC) for the rotation. While the potential for modeling and imitation was present in pairing with TC children it was less likely in pairings of PC-PC and NC-NC. Socio-cognitive conflict was judged to be higher in the former rather than the latter pairing. On individual retests--consistent with the hypotheses--children from PC pairings demonstrated greater progress on the object rotation task than children from NC pairings. There appears to be a zone of proximal development in which conflicting solutions to the task are considered relevant and generate the stimulus of socio-cognitive conflict.

Doise and Mugny (1984) conclude that socio-cognitive conflict within the pairing challenged individual centrations and stimulated the elaboration and coordination of viewpoints. Individual cognitive restructuring was stimulated through conflictual dyadic interaction. The individual restructuring of spatial reasoning was demonstrated through

the children's individual progress on the posttests. Doise and Mugny (1984; Doise, Mugny, & Perez, 1998) have published results from a series of studies which serve to confirm and expand upon these conclusions. While these tasks involve advances in spatial reasoning, it is not unreasonable to assume that similar processes may underlie the elaboration of social perspective taking.

The work of Doise and Mugny has been replicated by other researchers. Bearison, Magzamen, and Filardo (1986) studied 5- to 7-year old children ($N = 106$) who worked on spatial perspective taking problems. The children were pretested on a spatial perspective taking task, and then, on the basis of their pretest scores, were placed in different same-sex dyads or placed in a control group in which they worked individually. The pairings in the experimental condition were designed to operationalize differing degrees of conflict between the children. The pairs were asked to solve spatial perspective taking tasks. Data from the observed pairs were coded for analysis. The children were later given a posttest to determine what changes in individual spatial problem solving ability had occurred.

A curvilinear relationship was observed between the observed level of conflict within the pairing and the individual development of perspective taking ability. Children who were in dyads characterized by a moderate level of conflict did better on the posttest than children who were in dyads characterized by either a low or a high level of conflict. This finding provided support for the research hypothesis that socio-cognitive conflict facilitates a process of cognitive restructuring.

In an aptly named study "When Two Wrongs Make a Right: Promoting Cognitive Change by Social Conflict," researchers Ames and Murray (1982) studied socio-cognitive conflict in the context of conservation tasks. Grade one and two students ($N = 114$) were pretested on a variety of conservation tasks. The children were then randomly assigned to a variety of experimental groups with the constraint that in the social interaction group the children had to have disagreed on one length item and on one mass item to be paired.

Children in the social interaction group were asked to agree on the two items that they had previously disagreed on in the pretest. Other experimental conditions included a condition in which the children had a peer model the correct response to the items, and a condition in which they were shown a demonstration of conservation related to the items.

Consistent with the research hypotheses, children in the social interaction condition demonstrated a higher level of conservation on the posttest than children who had the correct responses modeled by a peer or demonstrated by an adult. Contrary to imitation theory, the social interaction group developed conservation concepts when both children had not demonstrated those concepts on the pretest. These effects were sustained on a delayed posttest and with items that were not part of the experimental session. Pairing children with differing conceptions is hypothesized to create an encounter in which the perspectives of others can only be assimilated if cognitive restructuring takes place. These studies suggest that modeling is not required or necessarily as effective in facilitating cognitive development.

While there is evidence that socio-cognitive conflict stimulates cognitive restructuring, it is necessary to exercise caution in relating results from studies related to spatial awareness and conservation to a discussion of socio-cognitive conflict in the context of the coordination of social perspectives.

Dependent Variables

Coordination of Perspectives

The coordination of perspectives is a complex process in which underlying inferences relating to the subjectivity of others must be organized within oneself and coordinated with the emerging perspectives of others. Kurdek (1979) notes that the coordination of perspectives may involve either simultaneous or sequential coordination of viewpoints. Simultaneous coordination is held to be more complex and involves the simultaneous decentering, generation, and balancing of different viewpoints from the same social

situation. Viewpoint construction refers to the development of perspective taking ability. The quality and depth of viewpoint construction and its complexity can vary among individuals.

For example, Conte, Andrews, Loomer, and Hutton (1995) note that aggressive children find situations of provocation the most difficult to deal with. This difficulty could be compounded by factors that may affect social processing abilities (such as a learning disability). To respond non-aggressively to situations of provocation, children benefit from being able to disengage from their emotional responses and from the social interaction so that they can simultaneously initiate and coordinate their responses to the provoking child or children.

Dekovic and Gerris (1994) defined coordination of perspectives as the ability to take a third person's point of view. However, stepping out of an egoistic viewpoint to consider the viewpoint of another and coordinate that perspective with one's own may occur at a reciprocal level of interaction (Selman's Stage 2, 1980) or involve a deeper level of separation and coordination that is involved in taking a third person's perspective of the relationship (Selman's Stage 3).

Different measures of the ability to simultaneously decenter may involve the assessment of different levels of viewpoint construction and coordination. Kurdek (1979; see also: LeMare & Krebs, 1983) suggests that the lack of a strong correlation between measures of the coordination of perspectives may relate to differences in constructs and measurement. Such differences would contribute to the level of heterogeneity observed within sets of data analyzed within the following meta-analyses. Inconsistent research findings related to the coordination of perspectives may reflect the nature of constructs, measures, and the multidimensional character of the phenomena. For example Bender and Carlson note that:

Distinctions can be made between perceptual (ability to assume another person's perceptual viewpoint), cognitive (ability to assess another person's knowledge),

and affective (ability to assess another person's emotional state) perspective taking. (Bender and Carlson, 1982, p. 361)

Cognitive and affective perspective taking abilities may differ within the same subjects. Waterman, Sobesky, Silvern, Aoki, and McCauley (1981) studied social perspective taking and adjustment in emotionally disturbed, learning disabled, and normal children who were 10- to 11-years-old. Cognitive perspective taking ability was highest for normal boys, lower for those learning disabled, and lowest for those who were emotionally disturbed. When age was controlled, however, there were no significant differences in affective perspective taking ability. As well, Carlo, Knight, Eisenberg, and Rotenberg (1991) note that different perspective taking abilities may be called on in different situations. One situation may require affective perspective taking while another requires cognitive reconciliation of inconsistent cues.

Roberts and Strayer (1996) note that role taking ability increases with age and that cognitive complexity and more sophisticated moral judgment would naturally increase with age (Strayer, 1980). Other researchers have found a significant relationship between the age of a child and their perspective taking abilities (Selman, 1980; Stewart and Marvin, 1984; see Underwood and Moore for a meta-analysis, 1982). Krebs and Sturup (1982) note that two factors are often related to moral behavior and altruism--IQ and age (see also: Abroms and Gollin, 1980). Chandler (1973) in a study of normal boys and boys who were chronically delinquent (aged 11-13) found that the boys who were delinquent had lower perspective taking abilities even when IQ was controlled. It may be hypothesized that cognitive ability relating to decentration and perspective taking relating to the move from ego-centric to socio-centric thought provide conditions favorable for prosocial behavior.

The relationships among perspective taking, empathy and prosocial behavior are analyzed within the meta-analyses of Chapter Three. It could be hypothesized that

viewpoint construction and coordination facilitates empathic awareness which is related to prosocial behavior.

The empathic response of self to the subjective reality of other is a key component to understanding the relationship between the coordination of perspectives and prosocial behavior. The development of affective perspective taking does not always parallel cognitive perspective taking. Hoffman (1975, 1991) observed that affective empathic response can precede self-other differentiation in young children. Social perspective taking ability may facilitate the development of empathy and prosocial behavior, but it is not a sufficient condition.

Unfortunately, researchers have often confounded affective with cognitive perspective taking, and affective perspective taking with empathy, making comparisons of data difficult. Despite difficulties in comparing data, in a meta-analysis of research relating to perspective taking and altruism, Underwood and Moore (1982) state that:

When the results of studies on perspective-taking and altruism are combined statistically, they are far from equivocal. Our reviews ... have revealed an extraordinarily reliable--if only moderately large--relationship. (Underwood and Moore, 1982, p. 169)

Underwood and Moore (1982) report correlations of between .25 and .30 for the associations between perspective taking and altruism. When age and type of perspective taking are controlled for, the partial correlations are smaller but still statistically significant. The sole exception they report is for empathy which did not show a reliable association with altruism in the studies that they reviewed. It should be noted that Underwood and Moore distinguish altruism from prosocial behavior in that altruism is defined by acts that do not appear to be motivated by self-gain. Prosocial behavior, on the other hand, may have a differing relationship with empathy. Underwood and Moore note that there is a need for more extensive sampling of the age range from childhood to

adulthood. They also note that the search for moderating variables between empathy and altruistic behavior may clarify the relationship between empathy and altruism.

Empathy

Most researchers agree that empathy refers to the response of one person to the affective state of another (Strayer, 1980). Iannotti (1978) suggests that empathy may be defined as an emotional response to the perspective of an other. Empathy implies that there is a level of congruence of emotions or an emotional understanding within the response. While there is not a direct correspondence between social perspective taking and empathy, neither is there a direct correspondence between empathy and prosocial behavior. Relations between empathy and prosocial behavior are influenced by other variables.

While there is some evidence of sex differences relating to empathy, it is not clear what factors underlie these differences. Socialization and social role pressure may contribute to differences. Measures of empathy may mask responses which are motivated by social acceptance. Holmgren, Eisenberg and Fabes (1998) in a study of 199 children aged 6-to 9-years-old found the girls to score higher on both empathy and prosocial behaviors. Girls reported more sympathy and sadness in reaction to a stimulus film than boys. Girls were rated more prosocial than boys by parents, teachers, and peers. Other researchers have found similar sex differences (see: Barnett, Howard, King & Dino, 1981; Bengtsson & Johnson, 1992; Cohen & Strayer, 1996; Kurtz & Eisenberg, 1983; Roberts & Strayer, 1996).

Many studies of empathy have involved "state empathy" relating empathy to a stimulus condition that may have little transference to other individuals or situations. Such studies measure the response of an individual in the context of a given situation--often an experimental manipulation. There have been very few studies of the relationship of empathy-related dispositional characteristics to prosocial behavior. Dispositional empathy

may be defined as a level of empathic awareness that is characteristic of an individual, independent of context. No doubt both dispositional empathy and state empathy are involved within individual empathic responses. Individuals may have developed differing stable patterns of empathic response (dispositional empathy). As well, individuals may relate differently to specific empathy stimulating contexts (state empathy) at various times. There are, no doubt, interactions between dispositional and state empathy.

The relationship between empathy and prosocial behavior is unclear. Individuals have different emotional responses to the perceived needs of others. It is possible that prosocial behavior is the result of an assessment of need rather than an outcome of emotional congruence. Some individuals may have an emotional response characterized by emotional distress rather than congruence with the other's emotional state. Personal distress related to the apprehension of another in need has been linked to egoistic motives and lower levels of prosocial behavior (Eisenberg, Carlo, Murphy, and Van Court, 1995; Holmgren, Eisenberg and Fabes, 1998).

It could be hypothesized that as conceptual and social perspective taking abilities increase with age, they enable more accurate reading of emotive cues, the development of deeper empathy, and more accurate need identification leading to increases in prosocial behavior. Many studies are congruent with this view. One such study by Barnett, Howard, Melton, and Dino (1982) observed that children who are high in empathy and are asked to consider the feelings of a sad child are more likely to engage in helping behavior than are children who are low in empathy. This may reflect a greater underlying ability--on the part of those high in empathy--to consider the viewpoint of the other, as well as a greater ability to generate an empathic response. Furthermore, there is evidence that age is associated with empathy and prosocial behavior. Howard and Barnett (1981), in a study of 5- to 7-year-olds, found that empathy and prosocial behavior increased with age. Lewin and Bekerman-Greenberg (1980), in a study of 5- to 12-year-olds, found that levels of moral reasoning and sharing increase with age.

Eisenberg and Miller (1987), in a meta-analysis of research relating empathy to prosocial behavior, found a positive relationship between the two that increased in magnitude with age. Eisenberg and Miller (1987) report that the common correlations from meta-analyses that examine the empathy-prosocial behavior relationship range from approximately .10 to .39. A meta-analysis of perspective taking and altruism by Underwood and Moore (1982) failed to find a relationship between empathy and altruism--a finding which Eisenberg and Miller (1987) suggest relates to the measures used to assess empathy with children. Picture/story indices of empathy and prosocial behavior are often used with young children. Eisenberg and Miller found no significant relationships when these measures were used, whereas the association between other measures of empathy and prosocial behavior were generally significant. Eisenberg and Miller also conclude that the association between empathy and prosocial behavior is somewhat weaker for children than for adults. They suggest that this might reflect the fact that affective responses and behavioral responses become more integrated with age.

Does empathy mediate the occurrence of prosocial behavior? Through a series of regression analyses, Krevans and Gibbs (1996), in a study of sixth and seventh grade students and their parent's discipline style, found support for the hypothesis that empathy mediates between parental discipline style and prosocial behavior. Inductive parents had more empathic children who engaged in a higher level of prosocial behavior. Work and Olsen (1990), in a study of grade four children, found empathy to be a moderator variable between social skills training and social adjustment.

Cohen and Strayer (1996) report that children who are conduct disordered, in comparison to normal children, have lower overall affective cognitive empathy. They suggest that conduct disordered children attend poorly to the distress cues of others and tend to attribute hostile intent to others. It is possible that these children have had family backgrounds in which emotions and the needs of all family members were not a focus of discussion and cognitive processing. This may result in lower levels of perspective taking

ability and empathy. It is also possible that the family interactions of some conduct disordered children may be characterized by conflict and power struggles which limit the consideration and coordination of differing perspectives. Family culture may limit the children's experience of trust, security and unconditional acceptance through which empathic awareness might be nurtured. It should be noted that relationships with peers, school culture, and the influences of wider society no doubt affect the development of children's perspective taking and empathic abilities.

The restricted lifeworld of some children in chronic conflictual or asymmetrical family relationships may lend credibility to attributions of uncooperative intent. Such attributions may tend to reinforce the perceived validity and normality of reciprocal patterns of uncooperative and ineffective social interaction. Cohen and Strayer (1996) suggest that such social conditions can lead to a focus on self rather than other, and lead to experiences of emotional distress which interrupt the ability to empathetically consider the needs of others. When ineffective social interaction patterns transfer to peers and adults outside the family culture, they can result in uncooperative reciprocal reinforcing patterns of behavior that mire children in ineffective social attributions, unproductive social relationships, and low peer acceptance. Conversely, children who have been supported in developing emotional awareness, knowledge of emotional display rules, and concepts and skills related to cooperative social relationships tend to be more socially accepted by their peers and engage in reciprocal patterns of social interaction which reinforce and extend their social awareness, cooperative attributions, and interpersonal skills.

Prosocial Behavior

Most studies rely on a single measure of prosocial behavior which is often assessed in an atypical context. Iannotti (1985) reports that studies of the relationship between measures of prosocial behavior report a low but significant correlation. Teachers often know children across a variety of situations. Teacher assessments of prosocial behavior

are often seen as a preferred measure. Teacher reported measures are, however, not always strongly correlated with naturalistic observational measures.

Empathy is often considered to be a mediating variable between social perspective taking and prosocial behavior. Iannotti (1985) in a study of 52 preschool children reports:

Inferring another's emotions based on the affective cues of the other (emotional role-taking) was a predictor of sharing in both the structured and natural settings, was the best single predictor of spontaneous prosocial behavior, and was the best structured measure predicting the composite prosocial score. (Iannotti, 1985, p.53)

The relationship between social perspective taking, empathy, and prosocial behavior, however, is not a simple one. There is evidence that preschool children may engage in a variety of prosocial behaviors that appear to be unmediated by perspective taking or empathy (LeMare and Krebs, 1983). While prosocial behavior may be a response to specific stated or unstated needs, it may also represent a more general pattern or style of behavior.

Affective perspective taking and empathy may be neither sufficient nor necessary conditions for prosocial behavior. For example Barrett and Yarrow (1977) in a study of five to eight year-olds found that inferential ability was not related to prosocial behavior.

Many factors may influence the relationship between empathy and prosocial behavior. The cost of engaging in prosocial behavior may be a factor. Miller, Eisenberg, Fabes, and Shell (1996) note that individuals are willing to donate their time and resources when the personal cost is low regardless of their level of empathy whereas donations involving high personal cost limit prosocial behavior.

Children have been studied to examine their conformity to adult expectations and the conditions under which they disregard behavioral prohibitions which adults set. Kurtz and Eisenberg (1983) found that disregard for prohibitions set by adults was related to low role taking and to a rationale for the prohibition which was a general injunction unrelated to a specific individual. Hurwitz and Gaylord-Ross (1983) found that prosocial

behavior--in the context of respecting a prohibition set by an adult--was related to awareness of the specific consequences which failure to respect the prohibition had on identified others.

The ability to recognize needs of others may relate to age as interpersonal and context cues must be understood to perceive those needs. Similarity and familiarity between self and other may make social perspective taking and need identification easier. Therefore, children may be more likely to recognize the need of another child than the need of an adult, or more likely to recognize the cues related to the need of a familiar adult than those of an unfamiliar adult. As well, ability to recognize contextual factors may enhance need identification and suggest means by which prosocial action may address a need.

Miller, Eisenberg, Fabes, and Shell (1996) note that prosocial behavior is related to both needs-oriented and social-normative reasoning. Needs oriented reasoning is oriented to, or focused on, the needs of others. Social-normative reasoning entails reasons for helping that are based on stereotypic notions (e.g., "because it's nice") and the approval or acknowledgment of others rather than on the needs of others. Needs oriented reasoning and empathic responding are more strongly related in older children. Eisenberg-Berg and Lennon (1980) suggest that while empathy and prosocial behavior may be related for adolescents and adults, the relationship is less certain for children. This is consistent with the fact that the ability to coordinate social perspectives increases with age enabling deeper empathic awareness of context and need. If empathy--facilitated through social perspective taking--mediates the occurrence of prosocial behavior, then prosocial behavior may be expected to increase with age. Researchers have found age related increases in prosocial behavior (see: Eisenberg and Miller, 1987; Howard and Barnett, 1981; Lewin and Bekerman-Greenberg, 1980).

In contrast, Lemare and Krebs (1983) in a study of 40 children, found perspective taking to be unrelated to prosocial behavior. LeMare and Krebs note that perspective taking is not inextricably linked to either empathy or prosocial behavior. They note that

“the inferences formed from the perspectives of others may be employed for a wide variety of purposes--purposes both prosocial and anti-social in nature”(LeMare and Krebs, 1983, p. 295).

While perspective taking can enable empathy, the relationship is not a certainty. The general interpretive frame of reference which an individual brings to a given situation may result in very different attributions, construction of meaning, and actions. When empathy is present, it may well reflect a interpretive frame of reference with related attributions that are congruent with recognizing, validating, and addressing the needs of others. Such an interpretive frame supports the development of empathy and is more likely to mediate a relationship between social perspective taking and prosocial behavior.

Chapter 3

Research Methodology and Results

Structure of the Integrative Review

I conducted a thorough computerized search of research literature related to each of the antecedent, independent, and dependent variables. All years of the *Child Development Abstracts & Bibliography*, *Current Contents*, *Dissertation Abstracts International*, *EBSCOhost Academic Search*, *ERIC*, *PsychInfo*, and *SocioFile* computer data bases were searched using the following terms: “communication symmetry,” “self-disclosure,” “socio-cognitive conflict,” “perspective taking,” “coordination of perspectives,” “role taking,” “empathy,” and “prosocial and children.” Titles and abstracts of studies that were identified through this process were reviewed to determine suitability for inclusion. To avoid possible sources of bias in published results, non-journal sources such as dissertations were included in the search. After culling the collected information for relevance to my thesis topic, further related research was identified via a ‘snowballing’ cumulation of research material identified through reference lists. A coding system was established to record data that were related to meta-analytic cumulation (see Appendix C).

Next, the acquired research literature was examined to determine which studies would be included in the meta-analyses. Research studies were included in the meta-analyses if they met these criteria:

- the subjects were aged 3 to 18. Studies of children aged two and under have not been included. Studies of college students were assumed to include subjects over the age of 18 and were excluded from analysis. Studies involving high school students were assumed to involve students who were 18 or younger and were included for review.
- *either*--at least one of the antecedent or independent variables (symmetrical communication, self-disclosure, or socio-cognitive conflict) was studied in

causal relationship with one of the dependent variables (coordination of perspectives, empathy, or prosocial behavior).

- *or*--two of the dependent variables relating to my thesis were examined in association with each other: coordination of perspectives, empathy, or prosocial behavior. (The definition of coordination of perspectives was treated broadly to encompass either increases in moral reasoning or increases in social perspective taking. Studies of spatial perspective taking were not included for analysis.)

Where sufficient research existed (3-15 relevant research articles) a meta-analytic cumulation of data was conducted using effect sizes (Hunter, Schmidt & Jackson, 1982; Wolf, 1986).

