

“ARE YOU THE RIGHT FRIEND FOR ME?” THE EFFECTS OF FRIENDSHIPS ON
SHY CHILDREN’S ADJUSTMENT IN MIDDLE CHILDHOOD

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DOCTOR OF PHILOSOPHY

by

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Abstract

Shy children want to engage in social interactions but also have a fear of social rejection that triggers an avoidant response. Shy children are at risk for a number of adjustment difficulties, especially along the internalizing dimension. Middle childhood appears to be a period when socially inhibited children are especially at risk of developing difficulties, when shyness becomes a more salient and deviant behaviour. Interestingly however, not all shy children develop problems as a result of their inhibition. Thus, identifying *protective factors* – factors that prevent shy children from suffering long-term socio-emotional difficulties – is essential. In the current dissertation, the possible protective role of friendships during middle childhood was explored. In particular, the effects of having a reciprocal friendship, a higher quality friendship, and the use of a social surrogate (a person with whom a shy individual can use to help them to engage in social interactions) were examined. Prior to the present dissertation, social surrogacy had only been examined in adulthood. In Study 1, preliminary psychometric properties and validity of the newly developed *Child Social Surrogate Questionnaire* (CSSQ) were explored. In Study 1, $N = 328$ participants in grades 3 to 5 completed measures of social surrogacy, shyness, and child outcomes. The CSSQ was found to have adequate factor structure and psychometric properties. As expected, social surrogacy use (in general) was related to shyness and anxiety. In Study 2, children's friendships with a specific reciprocal "best friend" were examined. There were $N = 578$ children in grades 3 to 5 who completed assessments of friendship quality and social surrogacy on a "best friend." Children and their homeroom teachers also completed measures of adjustment. Not surprisingly, best friendships (i.e., reciprocity, friendship quality) were related to positive outcomes.

However, support was not really found for the buffering effect of friendships on shy children's adjustment. In particular, although shy children reported using social surrogates, social surrogacy was found to be neither a strong risk nor protective factor for these children. The results are discussed in relation to the potential benefits of friendships on all children's adjustment, regardless of behavioural deficits.

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Since friendship was a main focus of this project, I would like to dedicate my dissertation to the memory of one of my best friends Barbara Duffy who passed away suddenly on March 13, 2006. She was a caring friend, an inspirational elementary school teacher, and an overall genuine person. She will be forever missed.

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“Are You the Right Friend for Me?” The Effects of Friendships on Shy Children’s
Adjustment in Middle Childhood

“True happiness consists not in the multitude of friends, but in their worth and
choice.”

- *Samuel Johnson*

Shy children are anxious and wary in social situations (e.g., Rubin & Asendorpf, 1993). Shyness in childhood is not necessarily problematic. In fact, over 80% of adults will claim they have been shy at some period in their lives (Pilkonis, 1977; Zimbardo, Pilkonis, & Norwood, 1974; Zimbardo, 1977). However, between 10-20% of the population experience extreme anxiety in social situations, and these individuals may perceive shyness as being extremely problematic (Kagan, 1988; Kagan, Reznick, & Gibbons, 1989; Kagan, Reznick, & Snidman, 1988).

In Western society, shy behaviours have been found to be associated with negative outcomes, especially in middle childhood and adolescence (e.g., Fordham & Stevenson-Hinde, 1999; Rubin, Chen, McDougall, Bowker, & McKinnon, 1995). In early childhood peers might not perceive socially withdrawn behaviours as being deviant but those children who choose to remain alone in social situations may become increasingly noteworthy with time resulting in negative peer reputations and even peer rejection and victimization (e.g., Boivin, Hymel, & Bukowski, 1995).

The goal of the current dissertation was to investigate whether friendships can act as a buffer against some of the negative adjustment indices often associated with shyness in middle childhood. Not only was friendship reciprocity of interest, but also the qualities of these best friend relationships. As well, shy children’s use of *social surrogates* was

explored. A social surrogate is a relatively new concept to the literature, and has previously only been used in the adult literature (Bradshaw, 1998). Basically a social surrogate is a person that a shy person can use to help them feel more comfortable in a social situation (Bradshaw, 1998). The concept will be further explained later in the paper.

Definitions of Social Withdrawal and Shyness

The terms social withdrawal and shyness will be used throughout this paper. Social withdrawal refers to the frequent display of solitary behaviours in the presence of peers (Rubin & Asendorpf, 1993). Children who are socially withdrawn may be alone because they prefer to be by themselves or they may be shy. Thus, withdrawn children isolate themselves from the peer group as opposed to those children who are isolated by the peer group (Rubin & Asendorpf, 1993). Shyness will be the aspect of social withdrawal focused on in the present dissertation.

Asendorpf's conceptual model suggests that shyness is triggered by a high approach motivation but also by a need to avoid others due to fear or anxiety when amongst other peers (Asendorpf, 1990, 1991, 1993; Rubin & Asendorpf, 1993). Thus, shy children may want to play with others but may be too afraid to join in. There are a number of terms that have been used to refer to types of shyness or shy behaviours, including: inhibition, passive withdrawal, anxious solitude, conflicted shyness, fearful shyness, self-conscious shyness, sensitive-isolated behaviours (Boivin et al., 1995; Buss, 1984, 1986, 1997; Coplan, Prakash, O'Neil, & Armer, 2004; Crozier & Burnham, 1990; Fordham & Stevenson-Hinde, 1999; Gazelle & Ladd, 2003; Kagan et al., 1989; Morison & Masten, 1991; Rubin & Asendorpf, 1993; Rubin & Mills, 1988;). Although there are

minor differences in regards to the causes of anxiety, the terms are similar in that they all refer to wary behaviours in social situations. For the purposes of the present study, the general term shyness will refer to both fearful shyness and self-conscious shyness. Fearful shyness is wariness in new situations or amongst unfamiliar people whereas self-conscious shyness is being inhibited when perceiving social evaluation by others (Buss, 1984, 1986; Crozier & Burnham, 1990; Rubin & Asendorpf, 1993). However, the literature reviewed in this paper incorporates a number of the shyness related terminology.

The Development of Shyness

Biology and physiology. There is some research to suggest that genetics plays a role in shy behaviour (Plomin & Daniels, 1986; Plomin & Stocker, 1989; Rickman & Davidson, 1994; Robinson, Kagan, Reznick, & Corley, 1992). Some researchers also claim that extremely shy/inhibited children have a lower threshold for sympathetic activation. Indeed it has been found that shy children have higher and more stable heart rates than nonshy children (Kagan et al., 1988; Rubin et al., 1997). It has also been reported that shy children have larger pupillary diameters, greater decrease in vocal perturbation under moderate stress situations, and higher levels of morning cortisol (de Haan, Gunnar, Tout, Hart, & Stansbury, 1998; Kagan et al., 1988; L. A. Schmidt et al., 1997). Shy children (Fox et al., 1995; Fox, Henderson, Rubin, Calkins, & L. A. Schmidt, 2001; Henderson, Marshall, Fox, & Rubin, 2004; L. A. Schmidt, Fox, Schulkin, & Gold, 1999) and adults (L. A. Schmidt, 1999) have also been shown to have comparatively greater EEG activity in the right frontal lobe.

Relatedly, more shy individuals have also been found to be prone to allergies (Bell, Jasnoski, Kagan, & King, 1990; Kagan, 1997) and illnesses (Chung & Evans, 2000; Rosenberg & Kagan, 1987). Indeed, shy infants have been found to have high incidences of colic, irritability, and insomnia (Rosenberg & Kagan, 1987). In addition, shy 7-year-old children have been reported as being ill on twice as many days as nonshy children (Chung & Evans, 2000). As a possible explanation for this finding, Chung and Evans (2000) suggested that since cortisol has been found to be higher in shy children than in nonshy children, and that cortisol can suppress immune system functioning, shy children may be less able to fight infections and diseases than their nonshy counterparts. Taken together, these findings suggest that there may be predisposed temperamental and biological differences that contribute towards shy children's behaviours. Even when inhibited children are in a non-threatening situation they are already at a higher stress level than their noninhibited peers.

Parenting. Parents also influence children's shy and anxious behaviours (e.g., Booth-LaForce & Oxford, 2008; for a review see Burgess, Rubin, Cheah, & Nelson, 2005). One way in which parents may inadvertently affect their child's level of shyness is through their belief systems. Parents' behaviours towards their child may be related to their beliefs about their child's behaviours (e.g., Burgess et al., 2005). Parenting beliefs regarding shy and socially withdrawn behaviours has received some research attention (e.g., Coplan, Hastings, Lagace-Seguin, & Moulton, 2002; Hastings & Rubin, 1999; Mills & Rubin, 1990; Rubin & Mills, 1990). Interestingly, whereas Mills and Rubin (1990) found that parents in general perceived they would use low-power strategies (e.g., discussing the problem with the child) in response to shy-withdrawn behaviours, Rubin

and Mills (1990) found that parents of shy-withdrawn children reported they would use more high-power strategies (e.g., coercive strategies) and be less likely to use indirect-no strategies (e.g., arrange play dates, to not respond) in incidences of withdrawal in their children than mothers of non-anxious children. Thus, parents of shy-withdrawn children may differ from parents of nonwithdrawn children in regards to beliefs about the best strategies on dealing with withdrawn behaviours.

Another important parenting variable to consider in relation to child shyness is parenting styles. The literature generally suggests that shyness is related to overprotective/overcontrolling/ overinvolved parenting behaviours (Burgess et al., 2005; Chen et al., 1998; Kennedy, Rubin, Hastings, & Maisel, 2004; Rubin, Burgess, & Hastings, 2002; Rubin, Stewart, & Coplan, 1995; Rubin et al., 1997). Overprotective parents do not encourage their children to try new experiences on their own. Instead, they will discourage them from exploring new situations as well as restrict and direct their activities and behaviours (Rubin, Burgess, & Hastings, 2002). Overly involved parents of inhibited children may believe that they are helping their children by either assertively telling the child how to act or by intervening in the child's place in potentially stressful situations. Instead however, they may be helping to maintain and perhaps increase their children's levels of anxiety (Burgess et al., 2005; Rubin, Burgess, & Hastings, 2002). In addition, overprotective parenting fosters dependency on the parents, decreases the child's sense of self-efficacy, and inhibits the development of the child's autonomy (Rubin, Stewart, & Coplan, 1995). Although parenting is not a focus of this dissertation, the literature on overprotective parenting will be briefly reviewed because a link will be

established between overprotective parents and a new friendship concept (child social surrogates) later in this paper.

Rubin et al. (1997) reported that children who had the highest mother-rated fearful temperaments were more likely to be inhibited in both the traditional inhibition paradigm (strange situation and adult stranger present) and the peer social situation when they had oversolicitous mothers. Their measure of oversolicitous parenting consisted of being intrusively controlling, unresponsive to their child's requests, being overly affectionate, having high positive affect, and intervening during their child's behaviour when it was unnecessary to do so. Further, Kennedy et al. (2004) found that children who had lower cardiac vagal tone (children who had physiological symptoms of behavioural inhibition) were more likely to have parents who reported having a restrictive/overcontrolling parenting style when the children were at both 2 and 4 years-old. Similarly, it has been found that parents who perceive their children to be shy are more likely to discourage independence in their children (Rubin, Nelson, Hastings, & Asendorpf, 1999). Finally, Rubin, Burgess, and Hastings (2002) demonstrated that inhibited 2-year-old children were more likely to display wary-reticent behaviours at age 4-years-old only when they had highly intrusive/overprotective mothers.