Structure of the Meta-analyses

My thesis seeks to clarify the relationships between symmetrical communication, self-disclosure, and socio-cognitive conflict (as antecedent and independent variables) and the coordination of social perspectives, development of empathy, and the occurrence of prosocial behavior (as dependent or outcome variables). Within the explanatory model presented (Figure 1) the antecedent and independent variables are hypothesized as influencing prosocial behavior through a sequence in which the coordination of social perspectives and the development of empathic awareness are precursors to prosocial behavior. This model sought to describe the relationships among the related variables. I was unable to find studies that included all of the relationships proposed in the model. It was necessary to independently consider the relationships among the variables which were used within the model. Such blocking of the data into sets related to the theoretical constructs enhanced the ability of the meta-analyses to aggregate data relating to similar phenomena. Apples were compared with apples, oranges with oranges.

Methodological Concerns

When meta-analysis was used in my review, four factors related to the validity of meta-analytic technique were controlled for in the analysis of data (Glass, McGaw & Smith, 1981; Wolfe, 1986). Regarding the first of these four factors, it has been argued that given studies cannot be compared and aggregated because there are too many differences between them (i.e., conceptualization of terms, operationalization of variables, measurement of outcomes, subjects, context, etc.). This is considered the “apples and oranges problem.” Studies to be aggregated can, however, be blocked into separate sets and then coded into sub-sets on the basis of their similarities and their dissimilarities on a variety of salient factors. Sets can then be assessed independently and sub-sets analyzed to examine possible relationships.

Within my meta-analysis studies were analyzed within two sets and related subsets to clarify relationships between relevant variables. While differences in conceptualization, operationalization, and measurement exist, such differences enhance the robustness of the analysis and the generalizability of the findings. The analysis of data within each set or subset permitted consideration of specific relationships within the data. A finer analysis of the relationships was possible within the context of the discussion of individual research findings in Chapter Two.

Secondly, it has been argued that results of poorly designed studies are given equal weight when aggregated with well designed studies. To address this concern, the studies included within the meta-analysis were coded in terms of quality of design. Where sufficient studies existed, the data were assessed to examine whether there was a difference between the results of well constructed studies vs. studies of poorer design (Hunter, Schmidt & Jackson, 1987; Rosenthal, 1984, 1990; Wolf, 1986).

Thirdly, two steps were taken to ensure that there was not a publisher bias in the data:

- a) All available research was included within the analysis including the sub-sample of research reported in dissertations. The results of this research sub-sample were compared with the results of literature sampled through published articles only.
- b) Alternatively, a second strategy was used--the "fail-safe N or file drawer strategy." To implement this strategy, it was necessary to calculate how many unpublished contradictory findings were required to challenge the interpretation derived from the meta-analysis.

A fourth concern relating to the independence of aggregated samples was addressed in two ways:

- a) When more than one comparison was made within studies, dependent data (i.e., data drawn from the same subjects) was assessed and compared with the results of independent data.
- b) Alternatively only one finding from each subject group was utilized. Where multiple outcome measures were reported for the same subjects and were measuring a common construct, a composite score was formed from the average of the results reported.

To maximize the reliability of coding, clearly defined coding procedures were developed. While coding reliability and the above four concerns regarding meta-analysis are valid concerns, there were ways in which each concern was addressed within my thesis.

Method

To compare apples with apples, and oranges with oranges, the effect sizes obtained within the studies were blocked into related sets. The data were initially divided into two sets. The first set (Set 1) was comprised of data from studies which examined the *causal* relationship of one or more of the antecedent or independent variables (symmetrical communication, self-disclosure, socio-cognitive conflict) to one of the dependent variables (coordination of perspectives, empathy, prosocial behavior). The second set (Set 2) was comprised of data from studies which examined the *association* between dependent

variables (coordination of perspectives, empathy, prosocial behavior). The studies in Set 2 were almost exclusively based on a correlational design.

The data, from both Set 1 and Set 2, were further blocked into subsets related to the model proposed in Figure 1. Data from Set 1 which examined causal relationships between the antecedent or independent variables and the dependent variables were further blocked into three subsets related to each of the dependent variables (coordination of perspectives, empathy, prosocial behavior). Data within each subset were examined to analyze causal relationships between intervention strategies related to antecedent or independent variables and that particular dependent outcome.

Data from Set 2 were examined through three meta-analyses which examined the association between dependent variables. The meta-analysis of the first subset of Set 2 examined the relationship between the coordination of perspectives and empathy. The meta-analysis of the second subset in Set 2 examined the relationship between coordination of perspectives and prosocial behavior. The relationship between empathy and prosocial behavior was analyzed in the meta-analysis of the third subset in Set 2.

Research studies that met the criteria for inclusion in these sets were coded and relevant effect sizes were calculated. Within studies selected for meta-analysis there were differences in conceptualization, operationalization, and measurement. For the inclusion of a particular effect size there had to be a clear relationship between that outcome measure and the hypotheses my thesis examined. A brief summary of each study and the rationale for its inclusion is found in Appendix A.

Only primary research data were considered relevant for meta-analytic aggregation; secondary reports of research were not included. Data on bivariate relationships were included for aggregation, data on multi-variate relationships were judged to be incomparable and were not included. In multi-variate relationships effect sizes were partialled from a variety of variables resulting in effect sizes relating to relationships which

were not directly comparable to bivariate data. Consequently, only zero order correlations were aggregated.

Most studies reported a t , r , F , or Z statistic. Effect sizes (d) were calculated for each of the relevant outcomes. The effect size is a measure of the difference between means in standard score form, i.e., the ratio of the difference between the means to the standard deviation, or variance of scores in the samples (Hunter, Schmidt, Jackson, 1982). The effect size d reports the difference between groups in terms of standard deviation units. By calculating the effect sizes in standard form, it is possible to cumulate and compare results across studies. A variety of formulas were used to convert statistics to d (for relevant formulas see Cohen, 1977; Rosenthal, 1984; Wolfe, 1986). Referring to Cohen's (1977) conventions, differences of .2, .5, and .8 were considered to be small, medium, and large effect sizes respectively.

Effect sizes assessed with F tests with $df > 1$ in the numerator were not included within the data sets but were reported within the related discussion of results (Rosenthal, 1984). When more than two groups were being compared it was difficult to determine with accuracy the difference between two of the means.

When statistics--necessary for the calculation of an effect size--were not reported, an estimate of the effect size was made using N and p . When a study was only reported as significant, $p = .05$ was assumed and an effect size was estimated. Tables were constructed to display the data which were included within each set or subset (see Appendix B). When a study was reported as non-significant an effect size of 0.0 was assumed and entered into the table. All assumptions that were made in this regard were footnoted within the respective tables.

Where a variety of variables were examined in a research study, only data for variables related to my thesis were included in the data set. Conversely, when more than one relevant relationship was examined within a study, the data relating to *each* relationship were included. The effect size for each relationship was entered within the appropriate

data subset. This means that data from one study may appear more than once in a given subset, or be included in more than one subset.

Where the data from more than one measure or comparison in a research study were included within a given subset, those data were considered to be dependent as they were based on the same subjects. Rosenthal (1984) has argued that each study should only contribute one effect size. Within each subset--when appropriate--the aggregation of the data in the sample was made for both the full sample (i.e., including the summation of all dependent and independent data) as well as for independent data (i.e., each study was permitted to contribute only one score to the aggregation of the data [this included averaged composite scores]). The number of subjects in each study varied considerably. To establish a fair basis for aggregation, weights were calculated for each independent effect size (Wolf, 1986).

When appropriate, stem-and-leaf plots and box plots were made to analyze the data from the *full sample*. This means that the full sample data that are presented in tables relating to the stem-and-leaf plots include both independent and dependent effect size outcomes. Stem-and-leaf plots are presented with the results of each meta-analysis. Box plots were used to identify outliers. Data related to each outlier were rechecked for accuracy and individual cases were examined. The data were reconsidered with the exclusion of outliers. Discussion relating to outliers was included within the analysis where relevant.

Effect sizes obtained for the data of the full sample (independent plus dependent effect sizes) and for independent data were examined to determine whether they deviated significantly from zero. Results of one-sample *t* tests are presented. All other data reported within the Results section are based on *independent effect sizes* unless otherwise specifically stated.

Two questions related to the meta-analyses are, "to what extent do the effect sizes obtained represent an underlying unitary phenomenon, and to what extent might the effect

sizes reflect the influence of unexamined variables?" Data that were homogeneous in variance were suggestive of a unitary phenomenon. Data that were heterogeneous were more closely examined. Heterogeneity may stem from a variety of sources including moderator variables and poor research design including, among other possible limitations, weak theoretical constructs and low reliability and validity of measurement strategies.

Data were examined to determine the degree of homogeneity within the subset. Tests of chi-squared were conducted to determine the extent to which the full sample effect sizes or independent effect sizes departed from either the weighted mean d (related to the full sample) or the independent weighted mean d . A sum of these departures formed a X^2 statistic which was assessed within the context of the chi-squared distribution (Wolf, 1986). Where the samples were of sufficient size and heterogeneous, an attempt was made to explain outliers and identify moderating variables.

In large samples of independent data, coded subgroups were assessed to determine whether significant differences existed among them using an independent samples t test. Comparisons between subgroups were made on various factors including an assessment of the possible influence of quality of research design on obtained effect sizes.

For each meta-analysis a fail-safe N was calculated to determine how many contradictory studies would need to be published to reverse a conclusion that a meaningful effect existed. The fail-safe N (N_{fs}) calculates how many studies--assuming that the studies sum to no effect (0.0)--would be required to lower the average effect size (mean d) obtained to a criterion level which is judged to be a minimal level of practical significance. I have selected Cohen's (1977) suggestion of $d = .2$ (small effect) to be the criterion level for practical significance.

Research results that were published as dissertations, or were not amenable to transforming into an effect size, were used as a reference in the discussion of each data subset. Such research results serve as a further check against a possible publisher bias.

Results

Data Set 1: Analysis of Antecedent or Independent Variables in Causal Relation to Dependent Variables

The data of Set 1 were comprised of data from studies which examined the *causal* relationship of one or more of the antecedent or independent variables (symmetrical communication, self-disclosure, socio-cognitive conflict) to one of the dependent variables (coordination of perspectives, empathy, prosocial behavior). A number of studies have examined various intervention strategies to assess the causal impact of those intervention strategies on the coordination of perspectives, the development of empathy, and prosocial behavior (dependent variables). To organize the analysis of this research, I have formed three separate subsets--each related to one of the dependent variables. Further analysis was made within each of the three separate subsets through grouping the intervention strategies and assessing the influence that similar strategies had on the dependent variable in question.

Research literature in moral development has provided evidence that a variety of strategies can stimulate moral development. Many strategies which have been used to stimulate moral development relate directly to my thesis. While particulars vary, research intervention strategies related to moral development often provide a context for conversation and discussion (symmetrical communication). Such an environment provides a setting within which feelings may be expressed (self-disclosure) and social perspectives considered. Conflicting perspectives which emerge (socio-cognitive conflict) may serve as a stimulus for the coordination of social perspectives, development of empathy, and occurrence of prosocial behavior.

Previous meta-analyses have found similar factors to be important in moral development. A meta-analysis by Leming (1981) of moral development research which involved cognitive conflict as a strategy to stimulate the development of moral reasoning found significant differences with treatment groups. A second meta-analysis by Schlaefli,

Rest & Thoma (1985) found dilemma discussions to be a stimulus to the development of moral reasoning. The results in the second meta-analysis were assessed in the context of Cohen and Cohen's (1983) conventions of .20, .50, and .80 for small, medium, and large effect sizes. A small to medium effect size was found for individuals participating in dilemma discussions. These meta-analyses indicate that cognitive conflict and dilemma discussion can act as a stimulus to the development of moral reasoning.

Intervention Strategies Related to the Coordination of Perspectives

In the analysis of intervention strategies related to the coordination of perspectives five studies were assessed which included a total of 342 subjects (references and details of the studies analyzed in this subset are reported in Appendix B). The data of this subset were first analyzed as a group to assess the impact the diverse strategies had on the coordination of perspectives, and to assess the homogeneity of the effect sizes. The studies within this subset were found, following analysis, to have a common effect size characterized by homogeneity of variance. While it is recognized that a common effect size, and homogeneity of variance, do not necessitate either a common cause or phenomenon, the data of this analysis were reported. The data were then further analyzed more closely to examine relationships that were present.

All effect sizes in this subset were independent. As shown in the first row of Table 1, the mean effect size was $d = .8495$. Interpreted within the context of Cohen's (1977) conventions, this is a large positive effect size. The median effect size for the intervention strategies related to the coordination of perspectives was $d = .697$. The effect sizes obtained from the five studies differ significantly from zero ($t = 6.653, p > .003$) indicating that intervention strategies used can result in the elaboration of coordinated perspectives. As these studies were experimental designs, they indicate a causal relationship. The last column of Table 1 is a homogeneity statistic which is not significant indicating that the

studies included do not vary significantly from each other. This suggests that they are likely measuring a common effect.

Table 1
Intervention Strategies: Coordination of Perspectives

Category	Number of Subjects	k	Mean d	Homogeneity
Coordination of Perspectives				
Full sample	342	5	.8495**	5.8343ns

Note. k = Number of effect sizes. Homogeneity = X^2 ($df = k-1$). * $p < .05$. ** $p < .01$. *** $p < .001$. Number of studies = 5

A stem-and-leaf plot of the full sample distribution (i.e., independent as well as dependent data) is displayed within Table 2.

Table 2
Stem-and-Leaf Plot of Effect Sizes (*d*): Intervention Strategies and Coordination of Perspectives

<i>d</i>			Summary Statistics	
Frequency	Stem &	Leaf		
4	0	6 6 6 9	Maximum d	1.305
1	1	3	Third quartile (Q3)	1.1275
			Median (Q2)	0.697
Stem width:	1		First quartile (Q1)	0.6478
Each leaf:	1 ES		Minimum d	0.6036
			Mean d	0.8495
			Weighted mean d	0.8803

The fail-safe N calculated for this set of data is 16.2. This indicates that slightly more than 16 studies summing to no effect (0.0) would have to be located to negate the interpretation that the intervention strategies assessed are causally related to the coordination of perspectives. No dissertations were available for a comparison to examine the possibility of a publication bias.

The data were explored further to examine the types of intervention strategies that were successful in promoting the development of coordinated perspectives. Three studies in the meta-analysis (Chandler, 1973; Etxebarria & Apodaka, 1994; Iannotti, 1978) had subjects participate in role taking or perspective taking tasks as the experimental manipulation. The studies then measured perspective taking or role taking ability as the outcome variable. The mean effect size obtained for the three studies was $d = .984$ ($t = 5.580, p > .031$). This indicates that intervention strategies that stimulate children's role and perspective taking abilities can lead to improvements in their ability to consider the social perspectives of others.

A study by Kramer and Radey (1997) that involved perspective taking tasks and the expression of feelings also led to increases in perspective taking ability ($d = .6036$). Class discussions of moral dilemmas examined by Medrano and De la Caba (1994) were related to increases in moral reasoning ($d = .692$).

Interventions which stimulate children to consider the role or perspective of others; express their feelings; or reflect on and discuss moral dilemmas stimulate the children's ability to consider and coordinate social perspectives.

Intervention Strategies Related to the Development of Empathy

In the analysis of intervention strategies related to the development of empathy, three studies were assessed which included a total of 313 subjects (references and details of the studies analyzed in this subset are reported in Appendix B). Of four effect sizes, three were independent.

The maximum effect size of 2.0630 was obtained in a study by Holmgren, Eisenberg, and Fabes (1998). Induction of empathy was stimulated by having the children watch an intense video of a child in distress. The outcome measure was self-reported sadness. The strength of the effect obtained could be related to the intensity of the stimulus film and the immediacy of the measure.

A study by Krevans and Gibbs (1996) found that inductive discipline strategies were related to children's empathy ($d = .889$). Pecukonis (1990) found that role taking tasks can stimulate the development of affective empathy ($d = 1.2399$).

One study which assessed an intervention strategy related to the development of empathy was not included in the meta-analysis of this set of data as it was not possible to transform the data provided into an effect size. However, the results of this study supported the interpretation that the exposure to others and their needs (via video tape) can positively influence the development of empathy (see: Barnett, Howard, King & Dino, 1981).

As a check against publisher bias, dissertations involving the assessment of intervention strategies related to the development of empathy were reviewed. A study by Dwyer (1981) of 52 children, ages eight through twelve, found interpersonal skills training to be effective in developing children's empathy. A study by Hill (1983) of preschool children found that children who were encouraged to consider the feelings of others demonstrated a significant increase in level of empathy in comparison to control groups. Miller (1981) studied the effect of role-playing/reversal and class meetings on the level of affective sensitivity (empathy) of fifth and sixth grade students. Miller, however, reported that no treatment effects were found. The results of the study by Miller are in contrast to those of Barnett et al. (1981), Dwyer (1981), and Hill (1983).

There are few studies assessing intervention strategies related to the development of empathy. Diverse intervention strategies (including role taking tasks, inductive discipline, and experimental induction of affect) have been used to stimulate the development of empathy. While each of these intervention strategies has been successful in promoting the development of empathy, they are diverse interventions which are not easily comparable through meta-analytic cumulation. The question of significance raised by Miller's work suggests caution in interpreting the findings related to empathy as an outcome variable and the need for further experimental study and analysis. However,

when individually reviewed, the studies examined within this subset support the conclusion that: conditions which permit or stimulate symmetrical communication and a consideration of the feelings and perspectives of others, are causally related to the development of empathy in children. This is an important area that is in need of further research to clarify the processes involved within the development of empathy.

Intervention Strategies and the Development of Prosocial Behavior

In the analysis of intervention strategies related to the development of prosocial behavior, 13 studies were examined which included a total of 1700 subjects (references and details of the studies analyzed in this subset are reported in Appendix B). The data of this subset were first analyzed as a group to assess the impact the diverse strategies had on the prosocial behavior, and to assess the homogeneity of the effect sizes. The studies within this subset were found, following analysis, to have a common effect size characterized by homogeneity of variance. Again, while it is recognized that a common effect size, and homogeneity of variance, do not necessitate either a common cause or phenomenon, the data of this analysis were reported. The data were then further analyzed more closely to examine relationships that were present.

Of 29 effect sizes examined, 15 were independent. As shown in the first row of Table 3, the mean effect size for the 29 combined effect sizes was $d = 0.50945$. This was a moderate effect size indicating a positive relationship between intervention strategies and the development of prosocial behavior. The effect sizes differed significantly from zero ($t = 7.746, p > 0.000$). When only independent effect sizes were considered, the obtained independent mean $d = 0.5681$ ($t = 5.598, p > 0.000$) which was similar to the mean d obtained for the full sample. The median effect size for the intervention strategies related to the development of prosocial behavior was $d = .5693$.

The homogeneity statistic in the last column of Table 5 indicated that there was a great deal of heterogeneity in the effect sizes obtained for both the full sample and for the independent sample. Within Table 4 it can be seen that effect sizes ranged from a low of $d = -.2454$ to a high of $d = 1.475$.

Table 3
Intervention Strategies: Prosocial Behavior

Category	Number of Studies	k	Mean d	Homogeneity
Full sample	5142	29	0.50945***	85.7798***
Independent sample	1700	14	0.56805***	37.4551***

Note. k = number of effect sizes. Homogeneity = X^2 ($df = k-1$). * $p < .05$. ** $p < .01$. *** $p < .001$.
Number of studies = 13

Table 4
Stem-and-Leaf Plot of Effect Sizes (d): Intervention Strategies and Prosocial Behavior

<i>d</i>			Summary Statistics	
Frequency	Stem &	Leaf		
1	minus 0	2	Maximum d	1.475
0	minus 0	1	Third quartile (Q3)	0.75085
1	0	0 1 1 1	Median (Q2)	0.5169
3	0	2 3 3 3	First quartile (Q1)	0.31195
3	0	4 4 4 5 5 5 5 5	Minimum d	-0.2458
4	0	6 6 7 7 7 7	Mean d	0.50945
2	0	8 8 9 9	Weighted mean d	0.2675
1	Extreme	(>=1.5)		

Stem width: 1
Each leaf: 1 ES

The fail-safe N calculated for this set of data was $N_{fs} = 44.9$. This indicates that approximately 45 studies summing to no effect (0.0) would have to be located to negate the interpretation that the intervention strategies assessed were causally related to

prosocial behavior. Due to difficulty in transforming the data of five studies into effect sizes, those five studies were not included within this meta-analysis. The results and conclusions of the five studies, however, were similar to the intervention strategies assessed and indicate that it is possible to stimulate the occurrence of prosocial behavior (see: Barnett, Howard, King & Dino, 1981; Barnett, Howard, Melton & Dino, 1982; Barnett, King & Howard, 1979; Morgan, 1983; and Sims, 1978).

As a check against publisher bias, dissertations involving intervention strategies related to my thesis and designed to stimulate prosocial behavior were reviewed. Dissertations examining this relationship were found to be in accord with the interpretation of results in Table 3 (see: Dwyer, 1981; Elder, 1983; Goff, 1993; Hill, 1983; and Zashin, 1981).