These findings demonstrate that shy child behaviours are related to oversolicitous and intrusive parenting. Moreover, this type of parenting does not appear to help children overcome their anxiety in social settings, but instead increases the likelihood that they will continue to be inhibited in the future and suffer negative adjustment outcomes. It is important to take into consideration that these studies do not allow us to determine the direction of effect. Parents of inhibited children may sense that their children are

uncomfortable in social settings and thus become more protective and controlling of them. Or, it is also possible that overprotective parenting leads to more inhibited child behaviours (Rubin, Stewart, & Coplan, 1995; Rubin, Burgess, & Hastings, 2002).

Shy Children at School

Regardless of the causes of shyness, shy children look different from their nonshy peers at school. At school shy children engage in more solitary activities, which can lead to the development of negative relationships with their peers and teachers (e.g., Birch & Ladd, 1997; Coplan, Rubin, Fox, Calkins, & Stewart, 1994; Ladd, 1990; Pianta, Steinberg, & Rollins, 1995). It is important to study children's behaviours at school because they spend much of their time in this environment and their behaviours and reactions from these behaviours can affect their future adjustment outcomes (Rubin, Chen, et al., 1995).

Shy children are often characterized by fewer verbal utterances, (Asendorpf & Meier, 1993; Crozier & Perkins, 2002; Evans, 1993, 2001; Kagan et al., 1988), fewer social initiations made to peers (Kagan et al., 1988), and taking longer than nonshy children to warm up to new situations (Crozier & Perkins, 2002). In addition, shy children have also been found to display reticent behaviour, which can be described as the onlooking and watching of other children playing, without joining in the activity (Coplan, Rubin, Fox, Calkins, & Stewart, 1994). Shy children may inch up close to a group of peers playing, hover next to them but then withdraw, probably due to increased feelings of anxiety and conflictual approach/avoidance motivations (Asendorpf, 1991; Asendorpf, 1993; Coplan et al., 1994). One way that children may deal with their approach/avoidance conflict is by engaging in solitary-constructive activities or parallel

play (playing next to other children but not with them; Asendorpf, 1991, 1993; Henderson et al., 2004; Ladd & Burgess, 1999).

In early childhood, shy-withdrawn children may go unnoticed by their peers because their behaviours are not seen as deviating from the rest of the peer group. However, when shy children continue to remain alone in middle and later childhood, the peer group may eventually view shy-anxious children as different and then shy children may be at risk for adjustment difficulties (Bukowski, 1990; Gavinski Molina, Coplan, & Younger, 2003; Younger & Boyko, 1987; Younger & Daniels, 1992; Younger, Schwartman, & Ledingham, 1985; Younger, Gentile, & Burgess, 1993). Children's peer relationships can affect their school adjustment (Ladd, 1990).

One of the most important predictors of normal growth and development is adequate social experiences (e.g., Kerr, 2000; Ladd, Kochenderfer, & Coleman, 1996; Rubin & Asendorpf, 1993; Rubin & Coplan, 2004). Since approximately a third of children's time is spent with their peers, the experiences they have with their peers is important for their adjustment (Hartup & Stevens, 1999; Rubin & Coplan, 2004). Peers are resources for mastering skills and can serve as models for later relationships. Children learn about the world, learn to understand different perspectives and social rules, and learn moral and social conventions through their interactions with peers (for a recent review, see Rubin, Bukowski, & Parker, 2006). Children also learn that their actions have consequences by associating with other children (Kerr, 2000). There are strong beliefs that peer interaction is important for the development of mature social thinking (Rubin & Asendorpf, 1993). Without adequate social experiences children may develop difficulties with peers and deficits in cognitive and social-cognitive processes (Piaget, 1932; Rubin

& Coplan, 2004; Stewart & Rubin, 1995; Sullivan, 1953). Lower peer interaction may also restrict children's language skills (Evans, 1996). Thus shy children, due to their difficulties interacting with peers, may be at risk for both social and academic deficits (e.g., Boivin et al., 1995; Coplan, Gavinski-Molina, Lagace-Seguin, & Wichmann, 2001; Crozier & Hostettler, 2003; Evans, 2001; Rubin, Chen et al., 1995; Rubin & Mills, 1988).

In the classroom, withdrawn children have been found to have less close (Rydell, Bohlin, & Thorell, 2005) and develop dependant relationships with their teachers (Birch & Ladd, 1998; Howes, Hamilton, & Matheson, 1994; Ladd & Burgess, 1999) as well as receiving a lot of teacher-initiated interactions (Coplan & Prakash, 2003). Children with close relationships with their teacher have been found to fare much better than children who have dependant relationships with their teacher (Birch & Ladd, 1997; Pianta, Steinberg, & Rollins, 1995). For instance, Birch and Ladd (1997) found that having a dependant relationship with a teacher was related to poor academic performance, school dislike and avoidance, and more loneliness at school. Thus, instead of developing healthy relationships with their peers shy children may spend a lot of time interacting with their teachers, however their dependant relationships with teachers do not promote adjustment, and may indeed further shy children's maladjustment (Coplan & Arbeau, 2008).

In general, shy children are not disruptive in the classroom. As a result their quietness may be seen as just merely good behaviour, as opposed to problematic behaviour requiring teacher assistance (Evans, 2001; Rubin, 1982; Rubin & Coplan, 2004). Teachers tend to spend most of their non-teaching time dealing with disruptive child behaviours. Anxious-fearful children have been found to be unlikely to be involved in aggressive behaviours (Ladd & Profilet, 1996). Thus their lack of peer interaction and

anxious behaviours may go unnoticed due to teachers concerns with more observable and disruptive classroom behaviours (Evans, 2001). However, teachers should also assist those children in their classrooms who are extremely withdrawn (Coplan & Arbeau, 2008).

Recently it has been found that even kindergarten teachers report being concerned with shy children, claiming they would be as likely to be worried about shy children's social problems as they would be for aggressive children (Arbeau & Coplan, 2007a) and that they would be socioemotionally supportive of the inhibited children in their classrooms (Thijs, Koomen, & Van der Leij, 2006). On the other hand, kindergarten teachers also report that they are more intolerant of aggressive children and would be more likely to respond to aggressive acts in their classroom (Arbeau & Coplan, 2007a). In addition to helping more externalizing classroom behaviours, teachers should also attempt to intervene with the children in their classrooms who display signs of uneasiness in the presence of their peers, since shy children could be at risk for negative outcomes (Coplan & Arbeau, 2008).

Correlates and Outcomes of Shyness in Childhood

Shyness is a relatively stable characteristic from early childhood through to adolescence (e.g., Evans, 1996; Hymel, Rubin, Rowden, & LeMare, 1990; Kagan et al., 1988; Rubin & Mills, 1988). A commonly held belief for years was that shy children were not at risk for maladjustment (Kohlberg, LaCrosse, & Ricks, 1972; Robins, 1966; Rubin & Asendorpf, 1993; Rubin et al. 2006). A possible reason for previous lack of associations between shy behaviours and outcome assessments was due to the outcomes being measures of externalizing problems (Rubin & Coplan, 2004; Rubin, Bukowski et

al., 2006). Since shyness is not an overt behaviour, it seems likely that the outcomes associated with the behaviour would be of an internalizing nature. Further, studies that have incorporated internalizing outcome variables have found that children who exhibit avoidance in the presence of peers are at risk for an abundance of internalizing problems (e.g., Boivin et al., 1995; Bowker, Bukowski, & Zargarpour, 1998, Prior, Smart, Sanson, & Oberklaid, 2000; Rubin, Chen et al., 1995; Rubin & Mills, 1988).

Outcomes in early childhood. Some negative associations have even been detected for shy behaviours in early childhood (e.g., Coplan, Gavinsky-Molina, Lagace-Seguin, & Wichmann, 2001; Coplan et al., 2004; Evans, 1996; Hart et al., 2000; Phillippsen, Bridges, McLemore, & Saponaro, 1999; Rubin & Coplan, 2004). Shy children in preschool have been found to engage in reticent behaviour, parallel play, and to be withdrawn (Coplan et al., 2004; Stevenson-Hinde & Glover, 1996). Preschool shyness has been reported as being positively related to negative mood, anxiety, worries, and negatively related to perceived competence, and prosocial behaviours (Coplan et al., 2004; Stevenson-Hinde & Gover, 1996). Hart et al. (2000) found that teacher-rated reticent behaviours in preschool was associated with lower sociometric ratings from peers.

Coplan et al. (2001) reported that reticent behaviour in kindergarten was positively associated with shyness and negatively related to social and academic skills. Spere, L. A. Schmidt, Theall-Honey, and Martin-Chang (2004) found that although on par with age expectancies, shy preschoolers had lower expressive and receptive language skills than their nonshy peers. Moreover, peer rejection and peer exclusion have also been found to be related with shyness in kindergarten (Gazelle & Ladd, 2003; Phillippsen et al.,

1999). Children who are rejected in kindergarten have been shown to like school less, to be school avoidant, and to perform less well academically than popular, neglected, and average status kindergarteners (Ladd, 1990). Most recently, Coplan, Closson, and Arbeau (2007) found that kindergarten children who were shy/reticent were more likely to have difficulties adjusting to school and to be rated by parents and teachers as suffering from internalizing problems.

Thus, these findings demonstrate that even in early childhood shy behaviours are a reason for concern. Somewhat alarming is that even in early childhood shyness has been found to be related to problematic peer relationships (Coplan et al., under review; Gazelle & Ladd, 2003; Hart et al., 2000; Phillipsen et al., 1999; Wood, Cowan, & Baker, 2002). However, not all studies have found shy behaviours to be related to problems in early childhood (e.g., Harrist, Zaia, Bates, Dodge, & Pettit, 1997; Ladd & Burgess, 1999). For example, Ladd and Burgess (1999) found that withdrawn children did not differ from normative children on peer acceptance, peer victimization, and loneliness from kindergarten to grade 2. In addition, Evans (1996) found no significant differences between reticent (children who were quiet throughout the year), mixed (children who became more talkative over the year), or verbal children on self-concept in both kindergarten and grade 1.

Shyness in middle childhood will be examined in the present dissertation because the results from several studies indicates that shyness becomes an increasing risk factor for an abundance of difficulties during this age period (e.g., Rubin, Chen, & Hymel, 1993; Rubin, Chen et al., 1995). In middle childhood peer relationships and friendships become very important to children (Sullivan, 1953). Those children who do not have

friendships and/or do not join peer networks at this time may be viewed as deviant and may become more noticeable to the peer group. Not only do their peers begin to notice the salience of withdrawn behaviours, but withdrawn children themselves may realize that they are different from their peers. The increased visibility of reclusive behaviour both to others and to themselves may lead to increased adjustment difficulties for withdrawn children in middle childhood (Bukowski, 1990; Younger & Boyko, 1987; Younger & Piccinin, 1989; Younger et al., 1985).

Outcomes in middle childhood and adolescence. Shy children have generally been found to have internalizing problems, as opposed to externalizing difficulties (Bowker et al., 1998; Hoza, Molina, Bukowski, & Sippola, 1995; Rubin, Bukowski et al., 2006; Rubin & Coplan, 2004). In middle childhood shyness and social withdrawal have been found to be related to depression, loneliness, lower global self-worth and self-esteem, and internalizing negative emotionality (e.g. fear, sadness, etc.) (e.g., Boivin et al., 1995; Crozier, 1995; Eisenberg et al., 1998; Fordham & Stevenson-Hinde, 1999; Rubin, Chen et al., 1995). In addition, Rubin et al. (1993) reported that withdrawn children in the fifth grade were less accepted by their peers than average children, and were viewed by their peers as less sociable and as having fewer leadership skills than the average and aggressive children. Teachers also rated the withdrawn children as more anxious and as less assertive than the average and aggressive children. Moreover, the withdrawn children perceived themselves as less physically competent than the average children. Further, social withdrawal has been found to be related to victimization by the peer group (Boivin et al., 1995; Bollmer, Milich, Harris, & Maras, 2005; Haselager, Hartup, van Lieshout, & Riksen-Walraven, 1998; Hodges et al., 1999; Jantzer, Hoover, & Narloch, 2006; Rubin,

Wojslawowicz, Rose-Krasnor, Booth-LaForce, & Burgess, 2006) and lower test performance (Crozier & Hostettler, 2003).

Shyness is also related to adjustment problems in adolescence (e.g., Cheek & Krasnopernova, 1999; Ishiyama, 1984; Prior et al., 2000). For instance, Ishiyama (1984) studied the effects of shyness in the 10th grade. The researcher divided the students into shy and nonshy groups and found that the shy students were lonelier, felt shyer around the opposite-gender, and had more academic difficulties. In addition, shy individuals were found to have more difficulties developing friendships and they also felt that their symptoms of shyness were more noticeable by other people. Shy students also reported more speech difficulties, self-consciousness, negative self-talk, and a greater loss of concentration during their shyness episodes and viewed the shyness experiences as embarrassing.

Some studies have examined the longitudinal outcomes associated with shy behaviours (e.g., Eisenberg et al., 1998; Gazelle & Ladd, 2003; Hymel et al., 1990; Ollendick, Greene, Weist, & Oswald, 1990). Rubin & Mills, 1988; Rubin, Chen et al., 1995). For instance, Rubin and Mills (1988) reported some of the long-term effects of passive withdrawal (quiet and constructive behaviours). Peer assessed passive withdrawal was measured in grades 2, 4, and 5 and was found to be related to negative self perceptions and to teacher-rated internalizing difficulties in grades 4 and 5 and to self-reported loneliness and depression scores in grade 5. Moreover, passive withdrawal (both peer and observer assessed) became increasingly positively related to peer rejection and negatively related to peer acceptance with age. Further, Rubin, Chen et al. (1995) reported that social withdrawal in the second grade was positively related to loneliness,

and negatively related to self-worth, and security in the peer group in the ninth grade. Although Hymel et al. (1990) found that grade 2 peer assessed shy behaviours were only related to lower perceived social competence and unpopularity in grade 2, grade 2 peer assessed shy behaviours predicted both being nominated by peers as sensitive-isolated and rated by teachers as shy-anxious in the fifth grade. In addition, children who were rated by peers as unpopular in the second grade were found to be nominated as sensitive-isolated by their peers in the fifth grade. Also, children who were rated by their teachers as having internalizing problems in grade 2 were likely to be rated by their teachers as engaging in shy-anxious behaviours in grade 5.

Booth-LaForce and Oxford (2008) identified three trajectory patterns for social withdrawal predicted by early parenting styles, temperament, and attachment. One trajectory consisted of children who began elementary school with fairly low levels of social withdrawal but their levels of social withdrawal increased steadily and in grade 6 these children had the highest levels of withdrawal. Another trajectory consisted of children who began elementary school with high levels of social withdrawal but their levels of social withdrawal decreased throughout elementary school. The third trajectory contained children who had low levels of social withdrawal throughout elementary school. In early elementary school children in the increasing and decreasing trajectories were more likely to be unpopular and neglected. In grade 2 children in the increasing group were also more likely to be rejected. In upper elementary both the increasing and decreasing group were found to be lonelier than the children in the consistently low social withdrawal group. In grade 3 children in the increasing and decreasing groups were more likely than the children in the consistently low withdrawal group to be unsociable and

excluded by peers, according to parental reports. However, in grade 6 children in the increasing group had the highest parental ratings of solitary behaviours and peer exclusion compared to the children in the other two trajectories (children in the decreasing group were still significantly more solitary than the children in the low group). Interestingly children who were in the decreasing trajectory were rated as having a shy temperament at 54 months of age whereas children in the increasing trajectory had poor inhibitory control at 54 months. Thus, children's risk for social withdrawal and long-term adjustment difficulties may depend on early child temperament.

Ollendick et al. (1990) assessed the adjustment of children in grade 9 who were nominated by their teachers as socially withdrawn, aggressive, and well-adjusted in the 4th grade. The results indicated that the withdrawn children had committed more offenses, were rated as more withdrawn by both peers and teachers, received lower sociometric ratings, and performed worse on tests of academic achievement. Further, from the fourth through to the sixth grade withdrawn children performed worse academically than the well-adjusted children (based on school records). In addition, childhood shyness has been found to be related to anxiety disorders in adolescence (Prior et al., 2000). Gest (1997) reported that individuals who were inhibited in childhood had difficult peer relationships and were less likely to move out of their family home in early adulthood than individuals who had not been inhibited in childhood. These longitudinal findings demonstrate that not only are shy children at risk for short-term adjustment problems but are also at risk for long-term maladjustment.

Gender differences. Some studies indicate that there are no gender differences in the prevalence of shy behaviours, particularly in early childhood (Lemerise, 1997).

However, in middle childhood, girls tend to self-report being more shy than boys (e.g., Crozier, 1995; Haselager et al., 1998; Ollendick et al., 1990; Rubin et al., 1993; Rubin, Wojslawowicz et al., 2006). Thus, because it is gender nonnormative, boys who display shy behaviours may be seen as abnormal (Sadker & Sadker, 1994).

At least in North America, it is believed that shyness in boys is more problematic than shyness in girls (Sadker & Sadker, 1994; Rubin & Coplan, 2004). For example, Stevenson-Hinde and Glover (1996) reported that high shy boys had the most negative mood and the most behaviour problems, including acting out problems. In preschool, shyness has been found to be related to peer exclusion for boys, but not for girls (Coplan et al., 2004). Coplan et al. (2001) reported that shyness in kindergarten was positively related to solitary-passive behaviours (quietly engaging in exploratory and/or constructive activities) for boys. Further, solitary-passive behaviours in boys were positively related to internalizing and academic problems, as well as negatively related to social competence. Shy/reticent kindergarten boys have also been found to be at risk for difficulties in their peer relationships (Coplan, Closson et al., 2007). In addition, Rubin et al. (1993) found that withdrawn boys were more likely to be lonely and to have lower perceptions of their social competence than aggressive and average boys. Moreover, Morison and Masten (1991) found that boys who were nominated by their peers as sensitive-isolated in middle childhood were more likely to have lower self-worth and to be less involved in activities in adolescence, girls nominated as sensitive-isolated in middle childhood, on the other hand, had high self-worth and were more involved in activities. Parents have also been found to rate their shy boys as unpopular (Eisenberg, Shepard, Fabes, Murphy, & Guthrie, 1998).

Long-term gender differences have also been detected for shy children. For instance, boys who were inhibited in childhood became more emotionally distressed in adulthood (Gest, 1997). In addition, boys who were shy in childhood have been found to be older than their peers when they got married, became fathers, and established stable careers, whereas women who were once shy children did not experience delays in marriage or parenthood (Caspi, Elder, & Bem, 1988; Kerr, Lambert, & Bern, 1996).

The more problems associated with being a shy boy as opposed to a shy girl may be partly due to gender stereotypes. For example, boys are expected to be more outgoing and assertive whereas it is acceptable for girls to be more passive, quieter, and unassertive (Sadker & Sadker, 1994). These gender stereotypes may be seen in family exchanges. Indeed it has been found that shy boys tend to have negative family interactions whereas shy girls have positive interactions with their families (Engfer, 1993; Hinde, Easton, Meller, & Tamplin, 1982; Simpson & Stevenson-Hinde, 1985). Even children are aware of the gender stereotypes associated with shyness. For instance, it has been found that children are able to recognize information regarding a hypothetical shy girl better than information about a hypothetical shy boy (Bukowski, 1990).

Another possible reason for gender differences is overprotective parenting. Maternal overprotective parenting has been found to be related to shyness in boys more than to shyness in girls (Coplan et al., 2004; Coplan, Arbeau, & Armer, 2008). In addition, mothers have been found to give their high shy boys a lot of positive attention whereas mothers have been found to be less positive and more negative in their interactions with high shy girls (Stevenson-Hinde & Glover, 1996). In a sample of boys, Park, Belsky, Putnam, and Crnic (1997) reported that 3-year-old children with more

sensitive and less demanding parents were more inhibited. Thus, these results suggest that perhaps boys who are subjected to controlling and sensitive parenting are more at risk of developing shy behaviours, possibly because the parents are not letting their child know that the behaviour is problematic and because the boys are not forced to learn to solve their own problems (Coplan et al., 1994; Park et al., 1997). Contrary to these findings, Hastings and Rubin (1999) found that more protective mothers reported being more supportive and warm in regards to withdrawn behaviours in girls, this finding was nonsignificant for boys.

Protective Factors

Protective factors are basically variables that may buffer individuals from negative outcomes (Caughy, DiPietro, & Strobino, 1994; Werner, 1990). Shyness has been found to be moderately stable, thus some shy children become less withdrawn over time (Booth-LaForce & Oxford, 2008; Evans, 1996; Hymel et al., 1990; Kagan et al., 1988; Rubin & Mills, 1988). Although some of the differences in stability can be partially accounted for by measurement errors, there are some shy children who successfully become less shy with age. In addition, not all shy children are maladjusted (e.g., Gazelle & Ladd, 2003), thus it is important to determine why some shy children are immune to negative indices. There is currently limited research on the possible reasons why some shy children are better adjusted than other shy children.

A potential protective factor for shy children is verbal skills. Interestingly, Asendorpf (1994) found that verbal intelligence, assessed using the Wechsler scales, was found to be related to decreased inhibition from preschool to elementary (from age 4 to age 10). In addition, although shy children tend to perform poorly on expressive language

tests (Crozier, 2001) Coplan and Armer (2005) reported that preschool children who had higher expressive vocabularies, as measured with the *Expressive One-Word Picture Vocabulary Test: Revised* (in which children are required to describe a drawing in only one word), required less teacher attention and were less likely to display asocial behaviour. Children with higher verbal skills may find it easier to communicate with their peers and teachers at school (Asendorpf, 1994). Thus, children who at a young age can clearly express themselves may be less likely to have their negative self-perceptions reinforced in later childhood.

Asendorpf (1994) also found that social competence was related to a decrease in inhibition over time. Perhaps children who have more social skills become more confident and less anxious in social situations because they know they are competent enough to deal with the situation. Plus, perhaps peers do not reject socially skilled shy children as much as those withdrawn children who have social skill deficits.