The data from the analysis of intervention strategies related to the development of prosocial behavior were further explored to examine possible sources of heterogeneity. A box plot of the independent data indicated that there was one outlier--a study by Conte, Andrews, Loomer, and Hutton (1995). This study had the maximum effect size in the sample ($d = 1.475$). The strength of the effect size reported may be accounted for by the nature of the study.

Conte et al. (1995) studied two groups of learning disabled children aged 10-12 who were involved in either a control group or a classroom based social skills intervention two times a week for over six months. The extent of the intervention was greater in duration than most of the studies in the sample. As well, the comparison was between two groups who were unique in that they were both learning disabled. Given the information processing and communication skills deficits within this group of children (Conte et al., 1995), it is not surprising that the experimental group who were involved in focused learning experiences made disproportionate gains. The independent data were re-analyzed for heterogeneity with the data from the outlier excluded. Though the study by Conte et al. was excluded, there was still a high degree of heterogeneity ($p = .001$) in the sample.

To examine the relationship between level of prosocial behavior and age the data were assessed using a linear and curvilinear regression model. The linear model failed to find a significant relationship between age and the occurrence of prosocial behavior $F(1,12) = 2.61$; $p = .132$. A quadratic curvilinear model was suggestive of a relationship between age and prosocial behavior $F(1,11) = 3.47$; $p = .068$. While the convex curvilinear fit was not technically significant, it was suggestive of a relationship in which prosocial behavior decreases slightly from age four to eight and then shows gradual increases that extend into adolescence.

Independent data were analyzed further to explore differences between studies that had been rated as having poor design characteristics and those that had been rated as being of better quality. Six studies had been rated poor, the other nine studies had been rated as having good design characteristics. While the means of poor and good studies were similar, the standard deviations were not. Poor studies had an independent mean effect size of $d = 0.5598$ and a $SD = 0.5818$. Good studies had an independent mean effect size of $d = 0.5736$ and a $SD = 0.2421$. While the standard deviation of poor studies indicated nearly twice the variance of good studies an independent samples test with equal variances not assumed was not significant ($t_{13} = .958$). While the mean effect sizes from poor studies were not significantly different from good studies the extent of variance was considerable.

To determine whether the variance of scores in poor studies was contributing to the heterogeneity of the sample chi-square was computed on the variance of scores derived from independent studies that had poor design characteristics and independent studies that had good design characteristics. While some heterogeneity was accounted for by design quality (poorly designed studies being the most homogeneous) there was still significant heterogeneity within the sample.

Possible sources of variance were examined in the differing operationalizations of the independent and the dependent variables. No significant differences were found when

subgroup means were compared for: induction vs. other independent manipulations; inductive parenting vs. other independent manipulations; or experimental measure of prosocial behavior vs. other measures. The results of long term follow-up (average of six months) of gains made through stimulus conditions were not significantly different from the short term results obtained. This important result indicates that changes that children made in their prosocial behavior were stable over time. While this result is important, it failed to account for the heterogeneity of the data.

Further analysis found that one study accounted for the majority of the heterogeneity in the data. A study by Grossman et al. (1997) had a disproportionate number of subjects ($N = 790$). This study assessed the impact of a violence prevention curriculum on the prosocial behavior of elementary school children. Small but significant increases in prosocial behavior were observed with the participating children. The effect size obtained was less than the mean effect size of the full sample. The large number of subjects in this study amplified the difference between the obtained effect size and the mean effect size of the sample, impacting strongly on the heterogeneity statistics. It may be that curriculum interventions within a large class have less impact on prosocial behavior than more individualized interventions, or that the measurement strategies used for the large sample were less sensitive to individual changes. When the data from the study by Grossman et al. (1997) were removed the homogeneity score was not significant (18.2683; $p = ns$). This indicates that the other studies may have been measuring a common effect. Diverse intervention strategies can be successful in promoting prosocial behavior. While the gains related to prosocial behavior in the study by Grossman et al. (1997) were small, it is important to note that the gains made were still significant when re-assessed six months later.

The data were further analyzed to explore more closely the nature of the interventions that were related to the occurrence of prosocial behavior. Studies which used role taking or perspective taking tasks as the experimental manipulation and assessed prosocial

behavior as the outcome variable were examined (Ahammer & Murray, 1978; Chandler, 1973; Conte, Andrews, Loomer & Hutton, 1995; Etxebarria & Apodaka, 1994; Grossman et al., 1997). The mean effect size obtained by these interventions was $d = .6808$ ($t = .043$). This indicates that stimulating the role and perspective taking abilities of children resulted in increases in prosocial behavior.

Three studies assessed perspective taking as well as expression of feelings or dilemma discussions (Kramer & Radey, 1997; Parish, 1981; Prinz, Blechman & Dumas, 1994) as variables that could increase prosocial behavior. The mean effect obtained by the three studies was $d = .6892$ ($t = 6.438$; $p = .023$). There was support for the proposition that self-disclosure, discussion, and the consideration of the perspectives of others were related to increased prosocial behavior.

Inductive discipline strategies which supported the consideration of the needs, feelings, and perspectives of others were assessed in relation to prosocial behavior within two studies and were found to result in significant increases in prosocial behavior (Hart, DeWolf, Wozniak & Burts, 1992; Krevans & Gibbs, 1996). The mean effect of the two studies was $d = .5738$ (given the small sub-sample involved, significance was not further assessed).

Experimental induction of affect in relation to prosocial behavior was assessed in two studies and found to contribute to significant increases in prosocial behavior (Brehm, Powell & Coke, 1984; Howard & Barnett, 1981). The mean effect size obtained for the two studies was $d = .2211$ which indicated that there was a small positive effect size related to increases in prosocial behavior when induction of affect occurred (given the small sub-sample involved significance was not further assessed). Children who were stimulated to consider the needs and feelings of others were more likely to respond with prosocial behavior.

A single study by Work and Olsen (1990) examined the effect of an interpersonal problem solving curriculum on the occurrence of prosocial behavior of 82 Grade Four

students. Central to the curriculum was the development of skills related to empathy and social problem solving. Work and Olsen found significant increases in the occurrence of prosocial behavior for the participating students ($d = .8864$). Children who developed skills related to empathy and to coordinating a prosocial response to interpersonal problems were more likely to behave prosocially.

Data Set 2: Analysis of Associations Among Dependent Variables

Analysis of Coordination of Perspectives and Empathy

In the analysis of the coordination of perspectives and empathy, five studies were assessed which included a total of 433 subjects (references and details of the studies analyzed in this subset are reported in Appendix B). Of nine effect sizes, eight were independent. As shown in the first row of Table 5, the mean effect size for the full sample of nine effect sizes was $d = .7911$. This was a strong positive effect size indicating a positive relationship between the coordination of perspectives and empathy. The effect sizes obtained from the five studies differed significantly from zero ($t = 7.906, p > 0.000$). As all of the effect sizes were based on correlations, causality is difficult to determine. The mean independent effect size for the eight independent effect sizes was $d = 0.8212$, indicating a strong positive relationship between the coordination of perspectives and empathy ($t = 11.49, p > 0.000$). The median effect size for the relationship between the coordination of perspectives and empathy was $d = .7972$.

In the last column of Table 5 are homogeneity statistics which were non-significant indicating that the effect sizes obtained in both the full sample and the independent sample were homogeneous. This indicates that it was likely that a unitary phenomenon was being accurately conceptualized and measured within this set of data. The stem-and-leaf plot in Table 6 indicates that the effect sizes ranged from a low of .1202 to a high of 1.093.

The fail-safe N calculated for this set of data was $N_{fs} = 26.6$. This indicated that approximately 27 studies summing to no effect (0.0) would be required to challenge the

interpretation that there was a positive relationship between the coordination of perspectives and empathy. No dissertations were available to check for the possibility of a publisher bias.

Table 5
Coordination of Perspectives and Empathy

Category	Number of Studies	k	Mean d	Homogeneity
Full sample	521	9	0.7911***	12.5418ns
Independent sample	433	8	0.8212***	3.6688ns

Note. k = number of effect sizes. Homogeneity = X^2 ($df = k-1$). * $p < .05$. ** $p < .01$. *** $p < .001$.
Number of studies = 5

Table 6
Stem-and-Leaf Plot of Effect Sizes (d): Coordination of Perspectives and Empathy

<i>d</i>			Summary Statistics	
Frequency	Stem &	Leaf		
1 Extreme	(=<.12)		Maximum d	1.093
2	6	2 7	Third quartile (Q3)	1.01395
1	7	4	Median (Q2)	0.8471
1	8	4	First quartile (Q1)	0.6523
1	9	7	Minimum d	0.1202
3	10	0 1 9	Mean d	0.7911
			Weighted mean d	0.7255

Stem width: 0.1
Each leaf: 1 ES

While the sample reflected homogeneity of scores, one effect size was an outlier in the box plot of the full sample. A study by Kagan and Knudson (1982) of children aged five to nine found a strong positive relationship between affective role taking ability and empathy using picture cards as a stimulus condition. However, when children's role taking and level of empathy were assessed using the taped voice of an adult confederate as a stimulus condition, a weak non-significant effect size was obtained ($d = 0.1202$). It is

not surprising that there was a weaker relationship in the adult condition. The non-visual medium of a taped voice provided fewer cues relating to emotional display. Secondly, the nature of adult emotions, and the subtlety of rules of display may be beyond the awareness of children aged five to nine. Kagan and Kudson (1982) note that subject-object similarity is an important condition for affective perspective taking and empathy.

Analysis of Coordination of Perspectives and Prosocial Behavior

In the analysis of the relationship between the coordination of perspectives and prosocial behavior, 21 studies were analyzed which included a total of 1288 subjects (references and details of the studies analyzed in this subset are reported in Appendix B). Of 40 effect sizes, 22 were independent. As shown in the first row of Table 7 the mean effect size for the full sample of 40 effect sizes was $d = 0.7174$ ($t = 5.625, p > 0.000$). This was a moderate to large effect size which indicated a positive relationship between the coordination of perspectives and prosocial behavior. The mean effect size for the 22 independent samples was 0.633 ($t = 4.851, p > 0.000$), which was a moderate positive effect size congruent with the mean effect size of the full sample. The median effect size for the coordination of perspectives and prosocial behavior was $d = .6877$.

The last column of Table 7 is the homogeneity statistic which was significant at $p = .001$ for both the full sample and the independent sample. This indicated that there was a great deal of heterogeneity among the effect sizes. The stem-and-leaf plot in Table 8 displays the data for the full sample which has a wide range from a minimum effect size of $d = -.8471$ to a maximum effect size of $d = 2.833$. While there was a wide range, the majority of the scores cluster around the full sample mean effect size of $d = 0.7174$.

The fail-safe N calculated for this set of data was $N_{fs} = 103.5$. It would require approximately 104 studies summing to no effect (0.0) to negate the interpretation that the coordination of perspectives has a positive relationship with pro-social behavior.

As there was difficulty in transforming the data of a study by Hurwitz and Gaylord-Ross (1983) into effect sizes, that study was not included within the meta-analysis of a coordination of perspectives in relationship with prosocial behavior. The results and conclusions of Hurwitz and Gaylord-Ross's study, however, were in agreement with the interpretation that there was a positive relationship between the coordination of perspectives and prosocial behavior.

As a check against publisher bias, dissertations involving the assessment of coordination of perspectives with prosocial behavior were reviewed. Only one dissertation was found to be suitable for comparison. Cho (1993) assessed the perspective taking of 58 preschool children. Within that study perspective taking was found to be unrelated to naturalistic observations or teacher's ratings of prosocial behavior. This interpretation does not support the interpretation of results in Table 7. Cho suggests that the lack of an observed relationship between perspective taking and prosocial behavior may relate to the young age of the children in the study.

Table 7
Coordination of Perspectives and Prosocial Behavior

Category	Number of Subjects	k	Mean d	Homogeneity
Full sample	2131	40	0.7174***	181.5647***
Independent sample	1288	22	0.633***	92.1317***

Note. k = number of effect sizes. Homogeneity = X^2 ($df = k-1$). * $p < .05$. ** $p < .01$. *** $p < .001$.
Number of studies = 21

The data from the analysis of the coordination of perspectives and prosocial behavior were explored further to examine possible sources of heterogeneity. Table 7 indicates that heterogeneity of data from dependent and independent effect sizes were similar, as were both the means and standard deviations of dependent and independent samples.

Table 8
Stem-and-Leaf Plot of Effect Sizes (*d*): Coordination of Perspectives and Prosocial Behavior

<i>d</i>			Summary Statistics	
Frequency	Stem	Leaf		
	minus 0.	5 8	Maximum <i>d</i>	2.833
3	minus 0.	2 3 3	Third quartile (Q3)	1.029
9	0	0 0 0 0 1 2 3 3 4	Median (Q2)	0.65585
14	0	5 5 5 6 6 6 6 6 7 7 8 8 9 9	First quartile (Q1)	0.16665
7	1	0 0 0 0 0 2 3	Minimum <i>d</i>	-0.8471
1	1	5	Mean <i>d</i>	0.71742
1	2	2	Weighted mean <i>d</i>	0.514
3	Extremes	(>=2.4)		

Stem width: 1

Each leaf: 1 ES

Independent data were analyzed to explore differences between studies that had been rated as having poor design characteristics and those that had been rated as being of better quality. The quality of study had been rated poor for six studies, and had been rated good for the other 16 studies. The means of poor and good studies were similar, as were the standard deviations ($t_{20} = -.046$; $p = .964$, 2-tailed, equal variances assumed).

The data were assessed using a regression model. No significant correlation was found between coordination of perspectives and prosocial behavior in relation to age using either a linear or curvilinear line of best fit.

Box plots were constructed to explore the full sample and independent data. Outliers were only present in the full sample data. Effect sizes that were outliers were from two studies: Bender and Carlson (1982); and Hudson, Forman, and Brion-Meisels (1982). The effects sizes from both studies indicated a strong positive relationship between coordination of perspectives and prosocial behavior which was consistent with the hypotheses of the meta-analysis.

Bender and Carlson (1982) had assessed the helping responses of children when an adult confederate spilt beads on the floor. The children were probed to determine whether they expressed a desire to help when they saw the beads spilt (Expressed Helping) and how they perceived the adult to feel (Perspective Taking--this was labeled Empathy 2 within the study). Children who expressed a desire to help were also more likely to make an accurate judgment of the adult's feelings. Given the fact that probes were used, and the outcome variable measured intentions, the larger effect sizes found in this study differ from those of other studies in this set of data. It should also be noted that these data were based on the assessment of only 12 children.

Hudson, Forman, and Brion-Meisels (1982) had studied a group of students that were unique to this sample. From a random sample of 110 grade two children, they drew matched pairs of students who were either one standard deviation greater or less than the group in role taking ability. It is not surprising that the measures of differences in prosocial behavior were amplified given the selective composition of the matched pairs.

Homogeneity was reassessed with the data from these two studies excluded. There was still significant unexplained heterogeneity in the data when these studies were excluded ($p = .001$). Heterogeneity of scores may relate to the reality that perspective taking may involve empathy and altruistic acts, or conversely may be used instrumentally to advance personal gain. Studies that assess perspective taking may be measuring skills that can be used for diverse social ends.

Analysis of Empathy and Prosocial Behavior

In the analysis of empathy and prosocial behavior 14 studies were analyzed which included 1156 subjects (references and details of the studies analyzed in this subset are reported in Appendix B). Of 21 full sample effect sizes, 14 were independent. As shown

in the first row of Table 9 the mean effect size of the full sample of 21 effect sizes was $d = 0.5685$ ($t = 4.779, p > 0.000$) which was a moderate positive effect size. The mean effect size of the 14 independent results was $d = 0.6236$ ($t = 6.325, p > 0.000$) which was a moderate effect size congruent with the results of the full sample. The median effect size for the analysis of empathy and prosocial behavior was $d = .7014$. This was indicative of a moderate positive relationship between empathy and prosocial behavior. As the results were based on a preponderance of correlational studies, causation can not be inferred.

In the last column of Table 9 are homogeneity statistics, both significant at $p = .001$. This indicates that there was heterogeneity within the data. The stem-and-leaf plot in Table 10 displays the data which range widely from a minimum of $d = -0.899$ to a maximum of $d = 1.339$. The majority of effect sizes cluster about the mean d of 0.5685.

The fail-safe N calculated for this set of data was $N_{fs} = 38.7$. This indicates that approximately 39 studies summing to no effect (0.0) would be required to negate the conclusion that empathy was positively related to pro-social behavior.

As a check against publisher bias, dissertations involving the analysis of empathy in relationship to prosocial behavior were reviewed. Only one dissertation was found suitable for comparison. Cho's (1993) study of preschool children discussed above found no relationship between empathy and prosocial behavior. This finding was inconsistent with the interpretation of results in Table 9. Cho suggests that the lack of a relationship observed between level of empathy and prosocial behavior may relate to the young age of the children involved.

Table 9
Empathy and Prosocial Behavior

Category	Number of Subjects	k	Mean d	Homogeneity
Full sample	1857	21	0.5685***	93.3995***
Independent sample	1156	14	0.6236***	48.1346***

Note. k = number of effect sizes. Homogeneity = X^2 ($df = k-1$). * $p < .05$. ** $p < .01$. *** $p < .001$.
 Number of studies = 14

Table 10
Stem-and-Leaf Plot of Effect Sizes (d): Empathy and Prosocial Behavior

d			Summary Statistics	
Frequency	Stem	Leaf		
2	Extremes	(= \leq -.6)	Maximum d	1.339
5	0	0 2 3 4 4	Third quartile (Q3)	0.886
10	0	5 6 6 6 7 7 7 8 8 8	Median (Q2)	0.6992
4	1	0 1 1 3	First quartile (Q1)	0.35585
			Minimum d	-0.899
			Mean d	0.5685
			Weighted mean d	0.5036
Stem width: 1				
Each leaf: 1 ES				

The data from the analysis of the empathy and prosocial behavior were explored further to examine possible sources of heterogeneity. Table 9 indicates considerable heterogeneity of data from both dependent and independent effect size subsets. A regression model of the relationship between empathy and prosocial behavior as this relationship relates to age did not show a significant correlation. Both linear and curvilinear regression lines were not significant. There was no clear evidence of age related differences in the relationship of empathy and prosocial behavior, though other researchers have reported such a relationship (see: Eisenberg and Miller, 1987).

Independent data were analyzed to explore differences between studies that had been rated as having poor design characteristics and those that had been rated as being of better quality. The quality of study had been rated poor for four studies, and had been rated good for the other 10 studies. An Independent Samples Test of the means of poor and good studies failed to find significant differences ($t_{12} = .374$; $p = .715$, 2-tailed; equal variances not assumed). The standard deviations, however, varied considerably (SD of: poor studies = .1936; good studies = .5686). A study by Eisenberg-Berg and Lennon (1980) had been coded as being a good quality study and contributed to the variance in the standard deviation of good studies.

Box plots were constructed to explore the full sample and independent data. Two outliers from a study by Eisenberg-Berg and Lennon (1980) indicated a negative relationship between empathy and prosocial behavior that is contrary to the hypotheses of the meta-analysis. Eisenberg-Berg and Lennon assessed the relationship between empathy and prosocial behavior in a group of 51 children aged four to five. Following hearing a story children were asked how they felt and asked to indicate their feelings by pointing to a picture. Verbal and non-verbal responses were negatively correlated with observed spontaneous prosocial behaviors. Children who responded empathetically demonstrated fewer prosocial behaviors. Eisenberg-Berg and Lennon suggest that these findings may indicate that it was social desirability or need for approval rather than empathy that was being assessed.

A meta-analysis by Eisenberg and Miller (1987) found no significant relationship between empathy and prosocial behavior when picture/story indices were used, whereas the associations between other measures of empathy and prosocial behavior were generally significant. Picture/story indices were used to measure empathy in the study by Eisenberg-Berg and Lennon (1980). Homogeneity was assessed with this study excluded. There was a considerable decrease in heterogeneity (Independent sample with study by

Eisenberg-Berg and Lennon (1980) included: $p = .001$; excluded: $p = .025$), however, a degree of heterogeneity remained unaccounted for in the analysis of the data.

Two other studies with extreme scores were explored to assess sources of heterogeneity. Both studies had results that were in support of the hypothesis but effect sizes larger than the mean effect size for the sample. A study by Dekovic and Gerris (1994) assessed social cognitive and behavioral differences between popular and rejected children. On the basis of sociometric test results which identified children as popular or rejected in the peer group, 125 children were drawn from an original pool of 1,158 children. Such a selection process serves to amplify differences between the two subgroups of children chosen and accounts for the large difference in effect size found between the two groups.

A second study by Cohen and Strayer (1996) assessed the empathic responses of conduct-disordered youth in comparison to a normal sample of youth. The comparison of two such very different groups served to amplify the effect size difference found between them. While the measured effect size was consistent with my thesis, the effect size was stronger than the mean effect size found for the sample.