Similarly, recent studies have found that experiencing lower amounts of peer exclusion may decrease the likelihood that withdrawn children will suffer from long-term deficits (Gazelle & Ladd, 2003; Gazelle & Rudolph, 2004; Oh et al., 2008). For instance, Gazelle and Ladd (2003) found that anxious solitary children who were excluded (soon after they entered kindergarten) were more likely to remain anxious solitary over time (through to grade 4) than anxious solitary children who were not excluded. In addition, excluded anxious solitary children were also more likely to be depressed from kindergarten to the fourth grade than anxious solitary children who were not excluded. Similarly, Oh et al. (2008) found that children who were in a trajectory characterized as experiencing decreasing amounts of social withdrawal from grade 5 to grade 8 were more

likely to experience less social withdrawal overtime if they encountered less peer victimization/exclusion during middle school.

Teacher-child relationships are another potential protective factor for shy children. As mentioned previously shy children have a tendency to develop dependent relationships with their teachers (Birch & Ladd, 1998; Howes, Hamilton, & Matheson, 1994; Ladd & Burgess, 1999). However, recently Arbeau and Coplan (2007b) found that the closer a shy child's relationship was with their teacher the less internalizing problems they had, the less lonely they were, the less problems they faced with their peers, and the lower teachers rated them on withdrawal. These findings suggest that possible interventions could focus on helping teachers develop positive relationships with all of their students, but especially with those students who are extremely inhibited.

Eisenberg et al. (1998) longitudinally examined the relation between shyness and coping strategies in children from 6- to 12-years-old. The authors found that teachers and parents believed that shy children would be likely to use negative coping strategies if they were in a conflictual situation with a peer. They claimed that shy children would be likely to do nothing, use avoidant coping (avoid the situation), and would be unlikely to get help from a teacher or to use instrumental coping strategies (try to solve the problem constructively) if they were in a conflictual situation. Burgess, Wojslawowicz, Rubin, Rose-Krasnor, and Booth-LaForce (2006) also reported that withdrawn and aggressive children would be more likely to use avoidant coping in negative situations compared to a control group of nonaggressive/nonshy children. Interestingly, Armer (2003) found that avoidant coping was a buffer from social anxiety for shy preschoolers. One suggestion

was that avoidant coping might lead to less social interaction thereby reducing the level of anxiety felt in social settings.

The current dissertation focused on another potential protective factor that has not received a lot of research attention in the shyness literature, shy children's friendships. The next section will describe the positive outcomes associated with friendships. The few studies that have been conducted on shy children's friendships will then be summarized, followed by a description of the social surrogate hypothesis, a new friendship construct that was assessed in this dissertation. The present studies will then be described.

Friendships

Friendships are close, reciprocated relationships between two individuals (Erdley, Nangle, & Gold, 1998). Friendships are considered to be important to both the young and the old (Hartup & Stevens, 1997, 1999). For example, friendships can aid in developmental transitions and coping with life stress in both childhood and in adulthood (e.g., Berndt & Keefe, 1995; Berndt, Hawkins, & Jiao, 1999; Dykstra, 1995; Hartup, 1996; Hartup & Stevens, 1997; Ladd, 1990; Ladd, Kochenderfer, & Coleman, 1996; Ladd & Price, 1987). In addition, individuals who have friends have higher levels of general well-being (Bagwell, Newcomb, & Bukowski, 1998; Hartup & Stevens, 1997, 1999) and less feelings of loneliness (Nangle, Erdley, Newman, Mason, & Carpenter, 2003; Newcomb & Bagwell, 1995; Parker & Asher, 1993; Parker & Seal, 1996). Children with friends also tend to be rated as more sociable and popular by the peer group (Bukowski, Pizzamiglio, Newcomb, & Hoza, 1996; Wojslawowicz Bowker, Rubin, Burgess, Booth-LaForce, & Rose-Krasnor, 2006). It has also been found that good friends defend and are loyal to each other (Berndt, 2002). For instance, having friends

high in protection has been found to reduce victimization levels for children who are high on internalizing problems (Hodges et al., 1999). Interestingly, unmarried elderly people have been found to be less lonely when they have supportive friendships (Dykstra, 1995).

Friendships are important for the development of adequate social skills and the enhancement of cognitive skills (Hartup, 1996; Ladd, 1990; Newcomb & Bagwell, 1995; Rubin, Wojslawowicz et al., 2006). Indeed, children adjusting to kindergarten have been found to have higher academic performance if they made friends in their class (Ladd, 1990). Children who do not have friendships may be at risk for being rejected (e.g., Parker & Seal, 1996) and victimized by their peers (Wojslawowicz Bowker et al., 2006) as well as at an increased risk for developing psychopathological symptoms in adulthood (Bagwell et al., 1998).

Since there are many benefits to having friends, it is conceivable that friendship may be a protective factor for children who are vulnerable to maladjustment (Brendgen, Vitaro, & Bukowski, 2000; Fordham & Stevenson-Hinde, 1999; Hodges et al., 1999). One such at risk group are shy children (Fordham & Stevenson-Hinde, 1999). As previously discussed, shy children are at risk for many negative outcomes, it is possible that some of these potential problems may be prevented by having best friendships since having friends is generally associated with positive outcomes (e.g., Hodges et al., 1999; Ladd, 1990; Ladd & Price, 1987; Wojslawowicz Bowker et al., 2006), and may be a specific protective factor for children at risk for victimization (Hodges et al., 1999). In addition, children who begin school with familiar peers are less likely to be anxious at the beginning of the year (Ladd & Price, 1987). Perhaps if shy children have at least one

friend in the classroom, they will be less susceptible to some of the negative outcomes that are often found to be associated with shyness.

What is a Friend?

In research, friendships are usually identified by asking children to list, circle, or point to their “friends”, “good friends”, “best friends”, “very best friends”, “children they like the most”, etc. (e.g., Berndt et al., 1999; Brendgen, Little, & Krappmann, 2000; Bukowski et al., 1998; Cillessen, Jiang, West, & Laszkowski, 2005; Crick & Nelson, 2002; Erdley et al., 1998; Grotjeter & Crick, 1996; Hartup & Stevens, 1999; Haselager et al., 1998; Hoza, Bukowski, & Beery, 2000; Keefe & Berndt, 1996; Ladd et al., 1996; Parker & Asher, 1993; Rubin, Wojslawowicz Bowker et al., 2006; Schneider, 1999), and then dyads are matched based on reciprocation of the friendship. Reciprocated friendships (also called mutual friendships; e.g., Haselager et al., 1998) are those in which two children name each other as their friend (e.g., Hartup & Stevens, 1999).

Occasionally, however, friendships are assessed by having children rate how much they like each of their classmates. Erdley et al. (1998) compared the psychometric properties between rating scale assessments and nomination procedures for identifying friendships. On two occasions, 4th and 5th grade students were asked to circle the names of three of their most liked classmates and to rate how much they liked to play with each of their classmates on a 1 (do not like to at all) to 5 (like to a lot) scale. The results indicated that the nomination measure was more conservative, leading to fewer identified friendships, than the rating scale assessment. In addition, the friendships identified with the nomination procedure were found to be less stable compared to the friendships that

were identified by the rating scale measure. The assessments were found to be moderately correlated.

However, Hartup and his colleagues (Hartup, 1996; Hartup & Stevens, 1997, 1999) have argued that researchers need to take into consideration not only if a child has friends but also (1) who the child's friends are (i.e., the friend's characteristics); as well as (2) the quality of the friendship. Having a high quality friendship may not always be beneficial, especially if the friend has negative characteristics. A high quality friendship with a child who has negative characteristics may increase the possibility that the child will also display the friend's negative behaviours (Berndt, 2004). In contrast, in one study children who were friends with withdrawn children became more withdrawn during the transition to junior high if they had low or average quality friendships with the withdrawn children, but did not become more withdrawn if they had high quality friendships with the withdrawn children (Berndt et al., 1999). Thus, the quality of the friendship should also be examined when friendship is the focus of a study. As such, the current investigation examined the effects of having friends as well as friendship quality on shy children's adjustment. In addition, the effects of using a friend as a social surrogate was also explored in the current dissertation.

Having Friends

At about 3 to 4 years of age children begin using the word friend and begin preferring to play with particular children (Hartup & Stevens, 1999). In addition, approximately 75% of children in preschool have been found to have reciprocal friendships (Hartup & Stevens, 1999). About 80 to 90% of adolescents will report reciprocal friendships (Hartup & Stevens, 1999). Sullivan (1953) claimed that developing

“chumships” was an important milestone of the preadolescent period. He argued that the intimacy within friendships would help foster children’s development, for instance children may form a more realistic view of themselves by their exchanges with their chums. Children who are chronically friendless have been found to be at risk for adjustment difficulties (Ladd & Troop-Gordon, 2003).

As compared to their counterparts without friends, children and adults with friends are less lonely (Brendgen et al., 2000; Parker & Seal, 1996), less depressed (Bagwell et al., 1998; Brendgen et al., 2000), less victimized (Haselager et al., 1998; Wojslawowicz Bowker et al., 2006), better accepted by their peers (Bagwell et al., 1998; Parker & Seal, 1996), more prosocial (Wojslawowicz Bowker et al., 2006), more popular (Nangle et al., 2003; Wojslawowicz Bowker et al., 2006), have higher feelings of being cared for and supported (Hoza et al., 2000), and have increased academic performance (Ladd, 1990). In addition, it has been reported that having social-support may improve physical health (Uchino, Uno, & Holt-Lunstad, 1999). Having problematic relationships with peers has been found to be associated with increased levels of depression (Nangle et al., 2003) and higher feelings of loneliness (Hoza et al., 2000). Low-accepted children have been found to be less likely to have mutual best friends than average- and high-accepted children (Parker & Asher, 1993). It has been suggested that popular children may develop more friendships because they have more peers that like them, thus they have more opportunities to develop friendships within the peer group (Hoza et al., 2000; Nangle et al., 2003). Moreover, older children tend to have more reciprocated friendships than younger children (Berndt & Hoyle, 1985; Parker & Seal, 1996).

Burgess et al. (2006) reported that children were more likely to attribute prosocial intent to their reciprocal friend during hypothetical negative events than to unfamiliar peers. Children were also less likely to report feeling embarrassed and were more likely to feel good about the situation if the situation involved a mutual friend. Moreover, children were less likely to use avoidant and emotional coping strategies, and were more likely to use appeasement strategies when dealing with situations involving a friend. These findings may represent children's attempts at maintaining the friendship. Situations may be less emotional and more easily resolved when friends are involved.

Further, Bagwell, Newcomb, and Bukowski (1998) compared the long-term adjustment of children who had reciprocated friendships versus those children who did not have reciprocated friendships in the fifth grade. Children's adult adjustment was evaluated 12 years after their friendships were originally assessed in the fifth grade. The authors found that children who had reciprocal friendships in the fifth grade had better adjustment outcomes in adulthood than adults who did not have mutual friendships in the fifth grade (Bagwell et al., 1998). Specifically, children with reciprocated friendships were found to have better academic performance, better relationships with their family members, fewer problems with authorities, higher self-perceptions regarding their moral behaviour, athletic abilities, and romantic relationships, and were less likely to display psychopathological symptoms. In addition, children who had reciprocated friendships in the fifth grade were found to report more positive features in their friendships even though the quality of their relationships were only assessed 12 years later (Bagwell et al., 1998). They were also more likely to claim that their friendships were less conflictual than the adults who did not have reciprocated friendships in the fifth grade (Bagwell et

al., 1998). This study demonstrates that having reciprocated friendships can have long lasting positive effects.

Moreover, Wojslawowicz Bowker et al. (2006) demonstrated that adjustment indices may alter quite dramatically when a child's friendship status changes. The researchers assessed the stability of children's friendships and their adjustment outcomes in the spring and the fall of fifth grade. Children who had friendships both in the fall and in the spring were the most well adjusted, regardless of whether they had the same or a different best friend in the spring as in the fall. Children without friends in the fall but who gained a friend by the spring became less victimized, but those who had a friend in the fall but lost the friendship and did not regain a new friendship became more victimized, and became viewed by peers as less popular and sociable. The results associated with the friendship loss group demonstrate that if a child does not regain a new best friendship after losing one, the benefits associated with having the friendship will be replaced by negative adjustment indices, making these children quite similar to those who are chronically friendless. Thus, the relationship's length may not be as important as just the mere presence of a companion (Wojslawowicz Bowker et al., 2006).

Peer rejection, on the other hand, has been found to be associated with decreased school liking and higher school avoidance, and less academic success (Ladd, 1990). However, even some low-accepted children have friends and some high-accepted children do not have reciprocated friendships (Parker & Asher, 1993). Children who are rejected have been found to be more aggressive and immature (Bagwell et al., 1998). Peer rejected children also have been found to have lower overall quality friendships, and poorer adjustment outcomes in adulthood (Bagwell et al., 1998). Peer rejection in the

fifth grade has been found to be related to academic problems and trouble with authorities, and increased psychological problems in adulthood. Peer rejection in the fifth grade has also been found to be related to lower perceptions of athletic competence in adulthood (Bagwell et al., 1998).

Some gender differences have been reported regarding friendships in the literature. In general, girls have been found to have more reciprocal friendships than boys (Berndt & Hoyle, 1985; Parker & Asher, 1993; Wojslawowicz Bowker et al., 2006). However, boys tend to have larger networks of friendships than girls who have been found to be more exclusive in their friendships than boys (Berndt & Hoyle, 1985; Parker & Seal, 1996). For instance, Berndt and Hoyle (1985) found that boys are more likely to make a lot of new friends during a school year if they had a lot of friends at the beginning of the year, however girls who had a lot of friends at the beginning of the year were more likely to make fewer friends during the year, suggesting that girls were less likely to expand their network if they already had a lot of friends. Interestingly, Hoza et al. (2000) reported that boys experience more loneliness in their friendships than girls.

Friendships have also been found to help when dealing with life transitions and stress (Berndt, 1999; Berndt et al., 1999; Ladd, 1990; Ladd & Price, 1987). For instance, Ladd (1990) found that kindergarten children who had more friends upon entering school liked school more and were less school avoidant two months after making the transition. These children were also found to increasingly like school more throughout the school year if these friendships were maintained after two months of beginning school. In addition, the more new friends that kindergarten children had at two months after school entry the better they performed academically. Moreover, Ladd and Price (1987) studied

children's transition from preschool to kindergarten. They found that children who had more positive relationships with the peers in their preschool classroom were liked more by their classmates in kindergarten and were more sociable with their peers in kindergarten. Also, children who had familiar peers in their kindergarten class were found to be more highly accepted by their peers, liked their peers more, and teachers reported that they shared materials and were more involved with their peers. These children also performed well on teacher-rated task-related behaviors (e.g., listening to instructions) and had less anxiety and made fewer visits to the nurse at the beginning of the school year. Children's continued relationships with peers outside of school and the number of familiar peers in their kindergarten class predicted school liking. It is important to study children's reputations (with both their peers and teachers) in early childhood because these reputations may have long-term effects on their development, and these reputations may be hard to change (Ladd & Price, 1987).

Ladd and Price (1987) recommended pairing children (so they know someone who will be in their class) prior to kindergarten to make the kindergarten experience feel less daunting, to help promote early school adjustment. It could be that children who attend school with previous friends adjust more easily to the school experience and they may use these friendships as a base to explore the environment and to make subsequent friendships (Ladd, 1990).

Transitioning to junior high is another period in a child's life when they need to adjust to new people and settings. Berndt et al. (1999) examined children's friendships in the 6th and 7th grade to determine if friends can help or hinder the transition into junior high. Interestingly, during the transition, students increased in their levels of perceived

social competence if their friends also reported having high perceptions of social competence. Further, in junior high children became less like their friends academically and in behavioural problems.

Moreover, reciprocated friendships have also been found to serve as a *protective factor* for children who are a risk for maladjustment. Laursen, Bukowski, Aunola, and Nurmi (2007) reported that for children with friends social participation in grade 1 was related to less peer isolation in grade 2. Further, for children with friends social isolation as well as internalizing and externalizing problems in the first grade did not lead to further maladjustment difficulties in the second grade. For children without friends, on the other hand, internalizing and externalizing problems in the first grade were related to increased social isolation in the second grade. In addition, for friendless children peer isolation in the first grade was related to increased internalizing and externalizing problems in the second grade. Thus, friendships appear to protect children from experiencing increased peer and behavioural difficulties.

It has also been suggested that friendship might be an important protective factor against victimization (e.g., Haselager et al., 1998; Hodges et al., 1999). For instance, Hodges et al. (1999) reported that the presence of a best friendship decreased the likelihood of being victimized a year later. In addition, children who had a best friend were less likely to become more internalizing as a result of being victimized. Further, children who had a best friend were less likely to experience externalizing problems as a result of being victimized but children who were without a best friend were more likely to suffer externalizing problems as a result of being victimized. Similarly, Schwartz, Dodge, Pettit, and Bates (2000) found in two studies that negative home environments

predicted peer victimization only for children who had few friendships, this relation was not found for children who had lots of friends. Also, unmarried people who have supportive friendships have been found to be less lonely than unmarried people without friends (Dystra, 1995). Thus, just by having friends at risk children may benefit from positive adjustment outcomes. However, the quality of the friendship may also need to be taken into consideration (Parker & Asher, 1993).

Friendship Quality

A high quality friendship is one that includes prosocial behaviours, intimacy, other positive characteristics and low amounts of conflict and negative aspects in the relationship (Berndt, 2002). The components of friendship quality according to Parker and Asher (1993) include validation and caring (the amount of caring and support in the relationship), companionship and recreation (the degree to which friends enjoy spending time together), help and guidance (the extent to which friends help each other), intimate exchange (the level to which friends share personal information about each other), conflict resolution (the extent to which arguments are solved quickly and fairly) and conflict and betrayal (the degree to which the friendship is characterized by disagreements and mistrust). Essentially, a high quality friendship is one that is high on positive features and low on negative features (Berndt, 2002). Children generally report their friendships to be fairly high in quality (e.g., Rubin et al., 2004).

Correlates of friendship quality. Friendship quality has been found to be positively related to social competence, global self-worth, and negatively related to internalizing difficulties (Rubin et al., 2004) and peer rejection (Bagwell et al., 1998). Positive friendship qualities have been found to be related to higher friendship

satisfaction whereas negative friendship qualities have been found to be associated with lower friendship satisfaction (Parker & Asher, 1993). Having high quality friendships have also been found to aid with the transition to school (Berndt et al., 1999; Ladd et al., 1996). Ladd et al. (1996) found that children who perceived higher levels of validation and less conflicts within their mutual friendships reported feeling happier in kindergarten. In addition, children who believed their friendships were high on validation and aid were more likely to report having support from their peer group, and liked school more with time. Moreover, high levels of conflict within a friendship were related to higher amounts of loneliness for boys. Students who perceived their friendships as containing more positive features have been found to be more involved in the classroom whereas students who have friendships that contain more negative features have been found to be more disruptive and less involved in the classroom (Berndt & Keefe, 1995). Further, positive friendship quality in university has been found to be associated with positive outcomes including lower levels of anxiety and hostility and higher amounts of self-esteem (Bagwell et al., 2005). Bagwell et al. (2005) indicated that individuals who perceived their friendships as growing weaker over time reported increases in feelings of discomfort and anxiety.

Friendship quality has been found to be associated with adolescents' actual behaviours. Brendgen et al. (2001) reported that adolescents who displayed more positive affect during videotaped discussions perceived their friendships as being higher in quality whereas adolescents who showed critical, negative affective, and conflict behaviours in the interactions with their friend reported that their relationships were high on negative friendship quality. Interestingly, for girls assertive behaviours during the discussions

were related to reported negative friendship quality whereas the opposite finding was reported for boys (the finding for boys was not significant). In addition, perceiving the quality of a friendship as being negative was related to their partners' criticism towards them and partner initiated conflict.

Parker and Asher (1993) examined the friendship quality of low-, average-, and high-accepted children's very best friendships. They reported that low-accepted children perceived their friendships as being lower on validation and caring, lower on conflict resolution, and lower on help and guidance than children who were considered of average- or high-acceptance by the peer group. In addition, children in the low-acceptance group perceived their relationships to be less intimate than children in the high-acceptance group, and perceived their relationships to contain more conflicts and betrayal than the children classified as being of average-acceptance. It was also discovered that validation and caring, companionship and recreation, help and guidance, intimacy, and conflict resolution were negatively related to feelings of loneliness whereas perceived conflict and betrayal within a relationship was predictive of increased loneliness. Popular children have more children who like them so they have more possibilities for close relationships (Nangle et al., 2003). A major limitation of Parker and Asher's study is that they failed to differentiate between the different types of low-accepted children, for instance withdrawn and aggressive children are less accepted by the peer group for different reasons, indeed the low-accepted group did show the most within-group variability in their study (Parker & Asher, 1993).

High quality friendships may help children's peers view them more positively, and may also help children to view their peers more positively (Berndt, 2002). Negative

quality relationships with friends, on the other hand, may lead over into relationships with other peers and adults which also might affect children's relationships with these individuals (Berndt, 2002).

Gender differences in friendship quality. Girls have been found to perceive their friendships as being of higher quality than boys (Bagwell et al., 1998; Berndt & Keefe, 1995; Brendgen, Markiewicz, Doyle, & Bukowski, 2001; Rubin et al., 2004; Rubin, Wojslawowicz et al., 2006). Parker and Asher (1993) found that girls report higher intimacy, less difficulty resolving conflict, more validation and caring, and more help and guidance in their relationships with their friends than boys. However, Parker and Asher did not find a significant difference between boys and girls on their reported levels of conflict and betrayal, and companionship and recreation. In addition, girls have been found to interact more positively and less negatively than boys when dyads of friends are observed. Specifically, girls have been found to display more positive affect, be more responsive, disclose more personal information, criticize less, show less negative affect, and be involved in less conflictual behaviours than boys while engaging in observed discussions (Brendgen et al., 2001). Interestingly adolescent boys have been found to perceive their friendships with girls as being more rewarding than their friendships with other boys, whereas girls rated their friendships with boys and girls equally for strength of the relationship and as providing equal amounts of reward (Thomas & Daubman, 2001). Thus, gender may be an important component to consider when examining the effects of friendship quality on children's adjustment.