Homogeneity was reassessed after removing both studies (Dekovic & Gerris, 1994; Cohen & Strayer, 1996) from the sample. Significant heterogeneity remained after the two studies were removed ($p = .005$). Then both studies were removed from the sample as well as the study by Eisenberg-Berg and Lennon (1980). With the three studies removed the homogeneity statistic was not significant (17.8766; $p = ns$). This indicates that the other studies in the sample may be measuring a common effect. The data in this sample support the position that empathy is positively related to the occurrence of prosocial behavior.

Chapter 4

Discussion and Conclusions

Methodological Concerns

Four standard methodological concerns have been raised about meta-analysis. The first concern relates to the diverse nature of the studies accumulated (the apples and oranges problem). A second concern relates to the aggregation of poor studies with good studies. A third concern is a possible publisher bias in the research that is published. The fourth concern involves the question of the validity of aggregating dependent and independent research results. Each of these four concerns relating to the methodology of a meta-analysis have been addressed when possible in Chapter Three.

The diverse nature of the studies aggregated is of concern, yet this diversity is also a source of strength in that a robust operationalization of the variables was made when meta-analyses were employed. Diverse groups of subjects and ages were considered, including children who were mentally handicapped, learning disabled, or institutionalized. The variety of ways in which variables were conceptualized, operationalized, and measured created a multi-faceted assessment. What was lost in detail from the particulars through meta-analytic cumulation was compensated for by the ability to generalize from the cumulated findings. The findings of the meta-analyses were contextualized and clarified through triangulating those findings with the outcomes of individual studies.

The concepts involved in these meta-analyses were not easily operationalized. Involved were subtle interpersonal processes and subjective experiences. One particular example of this difficulty was the lack of agreement among researchers related to what empathy was, and how it should be measured. Some researchers confound the terms affective perspective taking and empathy, though most distinguish empathy as a congruent subjective response to affective perspective taking. There is need for greater clarity in the use of such terms, particularly when results are aggregated within meta-analysis. In this

regard critics of meta-analysis have a valid point, however, some clarity can be assured through blocking the data into related sets as has been done in Chapter Three.

The second concern raised--the aggregation of poor studies with good studies--has been addressed when there were sufficient data to establish subsets and compare the independence of means. No evidence was found in support of this objection.

No evidence regarding the third concern--publisher bias--was found. Related studies and related dissertations were consistent with the conclusions made on the basis of the aggregated journal data. The number of conflicting studies required to challenge the interpretations made were such that those interpretations gain credibility. Where the data of individual studies were not clearly in support of my hypotheses it has been noted.

The fourth concern relating to possible differences between dependent and independent data has been addressed. Data relating to both the full sample and to the subgroup of independent effect sizes have been reported in each of the meta-analyses. Effect sizes and significance for both the full sample and the subgroup of independent effect sizes were found to be similar in each of the meta-analyses.

While the concerns raised about meta-analytic methodology are reasonable, they have each been addressed within this thesis and there is no evidence that the interpretation of the data is affected by those concerns.

Hypotheses

The hypotheses tested within this thesis were that:

- In the presence of symmetrical communication (antecedent variable) there will be increases in self-disclosure and socio-cognitive conflict (independent variables).
- Given these increases, children will be stimulated to develop a new level of cognitive organization through a coordination of social perspectives (dependent variable). This coordination of perspectives facilitates a deeper empathic

understanding (dependent variable) of the subjectivity of alter and enhances the potential for prosocial behavior (dependent variable).

Regarding the first hypothesis, the data aggregated within the meta-analyses did not clearly test this assertion. No studies exist which clearly address all of these variables in combination. Those that do exist, and are closely related, are not easily aggregated. However, the independent studies analyzed in Chapter Two provided support for the first hypothesis. Symmetrical communication does appear to be an antecedent condition which enables and supports deepening self-disclosure. Such disclosure may stimulate socio-cognitive conflict. Extremely high levels of socio-cognitive conflict, however, may increase feelings of personal distress and serve to limit self-disclosure or the incorporation of disclosed data (Bearison, Magzamen, and Filardo, 1986).

The analysis of intervention strategies related to each of the dependent variables provided evidence that symmetry of communication (i.e., present in: expression of feelings, class discussions, inductive discipline strategies) enabled self-disclosure and increased the potential for socio-cognitive conflict. There is evidence that these independent variables stimulated the coordination of perspectives and the occurrence of prosocial behavior.

Self-disclosure is not the only medium that leads children to consider the social perspectives of others. Intervention strategies that stimulate children's role and perspective taking abilities can lead to improvements in their awareness of the social perspectives of others. Role taking and perspective taking tasks have been found to increase prosocial behavior. Inductive discipline strategies which support the consideration of needs, feelings, and perspectives of others have contributed to increases in prosocial behavior as have experimental inductions of affect.

The analysis of the relationships among the dependent variables indicates that moderate to strong positive effect sizes characterize those relationships. As the majority of the studies relating to the dependent variables were correlational in nature, it is hard to draw

conclusions relating to causality. There is a need for finer grained causal analysis of naturally occurring processes--vs. assessment of correlational outcomes--among the antecedent, independent and dependent variables if a deeper understanding of children's moral development is to be attained.

Limitations

There are a number of limitations to this thesis. A first limitation relates to the ambiguity of definitions in construct development, operationalization of variables, and of the measurements used to assess outcomes. There was a great deal of ambiguity relating to definitions used for key concepts such as empathy and affective perspective taking. There was also considerable variation in constructs and measurement strategies employed. For example, the coordination of perspectives was considered to include: role taking, cognitive perspective taking, affective perspective taking, social perspective taking, or moral reasoning--to mention a few--with associated gradations or levels of coordination in each case.

Secondly, there was a considerable focus on measurement of outcomes vs. the more complex analysis of process--process which is often unique to the reciprocal interactions of dyads and groups. It is perhaps not an accident that more easily measured outcomes such as prosocial behavior received the most attention within the research. The quantitative research focus in studies examined often resulted in simplification of constructs at the cost of qualitative phenomenological considerations. This was particularly true of studies of empathy. Furthermore, the majority of the studies were correlational in design making analysis of causal relationships difficult.

A third limitation relates to the fact that this thesis has examined a complex model of children's moral development. There were no studies that examined all of the variables related to my thesis. It was necessary to explore and accumulate data from a broad research area. The actual research that has been conducted dictated the direction of my

analysis of the data. For example, the quantity of research related to more easily operationalized variables such as prosocial behavior exceeded research related to variables that were more central to the focus of my thesis.

Research relating to a central relationship within the model--the coordination of social perspectives and empathy--was limited. The breadth of research considered, and the limited number of studies relevant to each relationship considered, means that there were seldom enough studies available to effectively group the data into sub-sets to examine sources of heterogeneity within the sample, and clarify theoretical issues related to construct formation, operationalization, and measurement. As such, heterogeneity remains unexplained, and moderating variables unidentified. Again, there is a need for finer grained analyses of particular relationships such as the relationship of empathy to prosocial behavior.

A fourth limitation of this thesis relates to the methodology employed and the nature of the phenomena under study. An integrative review incorporating meta-analysis of existing research is strongly biased towards a quantitative analysis of the data. Unfortunately, the central aspects of the phenomena under consideration--coordination of perspectives and empathy--are subjective in nature and difficult to define and observe, not to mention the inherent difficulties related to measurement of these phenomena.

Coordination of perspectives and empathy are not easily abstracted as generalized concepts from the particulars of the phenomenological context in which they exist. The subtle--yet theoretically important--shifts that occur between affective perspective taking and the occurrence of empathy may be better explored through qualitative case studies. Such studies might better assess the awareness, concepts, skills, and interpretive frames of reference that individuals bring to a particular context which influence their interpretation of non-verbal cues, social interactions, and choice of behavior. Within such studies motivational and inhibiting factors relating to consequent prosocial behavior might be more productively explored. While an integrative review that incorporates meta-analysis

clarifies relations among aspects of form and structure of moral development, there is a need to more closely explore the particulars and processes of naturally occurring relationships.

Implications for Practice

Currently, actual practice in child development is characterized by a smorgasbord of theories and practices. Often there is little critical in-depth consideration of theory, research, or practice by practitioners in child development (i.e., educational institutions). In the flux of professional and popular daily conversations, popularized reductionist medical paradigms jostle with behavioral and developmental paradigms often losing a good part of the child in the process. Research in child development and an analytic and synthetic consideration of that research are rarely considered in designing proactive developmental strategies and reactive remedial interventions.

This thesis suggests that there are key developmental factors that need to be identified and addressed within developmental work with children. As my thesis is an integrative review of related research, the conclusions which have been arrived at reflect a synthesis of a broad base of literature relating to a diverse sample of children and contexts. While practitioners will continue to wrestle with issues of effective practice, there is a need for that practice to identify and support core developmental processes. The research I have reviewed and integrated clearly suggests that there are a variety of ways to support children's moral development.

This thesis suggests that symmetry of communication is central to children's moral development. Children need to have opportunities to express and discuss their needs, feelings, and ideas. Such communication needs to involve opportunities for self-expression as well as opportunities to hear others and reflectively consider and incorporate those perspectives. Adults can support moral development by providing a secure nurturing environment in which children can:

- identify, label, and express their needs and feelings.
- have opportunities to share their perspectives and consider and respond to those of others.
- be stimulated to identify, analyze, synthesize and evaluate interpersonal information.
- engage in social problem solving and participate in concrete development, implementation, and ongoing assessment of new patterns of social behavior.

While processes of reflection and social analysis may be stimulated through individual intervention with a child, children benefit through being exposed to the actual particulars of other perspectives and expressed phenomenal experience. Under conditions of communicative symmetry, self-disclosure and the stimulus of socio-cognitive conflict are present as a catalyst for elaborating social perspectives through the coordination of social perspectives.

The home and extended family are typically children's primary social culture and exert a significant influence on processes related to moral development. Other social forces impacting on children's moral development include schools, peers and increasingly the largely unregulated entertainment/cultural industry.

Large curriculum-centered--rather than child-centered schools--often fail to provide the optimal conditions for holistic child development. School cultures often fail to identify or address core developmental processes related to children's emotional, social, and moral development. Instead a "hidden" or unreflective social "curriculum" predominates shaping the school culture in the direction of system prerogatives at the expense of child development. Maintaining systemic requisites in large schools takes precedence over establishing a school culture in which children's moral development is pro-actively supported. There is a very real need to revisit theory and research related to moral development as a guide to systematic pro-active practice.

In actual educational practice, children's social development is often best addressed in the early years. It is in the particulars of children's daily social interactions that opportunities for growth may be most productively optimized. As significant adults in children's daily life, teachers are in a position to establish a social culture in which the "scaffolding" is present for ongoing emotional, social, and moral development. Opportunities for social learning need to be generated through institutional and curricula initiatives as well as continuously exploited within the particulars of daily activities. Class and school size are examples of institutional factors which directly impact on the opportunities that children have to speak and be heard.

Speaking and being heard are central to symmetry of communication and the opportunity for self-disclosure. Such conditions may be supported in diverse ways. Symmetry of communication may be facilitated within dyads through mediation processes by adults or peers. Informal family conversations (perhaps at meal time) and family meetings provide a potential forum for symmetry of discussion. Regular small group meetings at the classroom level regarding social issues--raised by children themselves--permit children to consider a diversity of perspectives and to incorporate those perspectives into new levels of coordinated social perspective taking. There are a variety of means which can be used to provide children with the communicative conditions necessary to coordinate their social perspectives with those of others.

Communicative symmetry provides a necessary antecedent condition for self-disclosure and socio-cognitive conflict. The potential for disclosed perspectives to be considered fully and accommodated through coordination of social perspectives is enhanced by a variety of factors. Through open questioning and active listening children can be encouraged to express thoughts, feelings and needs. Attention of children can be drawn to disclosed feelings and needs. Those aspects of disclosure can be validated and amplified by adults through paraphrasing and probes for comprehension (i.e., "How did Sue say she was feeling?").

Important to the co-constructive processes of coordinated social perspective taking is the delay of premature closure or resolution of inherent socio-cognitive conflict within the interaction. It is important to fully explore the perspectives of others and surface unexpressed aspects so that there is an undiminished accommodation of divergent perspectives. It is also important to articulate the new coordination of social perspectives and concrete consequences of those agreements of meaning for future social behavior of participants. A follow-up review with children aids in reinforcing salient aspects of individual perspectives that have been coordinated within a new co-construction of social meaning.

Summary and Conclusions

The research that has been reviewed and aggregated is generally supportive of the hypotheses of this thesis. There is evidence which supports a constructive model related to the coordination of perspectives and the development of empathy. This model has useful application in identifying key variables related to facilitating the moral development of children. Conditions of communicative symmetry, self-disclosure, and socio-cognitive conflict relate in constructive ways to the coordination of perspectives, the development of empathy, and the occurrence of prosocial behavior. The relationships among the dependent variables relating to empathy support its inclusion as a moderating link between the coordination of perspectives and prosocial behavior.

There has been an abundance of studies that involve measured outcomes relating to these variables. What is required is more attention to the processes involved in the interaction between the variables within naturally occurring contexts. While such research faces the challenges of valid construct formation, operationalization, coding and measurement of social process, there is also the possibility of developing greater clarity regarding the relations among these variables.

The role of empathy remains an issue that is of particular interest. Research related to the social construction of self and other is relevant to understanding the processes by which personal awareness and accurate attributions are mediated in their occurrence by collective social representations. The manner by which the data of cognitive and affective perspective taking are integrated and interpreted within the context of previously embodied phenomenal experience is central to understanding the empathic response. Greater clarity relating to these processes will enable more effective practice in child development. Deeper knowledge related to the processes involved in the coordination of social perspectives will enable a better understanding of the stability and generalizability of these schemata to new relationships.

Through an integrative review, I have explored relationships between variables that are central to the coordination of social perspectives, the development of empathy, and the occurrence of prosocial behavior. Emerging theoretical research directions have been considered, as have limitations, implications, and conclusions of my integrative review. Such a review provides firmer grounding for further theory, research and practice.

References

References marked with an asterisk indicate studies included in meta-analyses.

- *Abroms, K. I., & Gollin, J. B. (1980). Developmental study of gifted preschool children and measures of psychosocial giftedness. Exceptional Children, *46* (5), 334-341.
- *Ahammer, I. M., & Murray, J. P. (1979). Kindness in the kindergarten: The relative influence of role playing and prosocial television in facilitating altruism. International Journal of Behavioral Development, *2*, 133-157.
- Altman, I., & Taylor, D. (1973). Social penetration: The development of interpersonal relationships. New York: Holt, Rinehart & Wilson.
- Ames, G. J., & Murray, F. B. (1982). When two wrongs make a right: Promoting cognitive change by social conflict. Developmental Psychology, *18* (6), 894-897.
- Augoustinos, M. (1988). Social representations and ideology: towards the study of ideological representations. In U. Flick (Ed.), The psychology of the social (pp. 156-169). Cambridge: Cambridge University Press.
- Baron, A. (1979). Magnitude of victim's pain cues and level of prior instigation upon physical aggression. Journal of Personality and Social Psychology, *17*, 236-243.
- *Barnett, M. A., Howard, J. A., King, L. M., & Dino, G. A. (1981). Helping behavior and the transfer of empathy. The Journal of Social Psychology, *115*, 125-132.
- *Barnett, M. A., Howard, J. A., Melton, E. M., & Dino, G. A. (1982). Effect of inducing sadness about self or other on helping behavior in high- and low-empathic children. Child Development, *53*, 920-923.
- Barnett, M. A., King, L. M., & Howard, J. A. (1979). Inducing affect about self or other: Effects on generosity in children. Developmental Psychology, *15* (2), 164-167.
- *Barrett, D. E., & Yarrow, M. R. (1977). Prosocial behavior, social inferential ability, and assertiveness in children. Child Development, *48*, 475-481.

Bearison, D. J., Magzamen, S., & Filardo, E. K. (1986). Socio-cognitive conflict and cognitive growth in young children. Merrill-Palmer Quarterly, 32 (1), 51-72.

*Bender, N. N., & Carlson, J. S. (1982). Prosocial behavior and perspective-taking of mentally retarded and nonretarded children. American Journal of Mental Deficiency, 86 (4), 361-366.

*Bengtsson, H., & Johnson, L. (1992). Perspective taking, empathy, and prosocial behavior in late childhood. Child Study Journal, 22 (1), 11-22.

Berger, P. L., & Luckmann, T. (1967). The social construction of reality: A treatise in the sociology of knowledge. New York: Anchor Books.

Borst, C. V. (Ed.). (1970). The mind-brain identity theory: A collection of papers. In A. G. N. Flew (Ed.), Controversies in philosophy. London: The MacMillan Press.

Braaten, J. (1991). Habermas's critical theory of society. NY: State University of New York Press.

*Brehm, S. S., Powell, L. K., & Coke, J. S. (1984). The effects of empathic instructions upon donating behavior: Sex differences in young children. Sex Roles, 10 (5/6), 405-416.

Brems, C., & Fromme, D. K. (1992). Group modification of empathic verbalizations and self-disclosure. Journal of Social Psychology, 132 (2), p.189, 12p.

*Buckley, N., Siegel, L. S., & Ness, S. (1979). Egocentrism, empathy, and altruistic behavior in young children. Developmental Psychology, 15 (3), 329-330.

Carkhuff, R. R. (1969). Helping and human relations. New York: Holt, Rinehart & Winston.

*Carlo, G., Knight, G. P., Eisenberg, N., & Rotenberg, K. J. (1991). Cognitive processes and prosocial behaviors among children: The role of affective attributions and reconciliations. Developmental Psychology, 27 (3), 456-461.

*Chandler, M. J. (1973). Egocentrism and antisocial behavior: The assessment and training of social perspective taking skills. Developmental Psychology, 9 (3), 326-332.

Cho, E. (1993). The role of perspective-taking and empathy in preschooler's prosocial behavior (Doctoral dissertation, University of Maryland College Park, 1992). Dissertation Abstracts International, 53 (9), p.3099.

Chomsky, N. (1992). Chronicles of dissent. Vancouver, B.C.: New Star Books.

*Cohen, D., & Strayer, J. (1996). Empathy in conduct-disordered and comparison youth. Developmental Psychology, 32 (6), 988-998.

Cohen, J. (1977). Statistical Power Analysis for the Behavioral Sciences (Revised ed.). New York: Academic Press.

Cohen, J., & Cohen, P. (1983). Applied multiple regression/correlation analysis for the behavioral sciences (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.

Cohn, N. B., & Strassberg, D. S. (1983). Self-disclosure reciprocity among preadolescents. Personality and Social Psychology Bulletin, 9 (1), 97-102.

Collins, C. L., & Gould, O. N. (1994). Getting to know you: How age and other's age relate to self-disclosure. International Journal of Aging and Human Development, 39 (1), 55-66.

Collins, N. L., & Miller, L. C. (1994). Self-disclosure and liking: A meta-analytic review. Psychological Bulletin, 116 (3), 457-475.

Connell, R. W. (1987). Gender and power: Society, the person and sexual politics. Cambridge: Polity.

*Conte, R., Andrews, J. J. W., Loomer, M., & Hutton, G. (1995). A classroom-based social skills intervention for children with learning disabilities. The Alberta Journal of Educational Research, 12 (1), 84-102.

Cooley, C. H. (1933). Introductory sociology. New York: Charles Scribner's Sons.

Cooley, C. H. (1964). Human nature and the social order. New York: Augustus M. Kelly. (Original work published in 1902)

Cooley, C. H. (1969). Sociological theory and social research. New York: Augustus M. Kelly. (Original work published in 1902).

*Dehaan, R., Russell, H., Kinlaw, K., Philler, D., & Snarey, J. (1997). Promoting ethical reasoning, affect and behaviour among high school students: An evaluation of three teaching strategies. Journal of Moral Education, 26 (1), 5-20.

*Dekovic, M., & Gerris, J. R. M. (1994). Developmental analysis of social cognitive and behavioral differences between popular and rejected children. Journal of Applied Developmental Psychology, 15, 367-386.

Desmond, W. H. (1970). The position of George Herbert Mead. In G. P. Stone & H. A. Faberman (Eds.), Social psychology through symbolic interaction (pp. 55-62). Waltham, MA: Xerox College Publishing.

Dindia, K., & Allen, M. (1992). Sex differences in self-disclosure: A meta-analysis. Psychological Bulletin, 112 (1), 106-124.

Doise, W., & Mugny, G. (1984). The social development of the intellect. Oxford: Pergammon.

Doise, W., Mugny, G. & Perez, J. (1998). The social construction of knowledge: social marking and socio-cognitive conflict. In U. Flick (Ed.), The psychology of the social (pp. 77- 90) (G. Duveen, Trans.). Cambridge: Cambridge University Press.

Durkheim, E. (1972). Selected writings. (A. Giddens, Ed.). Cambridge: Cambridge University Press.

Duveen, G. (manuscript in preparation). The development of social representations.

Dwyer, E. W. (1981). The effects of interpersonal skills training on the development of empathy and prosocial behavior of gifted preadolescents (Doctoral dissertation, University of Maryland College Park, 1981). Dissertation Abstracts International, 43 (1), p. 114.