Friendship quality as a protective factor. Higher quality friendships have been found to protect children from victimization, peer rejection, and internalizing difficulties

(Bollmer et al., 2005; Hodges, Boivin, Vitaro, & Bukowski, 1999; Rubin et al., 2004; M. E. Schmidt & Bagwell, 2007). For instance, Hodges et al. (1999) performed a longitudinal study on the effects of friendship on victimization by one's peers in the 4th and 5th grades and again when they were a year older. The researchers had children identify 3 of their best friends and complete an assessment of friendship quality with their highest reciprocated best friend. Children nominated members of their class on items that tapped into victimization and teachers measured children's behaviours for internalizing and externalizing difficulties. The authors' found that having a friend high in perceived protection decreased the likelihood that a child high on internalizing problems would be victimized. In contrast, having a friendship low on protection increased the likely that a child high on internalizing problems would be victimized.

Further, Rubin et al. (2004) performed a study on fifth-graders' relationships with their parents and friends to determine what effects these relationships had on their adjustment. Interestingly, the authors found that girls who had low or average levels of friendship quality and low levels of maternal support were most likely to develop internalizing difficulties, whereas girls who had high quality friendships but low maternal support were protected from internalizing problems (this finding was especially true for girls). Thus, having high quality friendships helped to prevent at risk girls from experiencing internalizing problems. Similar results have also been found for bullying and externalizing problems (e.g., Bollmer et al., 2005).

Summary. In general friendships have been shown to have positive effects on children (e.g., Haselager et al., 1998; Hodges et al., 1999; Ladd, 1990), especially for those children who have friendships that are high in quality (Bagwell et al., 1998; Berndt

et al., 1999; Ladd et al., 1996; Rubin et al., 2004). Friendships have been found to protect some at risk children from difficulties (e.g., Schwartz et al., 2000), perhaps friendships may also help buffer shy children from experiencing long-term adjustment problems.

Shyness and Friendship

There are several theoretical reasons why friendships may be beneficial to shy children. For example, the positive benefits associated with friendship may lessen or eliminate the negative effects related to shyness. Shy children may also learn appropriate social skills by watching their friends socially interact with others. As well, the dyadic nature of a friendship may provide shy children the opportunity to practice their social skills in a supportive and less anxiety inducing atmosphere. Each of these theories for why shy children may particularly benefit from friendships is further explained below.

Offsetting Negative Effects

As mentioned previously shy children have been found to be at risk for internalizing difficulties (e.g., loneliness, low global self-worth), peer rejection, exclusion, and victimization (e.g., Boivin et al., 1995; Crozier, 1995; Eisenberg et al., 1998; Fordham & Stevenson-Hinde, 1999; Gazelle & Ladd, 2003; Rubin et al., 1993; Rubin et al., 1995). Moreover, as discussed above children who have friends have been found to be less victimized (Hodges et al., 1999), to have higher levels of general well-being (Bagwell, Newcomb, & Bukowski, 1998; Hartup & Stevens, 1997, 1999), to feel less lonely (Nangle, Erdley, Newman, Mason, & Carpenter, 2003; Newcomb & Bagwell, 1995; Parker & Asher, 1993; Parker & Seal, 1996), and are more sociable and popular in the peer group (Wojslawowicz Bowker et al., 2006). Perhaps some of the positive benefits attributed to friendships can counteract some of the negative outcomes often

found to be related to shyness. It is also possible that shy children with friends might be less likely to suffer from peer rejection, victimization, and internalizing difficulties because they may be seen as less deviant from the peer group than shy children without friends.

Modeling

Another reason why friendships might be beneficial for shy children is due to the potential for shy children to *model* the behaviours of their friend. If shy children witness appropriate social skills from their friend, they might be more likely to also attempt those same behaviours in a social setting. Bandura's research (Bandura, 1965, 1977, 1986; Bandura, Ross, & Ross, 1961, 1963) suggests that children can imitate the behaviours of others not only in the presence of the model but also in other settings when the model is absent. The social learning theory may therefore help to explain the benefits that may be attributable to having friendships on a child's social behaviour. Interestingly, Ryalls, Gul, and Ryalls (2000) found that infants who were shown four sequences of events by either a peer model or an adult model remembered the sequence of the events better both immediately after the demonstration and a week later when demonstrated by the peer model. The authors suggested that their results supported Piaget's (1962) theory and Festinger's (1954) social comparison theory. Both Piaget and Festinger argued that peers would be most influential for children's learning because they can use them to compare their own behaviours.

Results from previous studies have demonstrated the benefits of having peer models on a target child's behaviour (e.g., Ballard & Crooks, 1984; Greer, Dorow, Williams, McCorkle, & Asnes, 1991; Johnson-Pynn & Nisbet, 2002). For instance, peers

can help children develop appropriate eating behaviours (Greer et al., 1991). In addition, preschool peers have been shown to effectively aid their classmates build a house with blocks (Johnson-Pynn & Nisbet, 2002).

Perhaps most relevant for the current project, Ballard and Crooks (1984) had six preschool children who infrequently engaged in peer interaction watch a video in which children described how they engaged in social interaction with their peers. The peers in the video gradually became more engaged in peer play. The results demonstrated that the peer observations were successful. At post-treatment, most of the socially inhibited children showed interaction with their peers that was both above their baseline interaction rates and comparable to the comparison group's interaction levels. Most of the children in the treatment group also demonstrated a decrease in their interaction rates with teachers at post-treatment.

The results of the above studies show that children's peers can have a substantial effect on their behaviours. Importantly, most of the methods used in these studies only involved brief episodes of peer interaction, especially in comparison to a friendship. A child's friend would obviously spend a great deal more time with a child than a casual peer. Thus, the impact that a friend could have on a withdrawn child's behaviour may be substantial. If indeed the shy child chooses to model the friends' behaviours they could learn and increasingly demonstrate more sociable behaviours (Barry & Wentzel, 2006).

Opportunity to Practice Social Skills

The dyadic relationship of a friendship might also provide shy children the opportunity to practice their social skills in a non-threatening atmosphere. It is likely easier to engage in social interaction with a close friend than amongst a group of peers.

Furman, Rahe, and Hartup (1979) investigated the effects of having socially withdrawn preschool children play with younger versus same-aged children, compared to a control group of children who did not receive any treatment. Toys were available in the play sessions to help facilitate interactions between the pairs of children. The treatment sessions lasted for 10 weeks, and the socially withdrawn child's play partner switched after 5 weeks. Thus the withdrawn children had the opportunity to have one-on-one interactions with 2 play partners. At the post-treatment observations, it was found that the children in both treatment groups (younger play partner treatment group and same-aged treatment group) significantly increased in their peer interaction from pre-treatment to post-treatment, compared to the control group. The effects were stronger for the children in the younger peer group, more children in the younger peer group were found to have increased their rates of peer interaction than the children in the same-aged peer treatment group.

Interestingly, the children's rates of peer interaction in both treatment groups did not differ from the mean interaction rates in the overall preschool population, whereas the control group still showed lower rates of peer interaction than the preschoolers in general. Specifically, both treatment groups demonstrated increases in their levels of reinforcing behaviour (e.g., praise, help, smiling, cooperative acts) and in their neutral acts (acts that were not punishing or reinforcing, e.g., conversation), compared to the control group. Thus, social contact with other children in a one-on-one situation can increase socially withdrawn children's rates of interaction with their peers in a larger group setting. The authors suggested that a reason for the success of the dyadic interventions may have been due to the potential higher success that the withdrawn children would have had when they

demonstrated assertive behaviours. Consequently, shy children may feel more comfortable demonstrating social behaviours in dyadic relationships than in a larger peer group setting. However, the skills that shy children demonstrate in the one-on-one friendship may eventually transfer to their interactions within the larger peer group.

Current Literature on the Effects of Friendship on Shyness

Despite the many benefits associated with friendship, not much research currently exists concerning the friendships of shy children. The first question to be explored is whether shy children are more or less likely to have a “best friend.” There is some evidence to suggest that shy children are just as likely as nonshy children to have a best friend (Ladd & Burgess, 1999; Rubin, Wojslawowicz et al., 2006). Indeed, Rubin, Wojslawowicz et al. (2006) reported that at the beginning of the school year 65% of the 5th grade children in their shy/withdrawn group had a reciprocal best friend whereas 70% of the children in their control group were considered to have a mutual best friendship. At the end of the school year, 63% of the children in the shy/withdrawn group and 72% of the children in the control group had a mutual best friend. No differences were found between the groups at either time period. However, it has also been reported that sixth graders who do not have a reciprocal friend score higher on peer reported sensitivity-isolation (e.g., shy, unhappy, left out) as compared to children who do have reciprocal friendships (Berndt et al., 1999).

Rubin, Wojslawowicz et al. (2006) reported that the children in their shyness group were just as likely to have a stable friendship as the children in their control group. Moreover, dyads that consist of 1 or 2 withdrawn children have been found to be just as stable as those that do not contain a withdrawn child (Schneider, 1999). It has also been

found that fifth grade children did not differ on shyness/social withdrawal regardless of their changes in friendship status from the beginning of the school year to the end of the school year (whether they had the same mutual best friend, a different best friend, were previously friendless but gained a friend, became friendless, or remained friendless; Wojslawowicz Bowker et al., 2006).

One of the first studies to examine shyness and friendships was conducted by Fordham and Stevenson-Hinde (1999). In their study, 8 to 10-year-old children were asked to complete a number of questionnaires assessing their adjustment outcomes, including the quality of their highest ranked friendship. For the entire sample, positive friendship quality was negatively associated with observed shyness, suggesting that shy children may view their relationships with their friends more negatively than nonshy children. In addition, compared to their friends, shy children appeared to view their friendships less positively. To assess age differences in child outcomes, Fordham and Stevenson-Hinde split the participating children into younger (a mean age of 9 years) and older groups (mean age of 10 years). For the younger group, shyness was not related to any adjustment indices and positive friendship quality was only related to friend support. As opposed to the younger group, for the older group shyness was negatively related to global self-worth. In addition, positive friendship quality was positively associated with global self-worth and classmate support and inversely related to trait anxiety. It was proposed by the authors that a high quality friendship (i.e., characterized by positive features and low on conflict/betrayal) might *buffer* the negative effects associated with shyness (e.g., low global self-worth).

Schneider (1999) explored same-sex dyads of reciprocated friendships of 8 and 9 year-old children, half of which had at least one socially withdrawn child. Children were classified as socially withdrawn based on peer nominations generated by the Revised Class Play method. Each friendship dyad was observed while they engaged in 2 activities (they were given lego and a coloring task). Children's behaviours during the activities were coded for criticism, responsiveness, intimacy, power balance, competition, positive reinforcement, and number of verbal attempts made. In addition, the children were asked to rate the relationship quality of their friendship. All of the data was collected at 2 time periods, once each semester of the school year.

At both time periods, the dyads that contained at least one withdrawn child made fewer utterances. The friendship dyads that did not include any withdrawn children showed more competition when observed than the dyads with withdrawn children. It was also found that the dyads that were mixed (that contained one socially withdrawn child and one nonwithdrawn child) reported higher companionship scores on the friendship quality assessment than the dyads that included either both withdrawn children or no withdrawn children (at both time points). In addition, children in mixed dyads reported more helping in their relationships than dyads that consisted of both withdrawn children (at both time points). At time 2, children who were involved in a mixed dyad reported less conflict in their relationships than children who were in either a dyad that consisted of both withdrawn members or both nonwithdrawn members. At the first assessment, withdrawn children who were involved in a mixed dyad perceived their friendship as being more helpful and close, and at the second assessment as being higher in companionship than their nonwithdrawn friend. The author suggested that withdrawn

children might perceive their friendships as being of higher quality than their nonwithdrawn friend because withdrawn children might achieve greater satisfaction from the relationship than from their relationships with other peers. It was also postulated that nonwithdrawn children may be comparing their relationships with the withdrawn children to their other friendships, which may be more equalitarian.

Burgess et al. (2006) investigated whether having a reciprocal friend influenced the social cognitions of shy and aggressive children, as compared to a group of control children (nonshy, nonaggressive). Specifically, children's causal attributions, emotional reactions, and coping strategies to hypothetical peer scenarios were examined. Children were first asked to read scenarios depicting a negative situation with a hypothetical unfamiliar peer and answer questions regarding their attributions, emotional reactions, and coping strategies regarding the event. Afterwards, children were asked to read similar scenarios, however in these scenarios a reciprocal friend was involved in the incident. Children were also asked to answer questions regarding their perceived causal attributions, emotional reactions, and coping strategies in regards to these situations. The results revealed that shy children were less likely to blame themselves for the incident if it involved a reciprocal friend rather than an unfamiliar peer. Further, aggressive and withdrawn children were more likely to feel angry in the situations that involved an unfamiliar peer compared to the control children; however there were no group differences found for the reciprocal friend situations. Although shy and aggressive children were more likely than the control children to perceive using avoidant coping strategies, they were most likely to use such passive strategies in incidents involving unfamiliar children. Thus friendships may act as a protective factor for shy/withdrawn

children when negative situations occur. Shy children may not be as likely to feel personally responsible for the event, they may have less negative feelings toward the situation, and they may use more adaptive coping strategies if the incident involves a close friend.

Rubin, Wojslawowicz et al. (2006) studied the friendships of a group of shy/withdrawn children and compared them to a control group of children (who were neither shy nor aggressive). Both groups of children were in the fifth grade. The researchers assessed the children's friendships and adjustment outcomes during two school assessments, at the beginning of the school year and at the end of the school year, as well as during one lab visit. At the school assessments, children were asked to indicate the names of their same-sex "very best friend" and their "second best friend." Best friendships were identified when children either nominated each other as their very best friend or their second best friend. Children were also asked to complete the *Extended Class Play* measure. Further, teachers were asked to complete a measure of child adjustment in the classroom for each participating child (e.g., acting-out, shy-anxious, assertive social skills, frustration tolerance). During the visit to the lab, both the target child and their highest reciprocal best friend were asked to complete measures assessing the quality of their friendship.

The results indicated that the shy children who had a reciprocal best friend were considered by their peers to be more popular and sociable than the shy children who did not have a mutual best friendship. There were no differences found between shy children who had best friends and shy children who did not have a best friendship on victimization levels and teacher-rated anxious behaviour. Moreover, the best friends of the shy

children were found to be more shy and withdrawn, victimized, and excluded by their peers than the friends of the children in the nonshy/nonaggressive control group. In addition, shy children were found to be similar to their friends on prosocial behaviours.

Some gender differences were also reported. Shy boys were found to be similar to their friends on shyness/anxiety, social assertion, popularity/sociability, and victimization/exclusion. Shy girls were reported as being similar to their friends on acting-out and frustration tolerance. Concerning the quality of the children's friendships, it was found that shy children perceived their friendships to be lower in help and guidance, intimacy, conflict resolution, and in overall friendship quality compared to the target children in the control group. Interestingly, the friends of the shy children perceived their friendships to be less fun, to consist of less help and guidance, and to be of lower overall friendship quality than the friends of the children in the control group.

Therefore, even though shy children were just as likely to have a mutual, stable best friendship as the children in the control group, their friendships were more negative in nature. In addition, Rubin, Wojslawowicz et al. (2006) argued that shy children who have friendships may not be protected from negative adjustment outcomes. For instance, there was no difference found between shy children who had a best friendship and shy children who did not have a best friendship on peer victimization, suggesting that having a best friendship may not protect shy children from being victims of peer abuse. The relative similarity between shy children and their best friends (e.g., victimization, prosocial behaviours, popularity) may be a reason for the lack of protection from being involved in the relationship. If both children in a friendship are anxious and timid they may be easy targets for bullies, and neither may defend the other from the abuse (Rubin,

Wojslawowicz et al., 2006). Rubin, Wojslawowicz et al. (2006) suggested that shy children and their friends may benefit from interventions focused on their relationship.

Most recently, Oh et al. (2008) identified three social withdrawal trajectories that were predicted from peer exclusion, prosocial behaviour, and friendship stability. Similar to those found by Booth-LaForce and Oxford (2008), the trajectories were labeled the following: *low-stable* social withdrawal trajectory (low social withdrawal scores from grade 5 to grade 8), *decreasing* social withdrawal trajectory (highest social withdrawal in grade 5 but decreased steadily to grade 8), *increasing* social withdrawal trajectory (social withdrawal scores increased from grade 5 through to grade 8 and had highest social withdrawal scores in grade 8). Interestingly, the lack of a reciprocal friendship, having an unstable friendship in the fifth grade, and greater prosocial behaviour in the sixth grade were related to increased social withdrawal over time in the increasing group. The researchers also found that children who had a best friend who was withdrawn were more likely to be withdrawn in the fifth grade. Moreover, children who had friends who were withdrawn in the sixth grade were also likely to become increasingly withdrawn over time. These findings suggest that friends contribute to shy children's long-term adjustment.

Thus, current research findings suggest that friendships that contain shy children communicate less and are generally found to be lower in friendship quality (Fordham & Stevenson-Hinde, 1999; Rubin, Wojslawowicz et al., 2006). Moreover, shy children who have a best friend may be just as victimized and anxious as shy children who do not have a reciprocated best friend (Rubin, Wojslawowicz et al., 2006). The friends of shy children have also been found to be more victimized, excluded, and withdrawn than the friends of

control children (Rubin, Wojslawowicz et al., 2006). However, children who are without a friendship may be at risk for increased withdrawal (Oh et al., 2008). Further, shy children with a best friend have been shown to be viewed as more popular than shy children without a reciprocated best friend (Rubin, Wojslawowicz et al., 2006) and shy children may feel more positive about negative events if they involve a close friend (Burgess et al., 2006). In addition, if children are able to develop high quality relationships with their friends they may benefit by having higher global self-worth, more acceptance from their classmates, and may be less anxious (Fordham & Stevenson-Hinde, 1999). Therefore there is some research to suggest that having friendships can have positive effects on shy children's adjustment.

It can also be suggested from the results that a shy child may have higher quality friendships if they are friends with a nonshy child (Schneider, 1999). Perhaps a reason for such high quality friendships may be due to shy children using their nonshy friends as social surrogates. In other words, shy children may use their friends to help them enter socially threatening situations. The main goal of the current investigation was to examine the effects of using a friend, especially one in which the child has a high quality friendship, as a social surrogate on shy children's adjustment.

Social Surrogate Hypothesis

How do shy children with friends deal with social pressures? It is possible that shy children may use their friends to help them engage in social interaction. That is, shy children may use their friends to help them enter and interact more comfortably in social situations. Bradshaw (1998) coined the *social surrogate hypothesis*, speculating that people who are high on shyness would more often use their close friends to help them

become more socially interactive. These close friends, termed *social surrogates*, may help the shy person feel less anxious in a social setting by merely accompanying them, by helping the flow of conversations (keeping the conversation constant, without moments of awkward silences), or even by engaging in all of the interaction (essentially interacting on the part of the shy person). Ideally, Bradshaw argued that by having the social surrogate, the high shy person will enter more social situations, be less anxious in social situations, and become more involved in social interactions when they are in a social setting. Hobfoll's (Hobfoll & Stokes, 1988) theory of the processes and mechanics of social support was used as a conceptual basis for the social surrogate hypothesis. Hobfoll's theory argues that social support increases a person's resources. For a shy person, social support can increase their self-confidence and social skills.

Bradshaw (1998) claimed that a shy person would report recruiting and utilizing other people to go with them to anxiety inducing situations. As well, he hypothesized that high shy individuals would report only attending an event if a friend was present. In addition, he predicted that having a social surrogate present at events would increase a shy person's participation in social situations. Recruiting was described as trying to get another person to go with them to situations that may cause anxiety. Moreover, Bradshaw speculated that shy individuals would likely report trying to get their friends to engage in certain activities for them. Essentially, they would get a friend to perform the behaviours they perceived as being stressful in their place. In addition, shy people were thought to be less likely to enter a situation if they were unable to find someone else to go with them. Further, Bradshaw also predicted that having a social surrogate in a situation would

decrease the shy person's anxiety levels and increase the shy person's rate of social interaction.

Indeed, Bradshaw (1998) found that shy university students reported recruiting, utilizing, and being more social in the presence of their friends. Further, compared to university students who were low on shyness, high shy people reported that they would be less likely to attend a social situation if a friend did not attend with them. The students who claimed that they would recruit a friend to attend a situation with them to make the situation less stressful or because their friend engaged in the interaction better than they were more shy than the university students who reported bringing someone with them because it would be more fun. It was also found that for certain situations, shy people would be more likely to try to have their friend engage in behaviours for them than people who were low on shyness (i.e., ask if a seat is taken, say hello to a stranger at a party, ask a professor about a class project, disagree with someone's political position). Interestingly, it was also found that men were less likely than women to attempt to have a friend perform behaviours in their place.

Souma, Ura, Isobe, Hasegawa, and Morita (2008) also examined social surrogate use in shy university students. They were interested in determining whether having a social surrogate when beginning university would influence the size of a shy person's social network. Students were given questionnaires regarding their social surrogate use and friendship networks during the first and eighth months of university. Indeed they found that shy individuals expanded their social network between assessments by becoming friends with individuals from their social surrogate's social network. The

authors' suggested that if the shy students use other members of their social networks as social surrogates their social networks may continue to grow.

For some shy people, the social surrogate might help them practice their social skills in front of a non-threatening, supportive person. Hence, the shy person might gain social skills and self-confidence with the help of the social surrogate. Thus, at first consideration, it can be postulated that someone who uses a close friend as a social surrogate would become less shy over time.

A shy person would use a social surrogate positively if the surrogate is recruited mainly for support and encouragement in the social situation. The shy person may realize that having someone with them will help make them less anxious and self-conscious in the social setting and more able to carry on conversations with other people at the gathering. The surrogate may thus help the shy person during uncomfortable moments, but for the most part treat the shy person as an equal member of the social group. From an attachment perspective (e.g., Bowlby, 1958, 1978), a social surrogate (when used positively) can provide a secure-base from which the shy person can explore their environment and practice social skills. Shy people would use a social surrogate positively if they reported wanting the friend to help them be less anxious and more outgoing during the social activity.

However, if the social surrogate does *all* of the social interaction for the shy person, the shy person might not gain experience that will help them feel more comfortable in social settings unaccompanied. In effect, if the social surrogate takes the place of the shy person in the social interaction, the shy person might not benefit from the interaction (e.g., by developing social skills or becoming less shy over time).

Thus, social surrogates might also be used “negatively”, and thus not always lead to enhanced social performance. For example, the shy person may expect the surrogate to engage in most of the interaction in their place (like a “pinch hitter” for their social interaction) and thus does not make attempts to be socially interactive when in the company of their friend. Instead, they get their friend to communicate to others for them. Since the shy individual is not using the friend as a way to practice their own social abilities, there may be minimal benefits to using a surrogate in this way.