*Eisenberg, N., Carlo, G., Murphy, B., & Van Court, P. (1995). Prosocial development in late adolescence: A longitudinal study. Child Development, 66, 1179-1197.

Eisenberg, N., & Miller, P. A. (1987). The relation of empathy to prosocial and related behaviors. Psychological Bulletin, *101* (1), 91-119.

*Eisenberg-Berg, N., & Lennon, R. (1980). Altruism and the assessment of empathy in preschool years. Child Development, *51*, 552-557.

Elder, J. L. D. (1983). The relationship between role-taking, prosocial reasoning and prosocial behavior (Doctoral dissertation, The University of Western Ontario, Canada, 1982). Dissertation Abstracts International, *43* (8), p. 2740.

*Etxebarria, I., & Apodaka, P. (1994). Design and evaluation of a programme to promote prosocial-altruistic behavior in the school. Journal of Moral Education, *23* (4), 409-425.

Flick, U. (Ed.) (1998). The psychology of the social. Cambridge: Cambridge University Press.

*Garner, P. W. (1996). The relations of emotional role taking, affective/moral attributions, and emotional display rule knowledge to low-income school-age children's social competence. Journal of Applied Developmental Psychology, *17*, 19-36.

Gibbs, J. C. (1991a). Reply. Human Development, *34*, 111-112.

Gibbs, J. C. (1991b). Toward an integration of Kohlberg's and Hoffman's moral development theories. Human Development, *34*, 88-104.

Gibbs, J. C., Basinger, K. S., & Fuller, D. (1992). Moral maturity: Measuring the development of sociomoral reflection. London: Lawrence Erlbaum Associates, Publishers.

Gilligan, C. (1982). In a different voice: Psychological theory and women's development. Cambridge, MA: Harvard University Press.

Gilligan, C. (1998). Remembering Larry. Journal of Moral Education, *27* (2), 125-140.

Gilligan, C., Rogers, A. G., & Tolman, D. L. (1991). Women, girls & psychotherapy: Reframing resistance. London: Harrington Park Press.

- Ginsburg, H., & Oppen, S. (1969). Piaget's theory of intellectual development. Englewood Cliffs, NJ: Prentice-Hall.
- Glass, G. V., McGaw, B., & Smith, M. L. (1981). Meta-analysis in social research. London: Sage.
- Goff, J. F. (1993). Goal coordination, expressive management, and the relation between social perspective taking and social functioning: A developmental investigation (Doctoral dissertation, University of Maine, 1993). Dissertation Abstracts International, 54 (5), p. 2751.
- *Grossman, D. C., Neckerman, H. J., Koepsell, T. D., Liu, P., Asher, K. N., Beland, K., Frey, K., & Rivara, F. P. (1997). Effectiveness of a violence prevention curriculum among children in elementary school: A randomized controlled trial. Journal of the American Medical Association, 277 (20), 1605-1611.
- Habermas, J. (1987). The theory of communicative action--lifeworld and system: A critique of functionalist reason (Vol. 2). Boston: Beacon.
- Habermas, J. (1990). Moral consciousness and communicative action. Cambridge, MA: The MIT Press.
- *Hart, C. H., De Wolf, D. M., Wozniak, P., & Burts, D. C. (1992). Maternal and paternal disciplinary styles: Relations with preschoolers' playground behavioral orientations and peer status. Child Development, 63, 879-892.
- Helmericks, S. G., Nelsen, R. L., & Unnithan, N. P. (1991). The researcher, the topic, and the literature: A procedure for systematizing literature searches. Journal of Applied Behavioral Science, 27 (3), 285-295.
- Hill, T. C. (1983). The effects of self-reflection on preschool children's empathic understanding and prosocial behavior (Doctoral dissertation, University of Illinois at Urbana-Champaign, 1983). Dissertation Abstracts International, 43 (12), p. 3842.
- Hoffman, M. L. (1975). Developmental synthesis of affect and cognition and its implications for altruistic motivation. Developmental Psychology, 11, 607-622.

Hoffman, M. L. (1991). Commentary. Human Development, 34, 105-110.

*Holmgren, R. A., Eisenberg, N., & Fabes, R. A. (1998). The relations of children's situational empathy-related emotions to dispositional prosocial behavior. International Journal of Behavioral Development, 22 (1), 169-193.

*Howard, J. A., & Barnett, M. A. (1981). Arousal of empathy and subsequent generosity in young children. The Journal of Genetic Psychology, 138, 307-308.

*Hudson, L. M., Forman, E. A., & Brion-Meisels, S. (1982). Role taking as a predictor of prosocial behavior in cross-age tutors. Child Development, 53, 1320-1329.

Hunter, J. E., Schmidt, F. L., & Jackson, G. B. (1982). Meta-analysis: Cumulating research findings across studies. London: Sage.

Hurwitz, B. D., & Gaylord-Ross, R. J. (1983). Role-taking ability and prosocial behavior between nonretarded and retarded (confederate) peers. Education and Training of the Mentally Retarded, (Oct.), 197-203.

*Iannotti, J. R. (1978). Effect of role-taking experiences on role-taking, empathy, altruism, and aggression. Developmental Psychology, 14 (2), 119-124.

*Iannotti, J. R. (1985). Naturalistic and structured assessments of prosocial behavior in preschool children: The influence of empathy and perspective taking. Developmental Psychology, 21 (1), 46-55.

Jandy, E. D. (1969). Charles Horton Cooley: His life and his social theory. New York: Octagon Books.

Johnson, C. (1992). The emergence of the emotional self: A developmental theory. Symbolic Interaction, 15 (2), 183-202.

Jourard, S. M. (1964). The transparent self. Princeton, NJ: Van Nostrand.

*Kagan, S., & Knudson, K. A. M. (1982). Relationship of empathy and affective role-taking in young children. The Journal of Genetic Psychology, 141, 149-150.

*Kagan, S., & Knudson, K. A. M. (1983). Differential development of affective role-taking ability and prosocial behavior. The Journal of Genetic Psychology, 143, 97-102.

*Kalliopuska, M. (1983). Relationship between moral judgment and empathy. Psychological Reports, 53, 575-578.

Kaplan, S. M. (1997). Central life interests: An integrative review. Unpublished doctoral dissertation, California School of Professional Psychology at Alameda.

Kavathatzopoulos, I. (1991). Kohlberg and Piaget: Differences and similarities. Journal of Moral Education, 20, 47-55.

Kegan, R. (1982). The evolving self: Problem and process in human development. Cambridge, MA: Harvard University Press.

Kohlberg, L. (1981). The philosophy of moral development. San Francisco: Harper and Row.

*Kramer, L., & Radey, C. (1997). Improving sibling relationships among young children: A social skills training model. Family Relations, 46, 237-246.

*Krebs, D., & Sturup, B. (1982). Role-taking ability and altruistic behavior in elementary school children. Journal of Moral Education, 11 (2), 94-100.

*Krevans, J., & Gibbs, J. C. (1996). Parent's use of inductive discipline: Relations to children's empathy and prosocial behavior. Child Development, 67, 3263-3277.

Kurdek, L. A. (1979). Perspective taking as the cognitive basis of children's moral development: A review of the literature. Merrill-Palmer Quarterly, 24 (1), 3-28.

*Kurtz, C. A., & Eisenberg, N. (1983). Role-taking, empathy, and resistance to deviation in children. The Journal of Genetic Psychology, 142, 85-95.

Leman, P. J., & Duveen, G. (1996). Developmental differences in children's understanding of epistemic authority. European Journal of Social Psychology, 26, 683-702.

Leman, P. J., & Duveen, G. (unpublished manuscript). Representations of authority and children's moral reasoning.

Leman, P. J., & Duveen, G. (1999). Representations of authority and children's moral reasoning. European Journal of Social Psychology, *29* (5-6), 557-575.

*LeMare, L., & Krebs, D. (1983). Perspective-taking and styles of (pro) social behavior in elementary school children. Academic Psychology Bulletin, *5*, 289-298.

Leming, J. S. (1981). Curricular effectiveness in moral/values education: A review of the research. Journal of Moral Education, *10* (3), 147-164.

*Lewin, I., & Bekerman-Greenberg, R. (1980). Moral judgment and moral behavior in sharing: A developmental analysis. Genetic Psychology Monographs, *101*, 215-230.

*Marcus, R. F., Telleen, S., & Roke, E. J. (1979). Relation between cooperation and empathy in young children. Developmental Psychology, *15* (3), 346-347.

Mead, G. H. (1930). Cooley's contribution to American social thought. The American Journal of Sociology, *35* (5), 693-706.

Mead, G. H. (1934). Mind, self and society: From the stand point of a social behaviorist. (C. W. Morris, Ed.). Chicago, IL: The University of Chicago Press.

*Medrano, C., & De la Caba, M. A. (1994). A model of intervention for improving moral reasoning: An experiment in the Basque county. Journal of Moral Education, *23* (4), 427-437.

Milgram, S. (1974). Obedience to authority an experimental view. New York: Harper.

*Miller, P. A., Eisenberg, N., Fabes, R. A., & Shell, R. (1996). Relations of moral reasoning and vicarious emotion to young children's prosocial behavior towards peers and adults. Developmental Psychology, *32* (2), 210-219.

Miller, R. L. (1981). The impact of training upon the level of affective sensitivity (empathy) in fifth and sixth grade children (Doctoral dissertation, Michigan State University, 1980). Dissertation Abstracts International, *41* (12), p. 4962.

Morgan, S. H. (1983). Development of empathy in emotionally disturbed children. Humanistic Education and Development, (Dec.), 70-79.

Moscovici, S. (1981). On social representation. In J. Forgas (Ed.), Social cognition. Academic Press.

Moscovici, S. (1988). Notes towards a description of social representation. European Journal of Social Psychology, 18, 211-250.

Moscovici, S. (1993). The invention of society. Cambridge, MA: Polity Press.

Moscovici, S. (1998). The history and actuality of social representations. In U. Flick (Ed.), The psychology of the social (pp. 209-247) (G. Duveen, Trans.). Cambridge: Cambridge University Press.

Mounoud, P. (1996). Perspective taking and belief attribution: From Piaget's theory to children's theory of mind. Swiss Journal of Psychology, 55 (2/3), 93-103.

Mugny, G., & Doise, W. (1978). Socio-cognitive conflict and structure of individual and collective performances. European Journal of Social Psychology, 8, 181-192.

Ohbuchi, K., & Ohno, T. (1993). Empathy and aggression: Effects of self-disclosure and fearful appeal. Journal of Social Psychology, 133 (2), p243, 11p.

Oyserman, D., & Markus, H. R. (1998). Self as social representation. In U. Flick (Ed.), The psychology of the social (pp. 124). Cambridge: Cambridge University Press.

Papini, D. R., & Farmer, F. F. (1990). Early adolescent age and gender differences in patterns of emotional self-disclosure to parents and friends. Adolescence, 25 (100), p959, 18p.

*Parish, T. S. (1981). The enhancement of altruistic behaviors in children through the implementation of dilemma discussion procedures. Education, 102 (2), 154-158.

*Pecukonis, E. V. (1990). A cognitive/affective empathy training program as a function of ego development in aggressive adolescent females. Adolescence, 25 (97), 59-76.

Piaget, J. (1932). The moral judgment of the child. New York: Harcourt, Brace & World.

*Prinz, R. J., Blechman, E. A., & Dumas, J. E. (1994). An evaluation of peer coping-skills training for childhood aggression. Journal of Clinical Child Psychology, 23 (2), 193-203.

Reck, A. J. (Ed.). (1964). George Herbert Mead: Selected writings. Chicago, IL: The University of Chicago Press.

Rest, J. R. (1983). Morality. In J. H. Flavell & E. M. Markman (Eds.), Handbook of child psychology: Cognitive development, 3. New York: John Wiley & Sons.

*Roberts, W., & Strayer, J. (1996). Empathy, emotional expressiveness, and prosocial behavior. Child Development, 67, 449-470.

Roebben, B. (1995). Catching a glimpse of the palace of reason: the education of moral emotions. Journal of Moral Education, 24 (2), 185-197.

Rosenthal, R. (1984). Meta-analytic procedures for social research: Applied social research methods series, 6. Beverly Hills, CA: Sage.

Selman, R. (1980). The growth of interpersonal understanding: Developmental and clinical analyses. New York: Academic Press.

Selman, R. L., & Schultz, L. H. (1990). Making a friend in youth: Developmental theory and pair therapy. Chicago: The University of Chicago Press.

Selman, R. L., Watts, C. L., & Schultz, L. H. (Eds.). (1997). Fostering friendship: Pair therapy for treatment and prevention. New York: Aldine de Gruyter.

Schlaefli, A., Rest, J. K., & Thoma, S. J. (1985). Does moral education improve moral judgment? A meta-analysis of intervention studies using the Defining Issues Test. Review of Educational Research, 55, 319-352.

Simmel, G. (1990). The philosophy of money (2nd ed.). (T. Bottomore & D. Frisby, Trans.). London: Routledge.

Sims, S. A. (1978). Sharing behavior by children: Effects of behavioral example, induction, and resources. The Journal of Psychology, 100, 57-65.

Snoek, D., & Rothblum, E. (1979). Self-disclosure among adolescents in relation to parental affection and control patterns. Adolescence, 14 (54), 333-340.

*Stewart, R. B., & Marvin, R. S. (1984). Sibling relations: The role of conceptual perspective taking in the ontogeny of sibling caregiving. Child Development, 55, 1322-1332.

*Strayer, J. (1980). A naturalistic study of empathic behaviors and their relation to affective states and perspective-taking skills in preschool children. Child Development, 5, 815-822.

Taveggia, T. C. (1974). Resolving research controversy through empirical cumulation: Toward reliable sociological knowledge. Sociological Methods & Research, 2 (4), 395-407.

Underwood, B., & Moore, B. (1982). Perspective-taking and altruism. Psychological Bulletin, 91 (1), 143-173.

*Waterman, J. M., Sobesky, W. E., Silvern, L., Aoki, B., & McCaulay, M. (1981). Social perspective-taking and adjustment in emotionally disturbed, learning-disabled, and normal children. Journal of Abnormal Child Psychology, 9 (1), 133-148.

Weber, M. (1968) On charisma and institution building. (S. N. Eisenstadt, Ed.). Chicago: The University of Chicago Press.

Weyl, C. F. (1992). Empathy, perspective taking, and role taking: A review of the use of the constructs and an attempt at redefinition. Unpublished doctoral dissertation, Widner University, PA.

Wolf, F. M. (1986). Meta-analysis: Quantitative methods for research synthesis. London: Sage.

*Work, W. C., & Olsen, K. H. (1990). Evaluation of a revised fourth grade social problem solving curriculum: Empathy as a moderator of adjustive gain. Journal of Primary Prevention, 11 (2), 143-157.

*Zahn-Waxler, C., Radke-Yarrow, M., & Brady-Smith, J. (1977). Perspective-taking and prosocial behavior. Developmental Psychology, 13 (1), 87-88.

Zashin, M. M. (1981). A prosocial behavior training program: Modeling, role playing, and training in verbal self-instruction as techniques for teaching prosocial behaviors to groups of behaviorally disturbed pre-adolescent children (Doctoral dissertation, The University of Texas at Austin, 1981). Dissertation Abstracts International, 42 (3), p. 1199.

Appendix A. Studies Included in Meta-analyses

Data Set 1: Analysis of Antecedent or Independent Variables in Causal Relation to Dependent Variables (Table 11)

Intervention Strategies and Coordination of Perspectives

Chandler (1973). Egocentrism and antisocial behavior: The assessment and training of social perspective taking skills. (Study coding number--1)

Differences were first documented in role taking skills between a delinquent group and a nondelinquent group of 45 boys. Role taking ability was assessed through a measure of social egocentrism in which the boys were asked to describe a single cartoon sequence from their own point of view and then from the perspective of a coexperimenter who was shown only an abbreviated version. The delinquent boys were randomly placed in one of three groups: a control group, a placebo group, and an experimental group. The experimental group used drama and making video films as a strategy to remediate deficits in role taking ability. Following a 10 week intervention program the subjects in each of the groups were reevaluated using a second series of cartoon sequences. A large effect size was found for the difference between the mean of the experimental group in comparison to the combined mean of the placebo and control groups. This indicated an improvement in perspective taking ability for the delinquent boys in the experimental group in contrast to the boys in the placebo and control groups.

Etxebarria & Apodaka (1994). Design and evaluation of a program to promote prosocial-altruistic behavior in the school. (Study coding number--28)

This study examined the effects of a 15 week intervention program with 10- and 12-year-old children in Spain. The intervention program involved a series of activities to encourage empathy, perspective taking, having the concept of a person, and cooperation. Outcome measures included assessment of prosocial-altruistic behavior, classroom climate, and capacity for perspective taking. Students participating in the program showed increases in perspective taking ability. There are several methodological concerns with the study. The sample was a convenience sample of intact class groupings and there was no control group to control for factors such as maturation over a four month period.

Iannotti (1978). Effect of role taking experiences on role taking, empathy, altruism, and aggression. (Study coding number--12)

The effect of role taking experiences on role taking ability was assessed. The subjects were thirty 6- and thirty 9-year-old boys. Two different training conditions were used to influence the boys' role taking competencies. Training involved reading and acting out a story. The boys either took the role of one character or switched through a series of roles. Role taking was measured through assessing the role taking processes that the boys

engaged in when resolving a social dilemma or a strategy game. Both role taking conditions resulted in higher scores on the role taking measure as compared to the scores of the control group.

Kramer & Radey (1997). Improving sibling relationships among young children: A social skills training model. (Study coding number--43)

An intervention program to improve sibling relations was assessed using 42 older siblings (average age of 5). The older siblings were randomly assigned to either an experimental or a control group. A baseline of the sibling relationship quality was established through videotaping and coding each sibling pair in interaction. Following five training sessions a similar post-test was made of the sibling interaction quality. Training sessions involved developing social skills including those related to perspective taking and communicating feelings. A measure of perspective taking ability was found to have a strong positive correlation with demonstrated warmth in sibling relations. Children who scored high in perspective taking ability were seen as having more positive (warmer) sibling relationships. Children who were given the skills training demonstrated a higher level of perspective taking and more positive sibling relationships than children in the control group.

Medrano & De la Caba (1994). A model of intervention for improving moral reasoning: An experiment in the Basque county. (Study coding number--3)

Moral development of 97 students in the Basque county between the ages of 9 and 14 was assessed using a Spanish translation of Kohlberg's moral reasoning questionnaire (standard version: Form A). Students in six classes were initially pretested to assess their level of moral judgment. Following the pretest six discussion sessions were held in each classroom. The discussion sessions involved group discussions of moral dilemmas, some hypothetical and others real. Following the six discussion sessions students were administered a posttest to assess level of moral reasoning. A medium to large effect size was found for the difference between the posttest and the pretest means. Students had made progress in their level of moral judgment as measured on the posttest. There are several methodological concerns in this study including: the same test was used for both the pre and posttest; there was no control group to control for maturation.

Intervention Strategies and Empathy

Holmgren, Eisenberg & Fabes (1998). The relations of children's situational empathy-related emotions to dispositional prosocial behavior. (Study coding number--47)

The subjects were 199 kindergarten to third-grade students. The children were shown a control film and a stimulus film in which there was a distress segment and an empathy inducing segment. The children had their heart rate, skin conductance, and facial responses monitored. The children also completed a mood scale after watching the film. Sadness reported after the stimulus film was higher than self-reported sadness after the control film. Children demonstrated a higher level of empathic response when exposed to a video of another child in need.

Krevans & Gibbs (1996). Parent's use of inductive discipline: Relations to children's empathy and prosocial behavior. (Study coding number--13)

Relations between parent's discipline, children's empathic responses, and children's prosocial behavior were examined in order to evaluate Martin Hoffman's claim that children's empathy and empathy-based guilt mediate the socialization of children's prosocial behavior. Inductive discipline encourages children to consider how their behavior has affected others. In contrast, discipline based on power assertions such as coercion or threats of punishments are posited to promote self-focused concern with external consequences, which can in turn reduce prosocial behavior. Inductive discipline is seen as encouraging empathy and social perspective taking. Seventy-eight sixth and seventh graders (11-14 years old) and their mothers completed a variety of measures. The mothers completed a parental discipline questionnaire. The children completed three measures of empathy. There was a moderate positive relationship between inductive discipline and empathy. Children who had been raised with an inductive discipline style were more empathic.

Pecukonis (1990). A cognitive/affective empathy training program. (Study code number--30)

The effects of an affective/cognitive empathy training program on level of empathy in 24 aggressive females in a residential treatment center was investigated. Subjects were pretested on measures of affective and cognitive empathy. They then participated in four 1.5-hour training sessions involving: affect discrimination, role taking, affective matching, and event analysis. The training sessions were found to increase the level of affective empathy. No increase was found in the level of cognitive empathy.

Intervention Strategies and Prosocial Behavior

Ahammer & Murray (1979). Kindness in the kindergarten: The relative influence of role playing and prosocial television in facilitating altruism. (Study coding number--48)

Four programs were designed to foster prosocial behavior with 97 four to five-year-old children. The training programs focused on developing cognitive perceptual and affective role taking ability. The children in the training programs were compared to children who watched prosocial, neutral, or no television in the control conditions. Prosocial behavior was assessed through three experimental tasks designed to assess helping, cooperation, and sharing. Children who received training in role playing plus empathy, or role playing, demonstrated more helping behavior than children in the control conditions. Children who were in the role playing condition also shared more than children who were in the control conditions.

Brehm, Powell & Coke (1984). The effects of empathic instructions upon donating behavior: Sex differences in young children. (Study coding number--49)

The subjects were 67 first grade students. The children were either induced to consider the perspective of another child in need, or were given instructions to focus on

what the other child did. The children were then given an opportunity to donate money to the child in need. The boys donated more money to the needy child when they received empathy instructions than when they received neutral instructions. Donations by the girls did not show a difference between the two conditions.

Chandler (1973). Egocentrism and antisocial behavior: The assessment and training of social perspective taking skills. (Study coding number--1)

See description of study above. This study measured and attempted to remediate deficits in the role taking skills of 45 chronically delinquent boys. Development of role taking ability was assessed as was a follow-up measure of prosocial behavior. One and a half years after the study police and court records of all of the delinquent subjects were examined. The total number of delinquent offenses committed during this 18-month period was calculated and compared with the total number of offenses for the 18-month period prior to the intervention program. A large effect size was found for the difference between the two means. The experimental group had fewer delinquencies during the follow up period in contrast to members of the control and placebo groups.

Conte, Andrews, Loomer & Hutton (1995). A classroom-based social skills intervention for children with learning disabilities. (Study coding number--42)

Twenty-seven learning-disabled children participated in a study to assess the impact of social skills training on peer acceptance and social problem solving. The social skills training involved discussion of social problems, role-plays, and encouragement to integrate the viewpoints of all participants. Twelve children were in the training group, the remaining fifteen children were in the control group. The training took place for 45 minutes twice a week over the course of six months. Sociometric ratings of peer acceptance were obtained for the children following the six months training. Children who took part in the training group received higher scores on the sociometric ratings. Sociometric ratings of peer acceptance are strongly correlated with prosocial behaviors. It can be inferred that the training enhanced the prosocial behavior of the children involved.

Etxebarria & Apodaka (1994). Design and evaluation of a program to promote prosocial-altruistic behavior in the school. (Study coding number--28)

See description of study above. This study examined the effects of a 15 week intervention program with 10- and 12-year-old children in Spain. The intervention program involved a series of activities to encourage empathy, perspective-taking, having the concept of a person, and cooperation. Outcome measures included sociograms and self-reports to assess prosocial-altruistic behavior and classroom climate. Students participating in the program demonstrated increases in prosocial-altruistic behavior. The classroom climate of the participating classes was judged to have improved. However, classroom climate changes over a four month period of time may not be due to the intervention program as group cohesiveness and cooperation may develop naturally given the propinquity and frequency of contact of the children. Other methodological concerns with the study are noted above.

Grossman, Neckerman, Koepsell, Liu, Asher, Beland, Frey & Rivara (1997).

Effectiveness of a violence prevention curriculum among children in elementary school: A randomized controlled trial. (Study coding number--37)

A study was conducted to determine the effectiveness of a violence prevention curriculum (Second Step: A Violence Prevention Curriculum). The Second Step curriculum has lessons related to the development of empathy, perspective taking, impulse control, and anger management. Within the study aggressive and prosocial behavior changes were assessed for 790 second-grade and third-grade students. Posttest behavior observations revealed an overall decrease in physical aggression and an increase in neutral/prosocial behavior. These effects were found to persist six months later.

Hart, De Wolf, Wozniak & Burts (1992). Maternal and paternal disciplinary styles: Relations with preschoolers' playground behavioral orientations and peer status. (Study coding number--44)

The parents of 106 3-6-year-old children were assessed to determine their parenting styles. They were identified as having either an inductive, or a power assertive style of parenting. Playground behavior of the children was observed and coded. A composite prosocial score was formed on the basis of the observations. The children also completed a sociometric measure to determine peer preferences for playmates. Children whose mothers and fathers had inductive parenting styles demonstrated more prosocial behavior (including less rough play). Those children of parents who used an inductive discipline style were preferred playmates. The social behavior of the children was found to mediate the relationship between parenting style and peer preference. Children of inductive parents demonstrated higher levels of prosocial behavior and were preferred playmates.

Howard & Barnett (1981). Arousal of empathy and subsequent generosity in young children. (Study code number--16)

This study explored the effect of eliciting empathic arousal on the subsequent sharing behavior of 4- to 8-year-old children. The children were randomly assigned to one of two conditions in which they were either (a) encouraged to focus on the feelings of less fortunate others or (b) encouraged to think about less fortunate others. The children were then given an opportunity to privately donate some prize tokens to other children. The children in the empathy arousal condition reported feeling significantly sadder and donated significantly more prize money.

Kramer & Radey (1997). Improving sibling relationships among young children: A social skills training model. (Study coding number--43)

See description of study above. An intervention program to improve sibling relations was assessed using 42 older siblings (average age of 5). The children's prosocial behavior was assessed by their parents following the training. Children in the training group were considered by their mothers to demonstrate greater warmth in their sibling relationships than children in the control condition. Furthermore, parents rated the experimental group as being more helpful in improving the quality of sibling relations than the control group. This suggests that children who were given the skills training demonstrated an improvement in prosocial behavior with their siblings.

Krevans & Gibbs (1996). Parent's use of inductive discipline: Relations to children's empathy and prosocial behavior. (Study coding number--13)

See discussion above. The children were assessed by their peers and their teachers on the level of their prosocial behavior. There was a moderate positive relationship between inductive parental discipline and prosocial behavior. Children who had been raised in the context of an inductive discipline style were more empathetic and engaged in a higher level of prosocial behavior.

Parish (1981). The enhancement of altruistic behaviors in children through the implementation of dilemma discussion procedures. (Study coding number--40)

Two groups of fifth graders were compared. There were 15 children in each group. The children in the experimental condition viewed films over three sessions that stimulated dilemma discussions. The other children acted as a control group. The children later received candy and were then given an opportunity to give the candy to other children. Children who had been in the dilemma discussion group gave away more candy than children who were in the control group. Participation within the dilemma discussion group enhanced the generosity of the children involved.

Prinz, Blechman & Dumas (1994). An evaluation of peer coping-skills training for childhood aggression. (Study coding number--32)

The subjects were 96 first through third grade students who were rated by their teachers on the level of their aggressive behavior. Students who were rated as either high on aggressive behavior or low on aggressive behavior and high on social competency were selected for the study. The children were randomly assigned to either a control or to an experimental condition. From September to May the children in the experimental condition received training in peer coping-skills. The training was designed to enhance the quality of information that children exchange as speakers (ability to describe their feelings, thoughts, and behavior in a genuine articulate manner) and listeners (ability to thoroughly understand another's point of view). Children who were in the experimental group were rated by their teachers as having an improvement in social skills and a decrease in aggressive behavior. In comparison children in the control group were rated as demonstrating no improvement in social skills and as demonstrating no change in aggressive behavior. In a six month follow-up assessment by teachers the observed differences between the experimental and control groups on these measures were found to be stable.

Work & Olsen (1990). Evaluation of a revised fourth grade social problem solving curriculum: Empathy as a moderator of adjustive gain. (Study coding number--31)

The subjects were 82 fourth graders who were placed in either an experimental or a control condition. The children in the experimental condition participated in 20 lessons which were designed to develop the awareness and appreciation of the feelings of others as well as enhance social problem solving skills. Teacher ratings of children in the experimental vs. the control group indicated that children who had participated in the

training had fewer adjustive problems and more adjustive competencies than children who had not participated in the training.

Data Set 2: Analysis of Associations Among Dependent Variables

Analysis of Coordination of Perspectives and Empathy (Table 12)

Bengtsson & Johnson (1992). Perspective taking, empathy, and prosocial behavior in late childhood. (Study coding number--4)

Sixty 10- to 11-year-olds living in a socio-economically mixed area of a Swedish city were assessed to determine whether social perspective taking was related to dispositional affective empathy and prosocial behavior. The children were categorized on their level of perspective taking through assessing responses to oral hypothetical dilemmas and video vignettes. Children who were only able to consider the perspective of the victim were placed in the first category of perspective taking ability (one-sided empathic reasoning). Children who were able to consider both the perspective of the victim and the perspective of the victimizer were placed in a second level of perspective taking which implied a more complex coordination of perspective taking ability (extended empathic reasoning). Children were then assessed on an affective empathic tendency test (dispositional affective empathy) and rated by their teachers on the level of their prosocial behavior. A strong positive relationship was found between perspective taking ability (extended empathic reasoning) and affective empathic empathy (dispositional affective empathy). Children who were high in perspective taking ability tended to be high in level of empathy.

Kagan & Knudson (1982). Relationship of empathy and affective role-taking in young children. (Study coding number--9)

Measures of empathy and affective role-taking were administered to 88 kindergarten and grade two pupils in southern California. In the Affective Situation Test the children were asked how a child in the story felt as a measure of affective-role taking. The feelings that the children themselves had were used as a measure of empathy. In the Social Sensitivity Test children were asked to identify how an adult in the story felt as a measure of affective-role taking, and were assessed in terms of their own feelings as a measure of empathy. A strong positive relationship between role-taking and empathy was found using the Affective Situation Test. Children were able to take the affective role of another child in a story and empathize with that child. Affective role-taking as assessed using the Social Sensitivity Test however, did not relate significantly to empathy. Children had difficulty taking the affective role of an adult in a story and empathizing with that adult.

Kalliopuska (1983). Relationship between moral judgment and empathy. (Study coding number--18)

The sample consisted of 342 Finish school children aged 9 to 12 who were tested with two Kohlberg dilemmas and the Mehrabian and Epstein scale of emotional empathy. A

moderate positive relationship was found between level of moral reasoning and empathy scores for male and female 10-year-olds. The 10-year-old children who scored high on the moral reasoning task also scored high on the tests of empathic ability. Similar relationships between moral reasoning and empathy were found for male 11-year-olds and female 12-year-olds.

Roberts & Strayer (1996). Empathy, emotional expressiveness, and prosocial behavior. (Study coding number--19)

Relations between empathy, role taking, and prosocial behavior were evaluated in 73 children in 3 age groups (5-, 9-, and 13-year-olds). Each of these variables was assessed on a number of outcome measures. The outcome measures were examined individually and were combined into composite scores for further analysis. An Empathy Continuum score was developed by matching the attribution of a stimulus person's emotion with the cognitive attribution of the subject's own emotional state. Role taking was strongly linked to empathy accounting for 23% of its variance. This relationship was moderately stable across the sexes. Those children who scored high on role taking ability also tended to score high on empathy.

In all, 60% of the variance in empathy was accounted for by four predictor variables: role-taking scores, expressiveness, expression of anger (negative relationship), and emotional insight. The R^2 s for girls (.68) on these four predictor variables were similar to those for boys (.64). As predicted in the study, both cognitive and affective factors made important contributions to empathy. This is consistent with the dual cognitive-affective nature of empathy.

Strayer (1980). A naturalistic study of empathic behaviors and their relation to affective states and perspective-taking skills in preschool children. (Study coding number--27)

In this study 14 preschoolers who attended a university day-care center were observed during free-play periods twice a week for eight weeks. Two perspective taking tests--one of which was an affective perspective taking test--were administered to the children. Empathy was assessed by coding children's responses to the emotional displays of their peers. There was a strong (but non-significant) correlation between affective perspective taking ability and empathy. Children high in affective perspective taking ability tended to be more empathic. The lack of significance of the findings may indicate inadequate statistical power given the small sample size employed.

Analysis of Coordination of Perspectives and Prosocial Behavior (Table 13)

Abroms & Gollin (1980). Developmental study of gifted preschool children and measures of psychosocial giftedness. (Study coding number--46)

Intellectually gifted three-year-olds were studied to examine the relationship between role taking ability and prosocial behavior. The children were assessed on two conceptual role taking tasks which assessed the children's ability to conceptualize another person's wants, needs, or ideas. The children were also assessed on an affective role taking measure which examined their ability to infer another person's emotional state. The

children's prosocial behavior was assessed through observation and coding of behavior within the nursery. There was no relationship found between either conceptual or affective perspective taking and prosocial behavior. The children's scores on the perspective taking tests were not related to the prosocial behavior that they demonstrated within the nursery.

Barrett & Yarrow (1977). Prosocial behavior, social inferential ability, and assertiveness in children. (Study coding number--23)

Prosocial behavior of 5- to 8-year-old children was observed over a 6-week period at a summer camp. The children were individually assessed to determine their level of inferential ability. The children observed five videotapes of social interaction between a child and an adult. The children were asked to explain why the central character behaved as he had at the end of the story. Higher scores were given to children who in their explanations were able to demonstrate awareness of how the feelings of the central character related to the interactions of the others. Prosocial behavior was assessed through coding naturally occurring behaviors over the six week camp. Inferential ability was not found to be related to prosocial behavior. Children who were high in inferential ability were not found to demonstrate a higher level of prosocial behavior than those who were low in inferential ability.

Bender & Carlson (1982). Prosocial behavior and perspective-taking of mentally retarded and non-retarded children. (Study coding number--22)

Children who were described as trainable mentally retarded and educable mentally retarded were compared with children who were classified as normal. The average ages of the three groups were 16, 9, and 7 respectively. Though the average intelligence of the three groups differed, the children were all non-conservers on Piagetian tasks. Measures of perspective taking included identifying feelings on stimulus cards and identifying the feelings of an adult confederate who knocked a basket of beads over. Expressed helping--a prosocial indicator--was assessed by coding solutions offered to aid a child (depicted as being in need) in the stimulus cards and by a verbalization of desire to help the adult who spilt the beads. The groups did not vary in prosocial solutions on the stimulus card task or in their expressed helping in the context of the stimulus cards. In the situation in which the adult spilled the beads, there was a significant association between identifying the affective state of the adult and expressed desire to help for the normal intelligence group. Children of normal intelligence were able to both identify the feelings of the adult who spilled the beads and desiring to help pick them up.

Bengtsson & Johnson (1992). Perspective taking, empathy, and prosocial behavior in late childhood. (Study coding number--4)

See description of study above. Sixty 10- to 11-year-olds living in a socio-economically mixed area of a Swedish city were assessed to determine whether social perspective taking was related to dispositional affective empathy and prosocial behavior. The children were categorized on their level of perspective taking through assessing responses to oral hypothetical dilemmas and video vignettes. Children were then rated by their teachers on the level of their prosocial behavior. There was a strong

positive relationship between perspective taking ability and prosocial behavior. Children who were good at perspective taking were also more likely to exhibit prosocial behavior.

Buckley, Siegel & Ness (1979). Egocentrism, empathy, and altruistic behavior in young children. (Study coding number--5)

Children aged three to eight were assessed on a variety of factors: spatial perspective taking ability, empathy with other children, and altruistic behavior (helping and sharing). The empathy scores were higher for children who had better perspective taking ability. The altruism scores were also higher for those with better perspective taking ability. Children who had a higher level of spatial perspective taking ability were more likely to empathize with other children and to help and share with other children. There was a moderate to strong positive correlation between empathy and altruism when age was controlled for. Children who had a higher level of empathy for other children were more likely to engage in altruistic behavior.

Carlo, Knight, Eisenberg & Rotenberg (1991). Cognitive processes and prosocial behaviors among children: The role of affective attributions and reconciliations. (Study coding number--14).

Eighty-nine preschool through second grade children were administered measures of empathy and were then given the opportunity to help a same-sex confederate obtain toys. The children listened to 12 stories, each of which had an associated picture. In half the cases the pictures were congruent with the emotions expressed by the protagonist in the story. In half the cases the pictures were incongruent. The children were asked how they felt (empathy), how the character felt (affective attribution), and how they knew that the protagonist felt that way (affective reasoning). The children were then given a chance to help a confederate whom they ostensibly 'viewed' via a video-tape. In half the situations (congruent condition) the expression of the confederate--frowning and looking frustrated--matched the confederate's situation. In the other experimental condition the expressions of the smiling confederate were incongruent and did not match the situation. There was a moderate positive relationship between ability to make accurate attributions in stories with congruent pictures and helping in the congruent condition. Children who were able to make accurate affective attributions with congruent stimuli were more likely to help in the congruent condition. There was a moderate positive relationship between ability to reconcile incongruent pictures with accurate attributions, and helping in the incongruent condition. Children who were able to make accurate attributions with incongruent stimuli were also more likely to help when the visual stimuli was incongruent with the needs of the confederate.

Cohen, & Strayer (1996). Empathy in conduct-disordered and comparison youth. (Study coding number--45)

Empathy and perspective taking were measured by assessing responses to videotaped vignettes and through self-report questionnaires. The responses of 30 conduct disordered youth were compared with the responses of a comparison group. The conduct disordered youth, as assessed on the Jesness Inventory, had fewer prosocial behaviors and attitudes than the comparison group. Their scores related to perspective taking were also lower.

These scores can be interpreted as indicating that children in the normal comparison group, with higher scores in perspective taking, were more prosocial in their behavior and attitudes.

Dekovic & Gerris (1994). Developmental analysis of social cognitive and behavioral differences between popular and rejected children. (Study coding number--10)

The sample consisted of 125 first-, third-, and fifth-grade children who were selected as either popular or rejected by their peer group. The children were individually assessed to determine their level of social cognitive operations. Included were measures to assess: differentiation of perspectives; perspective taking; and coordination of perspectives. A strong positive relationship was found between prosocial behavior and peer acceptance. It is hypothesized that peer acceptance is an indicator of prosocial behavior. A strong positive relationship was found between level of social cognitive operations and peer group acceptance. Children who were better able to differentiate from and consider the perspectives of their peers were more popular with their peers. It is hypothesized that children with higher levels of perspective taking ability are more sensitive to the feelings and needs of their peers and are better able to engage in positive peer relationships.

Eisenberg, Carlo, Murphy & Van Court (1995). Prosocial development in late adolescence: A longitudinal study. (Study coding number--24)

This longitudinal study assessed the development of prosocial moral development over a 15 year time span. The subjects included 32 children (aged 17-18) from an earlier study as well as a second sample of 34 twelfth graders. Perspective taking was assessed on the Interpersonal Reactivity Scale. Prosocial behavior was measured through a self-report and maternal report. A strong positive correlation was found between perspective taking and both the self-report and the maternal report of prosocial behavior. Those subjects who were high in perspective taking ability were more likely to attribute prosocial behaviors to themselves, as were their mothers.

Garner (1996). The relations of emotional role taking, affective/moral attributions, and emotional display rule knowledge to low-income school-age children's social competence. (Study coding number--50)

Thirty-nine third and fourth grade children were assessed on three emotional knowledge tasks: emotional role taking; knowledge of affective attributions; knowledge of emotional display rules. The children also provided a self-report of the quality of their peer relations and their teachers rated their prosocial behavior. There was a moderate positive relationship between the children's emotional role taking scores and the level of prosocial behavior that they demonstrated. Children who were able to take the emotional role of another were also likely to demonstrate a higher level of prosocial behavior.

Hudson, Forman & Brion-Meisels (1982). Role taking as a predictor of prosocial behavior in cross-age tutors. (Study coding number--17)

Eighteen second-grade boys and girls were identified as high or low role takers. Each of the identified children acted as a tutor to two same-sex kindergarten children. The tutoring sessions were videotaped and the demonstration of prosocial behavior by each of

the tutors was coded and scored. There was a large difference between the high and low role takers in terms of the prosocial behavior that they demonstrated. Children who were high in role taking ability engaged in more prosocial behaviors. Prosocial behaviors demonstrated included the high role taking tutor's overall responsiveness to questions and overall responsiveness to pupil's difficulties.

Iannotti (1985). Naturalistic and structured assessments of prosocial behavior in preschool children: The influence of empathy and perspective taking. (Study coding number--36)

The role of empathy and perspective taking as mediators of prosocial behavior was assessed in this study. Prosocial behavior in 52 preschool children was assessed using naturalistic observation, structured measures of perspective taking, empathy, and prosocial behavior, as well as through teacher ratings. Many of the measures used for similar variables were found to be unrelated to each other. Only one of four perspective taking tests was found to be positively related to prosocial behavior. Children who scored high on emotional role taking also tended to score high on a composite prosocial measure.

Kagan & Knudson (1983). Differential development of affective role-taking ability and prosocial behavior. (Study coding number--25)

To test the hypothesis that affective role-taking ability is related to the development of prosocial behaviors 88 kindergarten to grade two students were administered two role-taking measures (The Social Sensitivity Test and the Affective Situation Test) and two measures of prosocial behavior (The Social Behavior Scale and a Donation Task). No significant relationship was found between The Social Sensitivity Test and the prosocial measures. The Social Behavior Scale had sub-scales relating to: Altruism, Equality, Superiority, and Rivalry/superiority. Only the results of the Altruism sub-scale are considered to be indicative of prosocial behavior. There was a moderate positive correlation between the Affective Situation Test and the Altruism sub-scale of the Social Behavior Scale. There was a small to moderate negative correlation between the Affective Situation Test and the Donation Task. Children who were better able to take the role of the other tended to score high on the Altruism sub-scale, but were less likely to donate to another child.

Kramer & Rady (1997). Improving sibling relationships among young children: A social skills training model. (Study coding number--43)

See description of study above. An intervention program to improve sibling relations was assessed using 42 older siblings (average age of 5). The children's prosocial behavior was assessed by their parents following the training. Children in the training group were considered by their mothers to demonstrate greater warmth in their sibling relationships than children in the control condition. Furthermore, children in the experimental group who were rated by their mothers as showing more warmth in their sibling interactions were also observed to exhibit more perspective taking. This suggests a positive relationship between perspective taking ability and prosocial behavior.

Krebs & Sturupp (1982). Role-taking ability and altruistic behavior in elementary school children. (Study coding number--41)

The social behavior of twenty-four second- and third-grade children was observed and recorded over a two month period. The children's teachers rated their prosocial behavior and the children were given role-taking tests. There were strong positive correlations between the measures of perspective taking ability and the occurrence of prosocial behavior. Children with scores high in perspective taking also tended to demonstrate more prosocial behavior.

Kurtz & Eisenberg (1983). Role-taking, empathy, and resistance to deviation in children. (Study coding number--29)

The effect of differing prohibitions on a resistance-to-temptation task was examined for 81 third graders who had previously been tested with two role taking tasks and an empathy questionnaire. In the presence of several toys children were asked to identify a toy that they liked the best. They were then instructed not to play with that toy and given an accompanying rationale. The children were then left alone with the toys for 12 minutes and their actions were videotaped for later coding. Children who had scored high on role taking were less likely to deviate regardless of the type of prohibition used.

LeMare & Krebs (1983). Perspective-taking and styles of (pro) social behavior in elementary school children. (Study coding number--35)

The subjects were 40 children in first, third, fifth, and seventh grades. A composite measure of perspective taking ability was established by combining the scores on eight perspective taking tests. While social perspective taking tests were used, so too were spatial perspective taking tests. As the tests were found to have a strong positive correlation the composite measure of perspective taking ability was considered valid for this analysis. Prosocial behavior was assessed by teacher ratings. A moderate negative relationship was found between level of perspective taking ability and prosocial behavior. Children who were rated as high in perspective taking ability tended to be rated low in terms of their prosocial behavior. The results of this study failed to support the hypothesis that perspective taking ability mediates prosocial behavior in elementary school children.

Lewin & Bekerman-Greenberg (1980). Moral judgment and moral behavior in sharing: A developmental analysis. (Study coding number--15)

Eighty boys and eighty girls from Israeli preschool, second, fourth, and sixth grades comprised same-sex pairs. The children were assessed on the level of their moral judgments related to three contexts. The three contexts varied in the degree to which each context was similar to the experimental situation. One child in each pair was randomly given a bag containing five small pretzels and an opportunity for sharing the pretzels with their partner was provided. There was a medium to strong positive relationship between level of moral judgment and sharing behavior when the measurement of the child's moral judgment reflected a context similar to the experimental condition. Children whose moral judgments were supportive of sharing in a similar context shared more of their pretzels with their partner.

Stewart & Marvin (1984). A naturalistic study of empathic behaviors and their relation to affective states and perspective-taking skills in preschool children. (Study coding number--51)

The behaviors of 57 mothers, their pre-school children, and their infants were assessed to examine the relationship between caregiving and perspective taking. The pre-school children were assessed on two conceptual perspective taking tasks: a logical syllogisms task (assessing ability to make social inferences); and a secrets task (assessing ability to discriminate among perspectives). Caregiving behavior was coded while the mothers briefly left the infants alone with the preschoolers. Those children who demonstrated a high level of caregiving also scored high in perspective taking ability.

Waterman, Sobesky, Silvern, Aoki & McCaulay (1981). Social perspective-taking and adjustment in emotionally disturbed, learning-disabled, and normal children. (Study coding number--21)

The subjects were white middle-class boys from combined fifth- and sixth-grade classrooms in a suburban school district. Preadolescent emotionally disturbed ($n = 35$) and learning disabled ($n = 31$) boys in self-contained classes were compared on social perspective taking and prosocial behaviors with a control group of normal boys ($n = 14$) in regular classes. The boys in the control group were from the same schools as the boys in the special classes. There were only 14 boys in the control group. Inferences drawn from such a limited sample size must be made with caution.

The boys were assessed on their cognitive and affective social perspective taking abilities. They were also assessed on prosocial behaviors by their teachers. The validity of this behavioral outcome measure is suspect as it is not clear that all of the individual teachers had experience with normal children, or used the behaviors of normal children as the reference group against which emotionally disturbed and learning disabled students were assessed.

It was found that the emotionally disturbed boys differed from the normal boys in terms of both their cognitive and affective perspective taking ability. The boys in the learning-disabled classroom had scores which fell between the two groups and did not significantly differ from either.

Boys in regular classrooms may be assumed to have fewer deficits in prosocial behaviors than boys in special classrooms for the emotionally disturbed. Scores on the behavior sub-scale--though of uncertain validity--found such differences between the groups. There was a positive relationship between both cognitive and affective perspective taking ability and prosocial behavior. Boys who were high in cognitive and affective perspective taking ability also tended to exhibit more prosocial behavior.

Zahn-Waxler, Radke-Yarrow & Brady-Smith (1977). Perspective-taking and prosocial behavior. (Study coding number--8)

A total of 88 children aged three to seven from white, middle-class backgrounds were administered ten perspective taking tests (six of which were conceptual perspective taking) and six tests of prosocial behavior. Correlations between prosocial behavior and perspective taking were determined for a perceptual battery and a conceptual battery of perspective taking tests as well as for the two batteries combined. A moderate positive

correlation was only found between the total prosocial scores and the combined perspective taking batteries for the three-year-olds. Given that the combined perspective taking battery included spatial perspective taking scores, these results are not included within the meta-analysis. The correlations between prosocial behavior and the conceptual battery for all age groups were found to be non-significant. Statistics from which the actual effect size could be calculated were not provided.

Analysis of Empathy and Prosocial Behavior (Table 14)

Barnett, Howard, King, & Dino (1981). Helping behavior and the transfer of empathy. (Study coding number--20)

See description of study above. A total of 103 10th to 12th grade students were pretested on two measures of empathy. They were then shown a videotaped presentation designed to elicit empathic arousal for a particular group of children (mentally or physically handicapped). The children were then given an opportunity to help a recipient group that was either the same as the group in the video or different. Prosocial behavior was assessed in the context of the number of booklets that the students stapled together (ostensibly for a recipient group). A positive relationship between empathy and prosocial behavior was observed. Students who scored high in empathy made more booklets than those who scored low.

Barnett, Howard, Melton & Dino (1982). Effect of inducing sadness about self or other on helping behavior in high- and low-empathic children. (Study coding number--26)

See description of study above. This study, involving 112 sixth graders, examined the relationship between the effects of self- and other-directed negative affect on subsequent helping behavior. Teacher and peer ratings were used to place children into high- and low-empathy groups. Prosocial behavior was assessed in terms of the number of booklets put together for "sick children in a hospital." Highly empathic children completed the most booklets.

Bengtsson & Johnson (1992). Perspective taking, empathy, and prosocial behavior in late childhood. (Study coding number--4)

See description of study above. A strong positive relationship between perspective taking ability and prosocial behavior (as rated by teacher) was found to be present only for children exhibiting extended empathic reasoning. This implies that children with a more developed coordination of social perspective taking ability are more likely to engage in prosocial behavior. A strong positive relationship was found between empathy (dispositional affective empathy) and prosocial behavior. This indicates that children with greater empathic awareness are more likely to engage in prosocial behavior.

Cohen, & Strayer (1996). Empathy in conduct-disordered and comparison youth. (Study coding number--45)

See description of study above. Empathy and perspective taking were measured by assessing responses to videotaped vignettes and through self-report questionnaires. The

responses of 30 conduct disordered youth were compared with the responses of a normal comparison group. The conduct disordered youth demonstrated fewer prosocial behaviors and attitudes than the comparison group. The normal comparison youth had higher scores on three measures of empathy. Children who had higher levels of empathy also tended to have more prosocial behavior and attitudes.

Dehaan, Russell, Kinlaw, Philler & Snarey (1997). Promoting ethical reasoning, affect and behavior among high school students: An evaluation of three teaching strategies. (Study coding number--33)

The subjects in this study were 54 high school students aged 15 to 18. The subjects participated in one of three ethics classes which met five days a week for one semester. Empathy was measured on two scales. Moral behavior was measured on a self-report scale. The intervention used--assigned ethics class--is not relevant to the variables being assessed within the meta-analysis. What is of interest is the correlation between level of empathy and moral behavior. There was a positive moderate relationship between empathy and moral behavior. Those children who scored high on empathy also tended to score high on moral behavior.

Dekovic & Gerris (1994). Developmental analysis of social cognitive and behavioral differences between popular and rejected children. (Study coding number--10)

See description of study above. A strong positive relationship was found between prosocial behavior and peer acceptance. Peer acceptance was used as an indicator of prosocial behavior. Empathy was assessed using four stories that the children had to respond to by stating how they would feel if they were an observer within the story. A strong positive relationship was found between level of empathy and peer group acceptance. Children who scored high on empathy were more popular with their peers.

Eisenberg-Berg & Lennon (1980). Altruism and the assessment of empathy in preschool years. (Study coding number--11)

The subjects were four- and five-year-olds in preschool classes. The empathy measure involved four stories. A verbal and a nonverbal measure of empathy were taken for each story. After each story the children were asked to state how they felt about the story (verbal) and to point to a picture that told how the story made them feel (nonverbal). The children's behavior was observed during approximately 80 two-minute timings during a ten week assessment of spontaneous prosocial behavior. Unexpectedly there was a moderate negative correlation between verbal empathy scores and spontaneous prosocial behavior. There was a moderate negative correlation between nonverbal empathy scores and spontaneous prosocial behavior as well. Children who scored high on the verbal and nonverbal assessments of empathy tended to demonstrate less prosocial behavior.

Holmgren, Eisenberg & Fabes (1998). The relations of children's situational empathy-related emotions to dispositional prosocial behavior. (Study coding number--47)

See description of study above. The subjects were 199 kindergarten to third grade students. The children were shown a control film and a stimulus film in which there was a distress segment and an empathy inducing segment. The children had their heart rate, skin

conductance, and facial responses monitored. Children completed a self-report mood scale following the stimulus film. Dispositional prosocial behavior was assessed through teacher/parent ratings as well as through peer nominations. Empathic children who reported sympathy or sadness following the stimulus film were not judged by their teachers to exhibit a greater degree of dispositional prosocial behavior. However, children who had a facial reaction coded as sadness were judged by their teachers to demonstrate a greater degree of dispositional prosocial behavior. Children who were judged to have an empathic facial reaction were also judged to be more prosocial.

Iannotti (1985). Naturalistic and structured assessments of prosocial behavior in preschool children: The influence of empathy and perspective taking. (Study coding number--36)

See description of study above. The roles of empathy and perspective taking as mediators of prosocial behavior were assessed in this study. Prosocial behavior of 52 preschool children was assessed using naturalistic observation as well as teacher ratings. Empathy and perspective taking were assessed as well. A small but non-significant positive relationship was found between empathy and a composite measure of prosocial behavior.

Krevans & Gibbs (1996). Parent's use of inductive discipline: Relations to children's empathy and prosocial behavior. (Study coding number--13)

See discussion above. Children who had been raised by an inductive discipline style were more empathetic and engaged in a higher level of prosocial behavior. Empathy is considered to be a moderator link between inductive discipline and prosocial behavior. A strong positive relationship was found between empathy and prosocial behavior.

Kurtz & Eisenberg (1983). Role-taking, empathy, and resistance to deviation in children. (Study coding number--29)

See discussion of study above. The effect of differing prohibitions on a resistance-to-temptation task was examined for 81 third graders who had previously been tested with two role-taking tasks and an empathy questionnaire. Children who had scored high on empathy were less likely to deviate regardless of the type of prohibition used.

Marcus, Telleen & Roke (1979). Relation between cooperation and empathy in young children. (Study coding number--34)

Thirty-two preschool children were the subjects. Empathy was measured by using stimulus cards and having the children point to the feeling that most closely reflected their affective state. The children were rated on their level of cooperation by two teachers and four observers. A moderate positive relationship was found between level of empathy and level of cooperative behavior. Children who were high in empathy also tended to be more cooperative.

Miller, Eisenberg, Fabes & Shell (1996). Relations of moral reasoning and vicarious emotion to young children's prosocial behavior towards peers and adults. (Study coding number--6)

Children aged four to five in two university day care centers were shown "distress videos." During the viewing they were assessed on facial affective response. Following the video their verbal self-reports were recorded as a measure of empathy. Prosocial behavior was assessed in the context of helping behavior toward a peer or toward an adult in apparent distress. A moderate positive relationship was found between a self-report of sad to the film and peer helping behavior. A moderate positive relationship was found between a self-report of sorry to the film and helping an adult in distress. Children who demonstrated empathic awareness in the context of watching the video were more likely to help a peer or an adult who was in apparent distress.

Roberts & Strayer (1996). Empathy, emotional expressiveness, and prosocial behavior. (Study coding number--19)

See discussion above. Relations between empathy, role taking, and prosocial behavior were evaluated in 73 children in three age groups (five-, nine-, and thirteen-year-olds). Each of these variables was assessed on a number of outcome measures. An Empathy Continuum score was developed by matching the subject's attributions of a stimulus person's emotion with the cognitive attribution of the subject's own emotional state. Prosocial behavior was assessed on a variety of measures including: helping an adult, sharing with a peer, cooperating with a peer, teacher and parent reports, and reports of best friends. Empathy accounted for 26% of the variance in prosocial behavior scores. Those children who were high on empathy scores tended to also be high on scores of prosocial behavior.

Studies Not Included In Meta-analysis (Table 15)

Intervention Strategies and Empathy

Barnett, Howard, King & Dino (1981). Helping behavior and the transfer of empathy. (Study code number--20)

A total of 103 10th to 12th grade students were pretested on two measures of empathy. Subjects in the control condition watched a film on a neutral topic. Subjects in the experimental conditions were shown a videotaped presentation designed to elicit empathic arousal for a particular group of children (mentally or physically handicapped). The videotapes in the experimental conditions challenged the children to consider the expressed needs of others. Following the videotape the subjects completed a "reaction questionnaire" which was used to assess empathy. The affect ratings on the reaction questionnaire of the children who were in the control condition reflected less sadness than the affect ratings of the children in the experimental conditions. The expressions of need in the videotapes elicited empathic responses in the subjects.

Intervention Strategies and Prosocial Behavior

Barnett, Howard, King & Dino (1981). Helping behavior and the transfer of empathy. (Study code number--20)

See description of study above. A total of 103 10th to 12th grade students were pretested on two measures of empathy. They were then shown a videotaped presentation designed to elicit empathic arousal for a particular group of children (mentally or physically handicapped). The children were then given an opportunity to help a recipient group that was either the same as the group in the video or different. The control group was shown a video of an affectively-neutral topic before being given an opportunity to help. Prosocial behavior was assessed in the context of the number of activity booklets that the students stapled together (ostensibly for a recipient group).

Subjects in the control group made fewer activity booklets than subjects who were given the opportunity to make booklets for either a group that was similar or dissimilar to the group in the videotaped presentation. This indicates that exposure to the stated needs of others can increase the level of prosocial behavior demonstrated. It was of interest that the subjects in both the similar and dissimilar conditions made significantly more activity booklets. It appears that concern aroused for a particular target group may "transfer" and enhance prosocial behaviors toward other recipients. In this study children who had been exposed to the stated needs of others demonstrated an increase in prosocial behavior.

Barnett, Howard, Melton & Dino (1982). Effect of inducing sadness about self or other on helping behavior in high- and low-empathic children. (Study coding number--26)

This study, involving 112 sixth graders, examined the relationship between the effects of self- and other-directed negative affect on subsequent helping behavior. Teacher and peer ratings were used to place children into high- and low-empathy groups. Children were asked to consider a sad situation relating either to themselves or another, or to consider an emotionally neutral situation. Prosocial behavior was assessed in terms of the number of booklets put together for "sick children in a hospital." Children high in empathy who were asked to consider an emotionally sad situation relating to another completed more booklets than children in the other conditions.

Barnett, King & Howard (1979). Inducing affect about self or other: Effects on generosity in children. (Study coding number--38)

The effects of inducing affect about self or other was studied in relation to sharing behavior. Eighty-five children aged seven to twelve participated in this study. Children who considered the sad affect of another child were more generous in their sharing than children who were induced to consider a sad event relating to themselves. Induction of positive or neutral affect relating to self or other did not influence donating behavior. Children who considered the sad feelings of others were more generous in their sharing.

Morgan (1983). Development of empathy in emotionally disturbed children. (Study coding number--2)

Fifty-seven classrooms of emotionally disturbed children were assessed to categorize the learning environment as either humanistic/psychoeducational or as behavioral/learning.

The activities which most differentiated the humanistic/psychoeducational classrooms were group meetings to work on each other's "problems," tutoring activities, and role playing. Behavioral/learning classrooms were characterized by sanctions for desired and undesirable behavior (i.e., token economy to reinforce raising hands and on task behavior; isolation and loss of privileges as punishment), students not permitted to interact, and individual students working independently in class. Six classrooms characterized by each of the two intervention strategies were randomly selected and student help-giving behavior (as well as self-control and responsibility) was measured in the selected classrooms. A medium effect size was found for the difference between the means of help giving behavior for the two types of classes. Students in the humanistic/psychoeducational classrooms had more incidents of offering to help peers or the teacher (i.e., help peers with work that was giving them trouble, help peers pick up something that was dropped, help the teacher find something in the room, etc.).

Sims (1978). Sharing behavior by children: Effects of behavioral example, induction, and resources. (Study coding number--39)

This study examined the effects of a behavioral example vs. induction of affect on the sharing behavior of 180 children aged nine and ten. The children were given M&M candies and were provided with an opportunity to share them with "some other children in another school." In the behavioral example condition an adult modeled sharing behavior by donating some of her M&M's. In the induction condition the children were asked to consider the feelings of a child in stories where another child does not share. Children in both conditions were then given an opportunity to share some of their candy. Children in the induction condition shared more candy than children in the control or behavioral example condition. Children who considered the sad feelings of others demonstrated a higher level of sharing behavior.

The Coordination of Perspectives and Prosocial Behavior

Hurwitz & Gaylord-Ross (1983). Role-taking ability and prosocial behavior between non-retarded and retarded (confederate) peers. (Study coding number--7)

The relationship between role-taking ability and prosocial behavior was investigated with a sample of 30 fourth-grade students. Students were assessed on their role-taking ability using a projective test in which they had to take the perspectives of different figures within a story. Coordination of perspectives was assessed in terms of ability to refocus on the initial story and coordinate that version with later versions from the perspectives of different figures. Students were placed into groups of high, moderate, or low role-taking on the basis of their scores. Participating students were asked to help a confederate 'mentally handicapped' student complete a model. Prosocial behavior was assessed in the context of the help given to the confederate. One measure of prosocial behavior identified Reinforcing Task Related Verbalizations (RTRV). Children who scored high in perspective-taking ability also scored high in RTRV.

Appendix B. Tables For Meta-analyses

Table 11--Data Set 1 for Tables 1-4:

Analysis of Antecedent or Independent Variables in Causal Relation to Dependent Variables

Author	Design	Sample (Age, N)	Intervention	Outcome	Problems with study	Effect size (d)
Intervention strategies and coordination of perspectives						
Chandler (1973)	ROO O ROX1O O ROX2O O	11-13 N=45	Role taking in the context of making a film	Perspective taking test	S	.95**
Etzebarria & Apodaka (1994)	OX1O	10-12 N=101	Program to promote prosocial behavior	Perspective taking measure	R E	1.305***
Iannotti (1978)	ROCO ROX1O ROX2O	5-9 N=60	Role taking and role switching conditions	Role taking measure	R E S	.697*
Kramer & Radey (1997)	ROCO ROX1O	5 N=42	Social skills training related to sibling interactions	Perspective taking (coded observations)	R S	.6036*
Medrano & De la Caba (1994)	OX1O	9-14 N=94	Class discussions of moral dilemmas	Kohlberg's moral reasoning questionnaire	R A E	.692***
Intervention strategies and empathy						
Holmgren, Eisenberg & Fabes (1998)	OX1O	6-9 N=199	Induction of empathy through watching a video	Self-reported sadness	R	2.063***
Krevans & Gibbs (1996)	O	11-14 N=78	Inductive discipline strategies x	Level of empathy		.889**

Table 11 Continued

Analysis of Antecedent or Independent Variables in Causal Relation to Dependent Variables

Author	Design	Sample (Age, N)	Intervention	Outcome	Problems with study	Effect size (d)
Intervention strategies and empathy continued						
Pecukonis (1990)	ROCO ROX1O	14-17 N=24	Cognitive/affective empathy training program	Level of affective empathy Level of cognitive empathy(b)	E S	1.2399* .7227
Intervention strategies and prosocial behavior						
Ahammer & Murray (1978)	ROCO ROX1O to ROX5O	4-5 N=97	Training in role taking and empathy Training in role taking Training in role taking	Helping task Helping task Sharing task	R	.5976*** .6706*** .8710***
Brehm, Powell & Coke (1984)	ROCO ROX1O	6-9 n=32 boys n=35 girls	Induction: asked to imagine themselves in needy child's place	Boy's donation of money Girl's donation of money		.5693* -.2458ns
Chandler (1973)	ROCO O ROX1O O ROX2O O	11-13 N=78	Role taking in the context of making a film	18-month police check	S	.7663*
Conte, Andrews, Loomer & Hutton (1995)	CO X1O	12-13 N=27	Social skills training, role playing, information sharing	Sociometric measure of peer acceptance	A R S	1.475**

Note. (a) No increases in cognitive empathy for the experimental group ($n = 12$)

Table 11 Continued
Analysis of Antecedent or Independent Variables in Causal Relation to Dependent Variables

Author	Design	Sample (Age, N)	Intervention	Outcome	Problems with study	Effect size (d)
Intervention strategies and prosocial behavior						
Etxebarria & Apodaka (1994)	OX1O	10-12 N=101	Program to promote prosocial behavior	Sociogram of consoling and defending behavior School helping behavior Self-report of prosocial behavior	R E	.516** -.114ns .60**
Grossman, Neckerman, Koepsell, Liu, Asher, Beland, Frey & Rivara (1997)	ROCO O ROX1O O	8 N=790	Violence Prevention Curriculum	Decrease in overall negative behavior Decrease at 6 months Increase in neutral/prosocial behavior Increase at 6 months		.1285 (a) .0662 (b) .1462 (c) .1212 (d)
Hart, DeWolf, Wozniak & Burts (1992)	O	3-6 N=106	Maternal inductive discipline x Paternal inductive discipline x	Prosocial behavior Prosocial behavior Peer preference Peer preference		.5168* .33ns .4582* .3923 (e)
Howard & Barnett (1981)	X1O X2O	5-7 N=161	Induction of empathy	Donating prize tokens	A R	.3399*

Note. (a) Estimated from $p < .07$
 (b) Estimated from $p < .35$
 (c) Estimated from $p < .04$
 (d) Estimated from $p < .09$
 (e) $p < .063$

Table 11 Continued

Analysis of Antecedent or Independent Variables in Causal Relation to Dependent Variables

Author	Design	Sample (Age, N)	Intervention	Outcome	Problems with study	Effect size (d)
Intervention strategies and prosocial behavior						
Kramer & Radey (1997)	ROCO ROXIO	5 N=42	Social skills training related to sibling interactions	Maternal rating of warmth and closeness in sibling interactions Parental assessment that the program was helpful	R S	.9115** .7354 (a)
Krevans & Gibbs (1996)	O	11-14 N=78	Inductive discipline strategies	Level of prosocial behavior		.7231**
Parish, T. S. (1981)	RCO RXIO	Grade 5 N=30	Dilemma discussions	Donating candies	S	.7664*
Prinz, Blechman & Dumas (1994)	OCO O OXIO O	Grade 1-3 N=74	Peer coping-skills training	1-Teacher rated aggression decrease 2-Teacher rated social skills 6-month follow-up on 1 (b) 6-month follow-up on 2 (b)		.2939* .4103* .5369**
Work & Olsen (1990)	OCO OXIO	Grade 4 N=82	Interpersonal problem solving curriculum	Teacher rated decrease in adjustive problems Teacher rated increase in adjustive competence	R E	.4184 (c) .8471*** .9256*

Note.

(a) $p < .06$ (b) $N = 74$ (c) $p < .07$ * $p < .05$. ** $p < .01$. *** $p < .001$.

A = inadequate statistical comparison of experimental gains with gains of control group or no control

B = intervention too brief

- E** = no follow-up testing to determine if posttest gains are stable
- M** = subjects not motivated to take the test or too young to understand it
- O** = validity of outcome measure
- R** = subjects not randomly assigned to treatments
- S** = sample was too small (experimental group fewer than 20)

Outcome Variable: Refers to an outcome variable which involves either the coordination of perspectives, the development of empathy, or the occurrence of prosocial behavior. The extent of the integration and elaboration of social perspective taking will vary given the developmental level and age of the subjects.

**Table 12--Data Set 2 for Tables 5-6: Analysis of Associations Among Dependent Variables:
The Coordination of Perspectives and Empathy**

Author	Design	Sample (Age, N)	Coordination of perspectives	Empathy	Problems with study	Effect size (d)
Bengtsson & Johnson (1992)	O	10-11 N=60	Extended empathic reasoning	xDispositional affective empathy	R A O	.6755*
Kagan & Knudson (1982)	O	5-9 N=88	Affective role-taking (child)	xEmpathy related to child	D O	.97986*** .1202ns
Kalliopuska (1983)	O	10-12 N=342 (e)	Kohlberg's moral dilemmas	xMehrabian and Epstein empathy scales	A	.8471 (a) .7473 (b) .629 (c) 1.0199 (d)
Roberts & Strayer (1996)	O	5-13 N=73	Role taking score	xLevel of empathy	S	1.093***
Strayer (1980)	O	4-5 N=14	Affective perspective taking	xEmpathic response	R S	1.008ns

Note. (a) $n = 66$, 10-year-old girls, reported as significant
 (b) $n = 52$, 10-year-old boys, reported as significant
 (c) $n = 57$, 11-year-old boys, reported as significant
 (d) $n = 23$, 12-year-old girls, reported as significant
 (e) correlations not reported for 11-year-old girls or 12-year-old boys

* $p < .05$. ** $p < .01$. *** $p < .001$.

- A = inadequate statistical comparison of experimental gains with gains of control group or no control
- B = intervention too brief
- E = no follow-up testing to determine if posttest gains are stable
- M = subjects not motivated to take the test or too young to understand it
- O = validity of outcome measure
- R = subjects not randomly assigned to treatments
- S = sample was too small (experimental group fewer than 20)

**Table 13--Data Set 2 for Tables 7-8: Analysis of Associations Among Dependent Variables:
The Coordination of Perspectives and Prosocial Behavior**

Author	Design	Sample (Age, N)	Coordination of perspectives	Prosocial behavior	Problems with study	Effect size (d)
Abroms & Gollin (1980)	O	3 N=20	Affective perspective taking	Preschool Social Observations Measure	A O	0.0 ns (a)
Barrett & Yarrow (1977)	O O	5-8 N=79	Social inferential ability	Prosocial behavior	A	.044ns
Bender & Carlson (1982)	OX10	7-16 N=42 (b)	Identifying adult's feelings	Spontaneous helping Level of perspective taking x Verbalized intention to help	A O R S	ns (c) 2.833 (d) .5296 (e)
Bengtsson & Johnson (1992)	O	10-11 N=60	Extended empathic reasoning	Prosocial behavior	R A O	1.5***
Buckley, Siegel & Ness (1979)	O	3-8 N=41	Perspective taking	Altruistic behavior	R A	.9526*
Carlo, Knoght, Eisenberg & Rotenberg (1991)	ROX10 ROX20	5-8 N=89	High on congruent affective attributions	Congruent helping (f) High on incongruent affective attributions		.583* .7231**

- Note. (a) Reported as non-significant, no further information given. Entered as 0.
 (b) Subjects were in three groups. Group 1: $n = 14$, 7 to 8-year-olds, normal IQ; Group 2: $n = 14$, 9 to 10-year-olds, EMH students;
 Group 3: $n = 14$, 16 year-olds, TMH students.
 (c) All subjects spontaneously helped regardless of empathy level. Ceiling effect of outcome measure, data not included in analysis.
 (d) Estimated from $p < .005$
 (e) Group 1: $n = 14$, 7 to 8-year-olds. Estimated from $p < .05$ (one-tail).
 (f) $n = 44$
 (g) $n = 45$

Table 13 Continued
The Coordination of Perspectives and Prosocial Behavior

Author	Design	Sample (Age, N)	Coordination of perspectives	Prosocial behavior	Problems with study	Effect size (d)
Cohen & Strayer (1996)	OC OX1	14-17 N=62	Perspective taking	Normal control vs. Conduct disordered	R	.8595**
Dekovic & Gerris (1994)	O	6-11 N=125	Social cognitive operations x Interpersonal understanding x Moral reasoning x	Peer group acceptance Peer group acceptance Peer group acceptance	O	.381* .5414** .6545**
Eisenberg, Carlo, Murphy & Van Court (1995)	OX1O OX2O	17-18 C1=32 C2=34	Perspective taking x	Self-report (a) Maternal report (b) Helping behavior (a) Donating (c)		1.036*** 1.0078** -.303ns .2214ns
Garner (1996)	O	Grade 3 & 4 N=40	Emotional role taking x	Teacher rated prosocial behavior	S R	.8216*
Hudson, Forman & Brion-Meisels (1982)	OX1O	7-8 N=18	Perspective taking x	Comforting Sharing Social problem solving Tutor answers questions ratio Tutor lends a hand ratio		.6572ns .1484ns 2.247** 2.631** 2.426**
Iannotti (1985)	O	4-6 N=52	Penny hiding game x Gift choice x Nickel-dime game x Emotional role taking x	Composite prosocial index Composite prosocial index Composite prosocial index Composite prosocial index		.3034ns .06ns -.2622ns .6522*

Note. (a) Correlations for perspective taking and self-report or helping behavior were for Cohorts 1 and 2 combined ($n = 66$).
 (b) Correlation for perspective taking and maternal report was for Cohort 1 only ($n = 32$).
 (c) Correlation for perspective taking and donating was for Cohort 2 only ($n = 34$).

Table 13 Continued
The Coordination of Perspectives and Prosocial Behavior

Author	Design	Sample (Age, N)	Coordination of perspectives	Prosocial behavior	Problems with study	Effect size (d)
Kagan & Knudson (1983)	OX1O	5-9 N=88	Perspective taking	x Donation test	O	-.5164*
Kramer & Radey (1997)	ROCO ROX1O	5 N=21	Perspective taking (coded videotapes)	x Maternal rating of warmth and closeness in sibling interactions	R S	1.065* 1.065**
Krebs & Sturup (1982)	O	7-9 N=24	Picture cards	x Naturalistic observation	R	1.218**
			Nickel-dime game	x Naturalistic observation	S	.9256*
			Picture cards	x Teacher ratings		1.387**
			Nickel-dime game	x Teacher ratings		.4128 (a)
Kurtz & Eisenberg (1983)	OX1O	8-9 N=81	Level of role taking	x Respecting prohibition		
LeMare & Krebs (1983)	O	6-13 N=40	Perspective taking	x Teacher rated composite prosocial behavior	A S	-.8471 (b)
			Perspective taking	x Teacher rated composite reduction in aggression	R	-.3242 (b)
Lewin & Bekerman-Greenberg (1980)	OX1O	5-12 N=160	Level of moral reasoning in a similar situation	x Sharing pretzels with a partner		1.008***
Stewart & Marvin (1984)	OX1O	3-5 N=57	Perspective taking	x Care giving	A R	.7497 (c)
Waterman, Sobesky, Silvern, Aoki & McCaulay (1981)	O	10-11 N=80	Cognitive perspective-taking	x regular class placement	O	.6676**
			Affective perspective-taking	x (d) regular class placement	R S	.6371**
Zahn-Waxler, Radke-Yarrow & Brady-Smith (1977)	O	3-7 N=108	Perspective taking	x Prosocial interventions	A R	0.0 ns (e)

Note. (a) $p < .10$

(b) Sub-scale scores were averaged to form composite scores (significance unavailable).

(c) Estimated from $p < .008$

(d) Emotionally disturbed boys compared to normal boys; $n = 49$

(e) Reported as non-significant, no further information given. Entered as 0.

* $p < .05$. ** $p < .01$. *** $p < .001$.

A = inadequate statistical comparison of experimental gains with gains of control group or no control

B = intervention too brief

E = no follow-up testing to determine if posttest gains are stable

M = subjects not motivated to take the test or too young to understand it

O = validity of outcome measure

R = subjects not randomly assigned to treatments

S = sample was too small (experimental group fewer than 20)

**Table 14--Data Set 2 for Tables 9-10: Analysis of Associations Among Dependent Variables:
Empathy and Prosocial Behavior**

Author	Design	Sample (Age, N)	Empathy	Prosocial Behavior	Problems with study	Effect size (d)
Barnett, Howard, King & Dino (1981)	ROCO ROX10 ROX20	Grade 10-12 N=103	Level of empathy	Making booklets for a recipient group	A B E	.4256*
Barnett, Howard, Melton & Dino (1982)	ROCO ROX10 ROX20	Grade 6 N=112	Composite score of peer and teacher ratings of empathy	Making booklets for recipient group		.7502***
Bengtsson & Johnson (1992)	O	10-11 N=60	Dispositional affective empathy	Prosocial behavior	R A O	.6289*
Cohen & Strayer (1996)	OC OX1	14-17 N=62	Empathy continuum Level of empathy Empathic concern	Normal control vs. Conduct disordered	R	1.339*** 1.106*** .7367**
Dehaan, Hanford, Kinlaw, Philler & Snarey (1997)	O	15-18 N=54	Level of empathy	Self-report moral behavior	R	.7231*
			Level of empathy	Self-report social moral behavior	S	.8990**
Dekovic & Gerris (1994)	O	6-11 N=125	Empathy	Peer group acceptance	O	1.068***
Eisenberg-Berg & Lennon (1980)	O	4-5 N=51	Verbal empathy scores	Spontaneous prosocial behavior		-.606*
			Nonverbal empathy scores	Spontaneous prosocial behavior		-.899**
Holmgren, Eisenberg & Fabes (1998)	OX1O	6-9 N=199	Self-report of sympathy Self-report of sadness Facial reaction of sadness	Teacher rated pro-social behavior	R	.0600ns .2010ns .3034*
Iannotti (1985)	O	4-6 N=52	Emotional matching	Composite prosocial index		.4083ns

Table 14 Continued
Empathy and Prosocial Behavior

Author	Design	Sample (Age, N)	Empathy	Prosocial Behavior	Problems with study	Effect size (d)
Krevans & Gibbs (1996)	O	11-14 N=78		Level of empathy x Level of prosocial behavior		.873**
Kurtz & Eisenberg (1983)	OX1O	8-9 N=81		Level of empathy x Respecting prohibition		.5833*
Marcus, Telleen & Roke (1979)	O	3-5 N=32		Level of empathy x Teacher rated cooperation	S	.8471*
Miller, Eisenberg, Fabes & Shell (1996)	O	4-5 N=74		Verbal empathic expression x Helping a peer Verbal empathic expression x Helping an adult	A R	.6992* .606**
Roberts & Strayer (1996)	O	5-13 N=73		Empathy continuum score x Level of prosocial behavior	S	1.1856***

Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

- A = inadequate statistical comparison of experimental gains with gains of control group or no control
- B = intervention too brief
- E = no follow-up testing to determine if posttest gains are stable
- M = subjects not motivated to take the test or too young to understand it
- O = validity of outcome measure
- R = subjects not randomly assigned to treatments
- S = sample was too small (experimental group fewer than 20)

Table 15:
Studies Not Included In Meta-analysis

Author	Design	Sample (Age, N)	Intervention	Outcome	Problems with study	Effect size (d)
Intervention Strategies and Empathy						
Barnett, Howard, King & Dino (1981)	ROCO ROX10 ROX20	Grade 10-12 N=103	Watching a video of individuals who were mentally or physically challenged	Level of empathy	A B E	? F(2,91) #20 sig
Intervention Strategies and Prosocial Behavior						
Barnett, Howard, King & Dino (1981)	ROCO ROX10 ROX20	Grade 10-12 N=103	Watching a video of individuals who were mentally or physically challenged	Stapling activity booklets for recipient group	A B E	? F(2,91) #20 sig
Barnett, Howard, Melton & Dino (1982)	ROCO ROX10 ROX20	Grade 6 N=112	Affect induction (self, neutral, other)	Making booklets for recipient group		? F(2,100) #26 sig
Barnett, King & Howard (1979)	ROX10 to ROX60	7-13 N=85	Positive affect induction (self, other) Neutral affect induction (self, other) Negative affect induction (self, other)	Donation of prize chips	S	? F(2, 73) #38 sig
Morgan (1983)	RX10 RX20	10-11 N=96	Humanistic/psychoed vs. behavioral classes	Help giving behavior	R E	? F(2,136) #2 sig
Sims (1978)		9-10 N=180				? F(2,162) #39 sig
Coordination of Perspectives and Prosocial Behavior						
Hurwitz & Gaylord-Ross (1983)	OX10 OX20	9-10 N=30	Perspective taking x Reinforcing task related verbalizations		R S	? F(2,27)#7 sig

Appendix C. Coding Form For Meta-analyses

Study identification number: _____

Full reference: (Author, Publication Date, Title, Source, Volume, Pages, Publisher, etc.)

Publication form: (1) Journal, (2) Book, (3) Thesis, (4) Unpublished _____

Form of study: (1) Theoretical, (2) Secondary discussion of research, (3) Meta-analysis,
(4) Primary research _____

Quality of study: (1) Poor, (2) Well designed _____

Training of author: (1) Sociology, (2) Psychology, (3) Education, (4) Social Work, (5)
Other, (6) Unknown _____

Subjects

Percentage male: _____

Mean age to nearest year: _____

Intelligence: (1) below average, (2) average, 95-105, (3) above average _____

SES: (1) low, (2) middle, (3) high, (blank) unknown _____

Location of study: _____

Intervention

Group assignment of clients: (1) random, (2) convenience sample [includes class
grouping],

(3) matching, (4) other nonrandom _____

Internal validity: (1) low, (2) medium, (3) high _____

Percentage mortality from intervention group: _____

Percentage mortality from comparison group: _____

Is more than one variable compared simultaneously against the control:

(1) yes, (2) no _____

Number of comparisons in this study: _____

Number of outcome measures within this comparison: _____

Type of comparison: (1) control, (2) retest, (3) other _____

Type of intervention: _____

Duration of intervention in hours: _____

Duration of intervention in weeks: _____

Effect Size

Sample size for intervention group: _____

Sample size for comparison group: _____

Outcome type (Measurement instrument): _____

Number of weeks post-intervention measure was taken: _____

Reactivity of measure: (1) low ...(5) high _____

Calculation of effect size: (1) mean difference over control S.D., (2) MS within, (3) MS total minus treatment, (4) probit, (5) chi square, (6) T table, (7) mean and P, (8) nonparametrics, (9) correlations, (10) raw data, (11) estimates, (12) other _____

Source of means: (1) unadjusted post-test, (2) covariance adjusted, (3) residual gains, (4) pre-post differences, (5) other _____

Intervention group pre-mean: _____

Intervention group pre-standard deviation: _____

Intervention group post-mean: _____

Intervention group post-standard deviation: _____

Comparison group pre-mean: _____

Comparison group pre-standard deviation: _____

Comparison group post-mean: _____

Comparison group post-standard deviation: _____

T statistic: _____

F statistic: _____

Mean square within, residual or common: _____

Intervention group percentage change: _____

Comparison group percentage change: _____

Effect size: _____

Other factorial effects tested: (0) none, (1) sex, (2) other _____

Theoretical hypotheses and notes relating to research design and outcomes

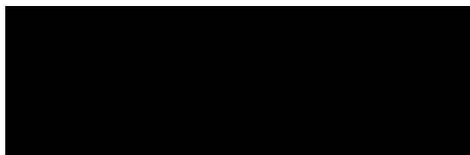
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Title of Thesis:

The coordination of perspectives and development of empathy in children:
An integrative review.

Author



Douglas Hilton Mollard
Monday, March 06, 2000

VITA

Surname: Mollard Given Names: Douglas Hilton

Place of Birth: Regina, Saskatchewan, Canada

Educational Institutions Attended:

University of Saskatchewan	1973-1987
University of Victoria	1994-1999
University of British Columbia	2000-

Degrees Awarded:

B.A.	University of Saskatchewan	1977
Adv. Cert. in Arts (4th year certificate)	University of Saskatchewan	1984
B.Ed.	University of Saskatchewan	1985
M.Ed.	University of Saskatchewan	1987

Honours and Awards:

University of Saskatchewan Graduate Scholarship	1985
Elmer Shaw Bursary, College of Graduate Studies, University of Saskatchewan (Declined)	1986

Publications:

Savage, H. W., Saklofske, D. H., & Mollard, D. (1987). Teacher stress: Nature, sources and extent. A research review of stress as experienced by classroom teachers, written for the Saskatchewan School Trustees.