The social surrogate may also interact on the part of the shy individual to protect their shy friend from uncomfortable situations. This can be conceptualized as an “overprotective” friendship. An overprotective friend may accompany a shy person to a social situation, but does not encourage or make attempts to include the shy person in the communication, even if the shy person wants to be a part of the interaction. The social surrogate may monopolize the social interaction and treat the shy person as if they are incapable of interacting with others without them. Conceptually, an overprotective friendship can be considered similar to overprotective parents. Perhaps, like overprotective parents (Rubin, Cheah, & Fox, 2001), overprotective friends try to protect their shy friends from situations where they may be uncomfortable. For example, they may accompany them to social encounters and engage in conversations for the shy person. However, it is also possible that some social surrogates that are used negatively (those who engage in most of the interaction for the shy person) enjoy being the ‘center of attention’ and that by having a less assertive friend they do not have to compete for the attention of their peers.

At the present time, Bradshaw (1998) and Souma et al. (2008) are the only published studies that have examined the use of social surrogates by shy individuals. Whereas both of these studies examine social surrogate use in university students, the current dissertation explored the use of social surrogates by shy children in middle childhood, and determined if having social surrogates are associated with adjustment outcomes. In addition, shy children's reasons for wanting a friend to accompany them to social situations were examined.

Overview of Present Research

Two studies were conducted in the current dissertation. Study 1 focused on the *general* use of social surrogates. The primary goal was to evaluate the preliminary psychometric properties of a new measure of children's social surrogate use. In particular, the factor structure and the internal consistency of the *Child Social Surrogate Questionnaire* were explored. As well, the preliminary construct validity was examined through the links between general social surrogate use and conceptually related outcome variables.

Study 2 focused more specifically on social surrogate use among shy children and their *best friends*. To begin with, the effects of having reciprocal friendships on shy children's adjustment were examined. Further, the implications of having higher quality friendships were investigated. Finally, the specific impact of social surrogate use in shy children's best friendships was evaluated.

As a side note, a self-report assessment of shyness was included in the present study. In middle/late childhood, children are probably most qualified to report on their own level of shyness. For example, it has been previously found that a third of children

who identified themselves as being shy were not found to be shy using parent and teacher measures (Spooner et al., 2005). Moreover, self-reported shy children who were not considered shy by teachers and parents had lower perceived academic competence and global self-worth than children who were considered to be shy by their parents and teachers (Spooner et al., 2005). Possibly because shyness is not as salient as externalizing behaviours and/or involves internal aspects that are not visible, teacher and parent reports of shyness have not been found to be highly correlated with self-reports of shyness in middle childhood (Spooner et al., 2005). In the following sections the specific hypotheses regarding each study are provided.

Hypotheses: Study 1. In Study 1, the properties of a new child social surrogate questionnaire were examined. In this study, children's general use of social surrogates was assessed. It was predicted that the *Child Social Surrogate Questionnaire* items would load on a single factor within each situation (children were asked to read scenarios regarding particular stressful situations). Children's reasons for recruiting a friend in each situation were also assessed. It was predicted that shy children would report needing the surrogate more to help decrease their anxiety levels and to engage in the interactions on their part. Overall, boys were also hypothesized to report using social surrogates less than girls (Bradshaw, 1998).

Although social surrogate use could be either beneficial or harmful to children's adjustment (depending on *how* they are used by children), based on past research with adults demonstrating a decrease in anxiety (Bradshaw, 1998) and an increase in social contacts (Souma et al., 2008) social surrogate use was predicted to be a *protective factor*, especially for shy children. It was anticipated that social surrogacy use would be

negatively related to anxiety, victimization, and loneliness, and *positively* related to perceived social and school competence. Interaction effects between the social surrogate factors and shyness were also examined. It was predicted that shy children who use social surrogates would have less adjustment difficulties than shy children who do not use social surrogates.

Hypotheses: Study 2. In Study 2, shy children's reciprocated friendships and the friendship quality of these relationships were investigated. In addition, the validity of the social surrogate measure was further assessed. As opposed to Study 1, which assessed children's use of their friends as social surrogates in general, Study 2 examined whether shy children are likely to use their reciprocal "best friend" as a social surrogate.

It was hypothesized that, overall, children with friends would be better adjusted than children without reciprocated friendships. It was also expected that shy children who have a reciprocated friendship would have less internalizing problems (e.g., depressive symptoms, etc.) and less difficulties at school (e.g., less victimization, etc.). It was further anticipated that reciprocal friendships would benefit shy boys and shy girls.

Friendship quality was also expected to play a *moderating* role in shy children's adjustment outcomes. To begin with, children with higher perceived friendship quality were expected to be better adjusted overall. However, shyness was also expected to interact with friendship quality in the prediction of outcomes. More specifically, shy children with high quality friendships (higher on positive qualities) were expected to show better adjustment. As in previous studies (e.g., Brendgen, Markiewicz, Doyle, & Bukowski, 2001; Rubin et al., 2004; Rubin, Wojslawowicz et al., 2006), girls were predicted to perceive their friendships as being of higher quality than boys.

In Study 2, it was also expected that shy children would use their “best friends” as social surrogates. Again, social surrogate use was hypothesized to be a protective factor for shy children. Shy children who used their best friends as social surrogates were expected to have less internalizing problems (e.g., depression, etc.), to be less victimized, and to have less teacher-reported behavioural problems. As in Study 1, girls were predicted to use social surrogates more than boys (Bradshaw, 1998).

Study 1 – Method

Study 1- Factor Structure and Preliminary Analyses of the Child Social Surrogate Questionnaire

The purpose of Study 1 was to examine the factor structure of the newly developed measure of child surrogacy, the *Child Social Surrogate Questionnaire*. The factor structure, internal consistency, and some construct validity of the new measure was examined. An important question that was explored in the first study was whether high shy children are more likely to use social surrogates than less shy children.

Participants

Participants in Study 1 were $N = 328$ children in grades 3 to 5. Children were attending four public elementary schools in a small city in Alberta, Canada. The consent rate was 55%. Only children who had written parental consent participated in the study. There were 110 children in grade 3, 116 children in grade 4, and 97 children in grade 5 (five children did not indicate their grade on their questionnaires). Children ranged in age from 8 to 12 years ($M_{age} = 9.45$, $SD = .93$). The gender distribution was fairly even, with slightly more girls participating ($n = 175$) than boys ($n = 153$). The majority of the parents of the children in Study 1 were Caucasian with other ethnicities also represented

(mothers: 87.1% Caucasian, 6.6% Asian, 1.6% Black, .9% Hispanic, .3% Aboriginal, 3.4% Other; fathers: 88% Caucasian, 5.4% Asian, 1.9% Black, .3% Hispanic, .6% Aboriginal, 3.8% Other). Approximately 3% of mothers and 3% of fathers had not completed high school, 23% of mothers and 24% of fathers only had a high school diploma, 35% of mothers and 31 % of fathers graduated from community college, 29% of mothers and 27 % of fathers had a university degree, and 9% of mothers and 12% of fathers had a graduate degree. There were 93% of parents who indicated that English was the primary language spoken at home. In order to maximize participation rate in the first study, only children were asked to participate in the data collection. No data were collected from parents (aside from granting consent, and providing background information) or teachers.

Measures

Parents. An information letter and consent form was sent home with children to be completed by their parents (see Appendix A). There was also a brief demographics form included (see Appendix B). Finally, parents were also asked questions regarding their child's friendship status (see Appendix C). One problem with reciprocal classroom friendships is that the best friends of some children are not in the same class so the child may appear friendless when in fact they have a very good friendship outside of their class. Thus, parents were asked to indicate if their child has a best friendship and if so, whether that friend is in their class, in their school (maybe in another grade) or from an extracurricular activity outside of school or a friend from the neighborhood.

Child Social Surrogate Questionnaire. The purpose of Study 1 was to pilot items for the newly developed *Child Social Surrogate Questionnaire* (CSSQ). The CSSQ was

designed broadly based on the items Bradshaw (1998) used to test social surrogate use in adults. Bradshaw (1998) performed two studies that each used different assessments of social surrogate use. In the first study Bradshaw asked his participants to answer 8 general questions on three aspects of social surrogate use. Three questions concerned whether the participants recruited social surrogates (e.g., “When going places where I don’t know anyone, I don’t like to go unless I get a friend to go with me”); three questions asked whether the participants used social surrogates when they are in a social situation (e.g., “When I go out places with my friends, I usually let them do most of the talking to others); and finally two questions assessed whether or not having social surrogates increased their own social performance (e.g., “I feel more comfortable in a group of strangers when a friend is with me”). However, when discussing the results of his first study Bradshaw claimed that the items were too general and needed to be more situational specific. For instance, a person who is sociable may also want to recruit others to go with them to events. In the second investigation Bradshaw gave participants 14 specific situations and asked them to indicate whether they would recruit someone to go with them and whether their attendance at the event was conditional on finding someone to go with them (e.g., “Going to a professor’s office and asking him to explain an assignment you do not understand”). Participants were also asked to read 10 behavioural descriptions and indicate whether or not they would try to get a friend to perform the behaviour for them (e.g., “You are shopping at a store and you can’t find an item on the shelf. You go to find a clerk and ask them to help you find the item”).

In the current dissertation a social surrogate scale was developed for children (see Appendix D). Even though the items on the *Child Social Surrogate Questionnaire* were

only loosely based on Bradshaw's (1998) items, the items were strongly based on his theoretical description of social surrogates. There were two main reasons for the reconstruction of the items on the CSSQ: 1) the majority of the items on Bradshaw's measures were not appropriate for children in the current project's age group; and 2) a factor analysis was not performed on the items in his adult measures.

In Study 1 shy children's general use of their friends as social surrogates was examined. There were four situations with 11 questions for each situation tested in the pilot investigation. Factor analyses were performed on the items (results from these analyses are described in the following results section). The items were rated on a 5-point Likert scale: 1) never true about me, 2) hardly ever true about me, 3) sometimes true about me, 4) most of the time true about me, 5) always true about me. There was also one item for each situation that asked the participants to indicate their main reason for wanting a friend to come with them. This question had the following possible responses: 1) It is more fun to have someone to go with me, 2) I would be less scared if I had a friend with me, 3) If my friend came they would talk so I wouldn't need to talk.

Shyness. In Study 1 shyness was measured using a self-report questionnaire. Children were asked to complete the self-report *Children's Shyness Questionnaire* (CSQ; Crozier, 1995; see Appendix E). The CSQ is a 26-item self-report assessment of children's shyness (Crozier, 1995). However, only 25-items were used in the current dissertation, due to one item being previously found to lower the internal consistency of the scale ("I enjoy singing aloud when others can hear me"; Crozier, 1995; Findlay & Coplan, 2008; Spooner, Evans, & Santos, 2005). Examples of items on the scale include: "I am easily embarrassed", "I am usually shy in a group of people", and "I feel nervous

when I am with important people.” Children answered each question by indicating a ‘Yes’, ‘No’, or ‘Sometimes’ response (Spooner et al., 2005). Similar to other studies, children received a total shyness score by averaging their scores across the items (Crozier, 1995; Findlay & Coplan, 2008; Spooner et al., 2005). Higher scores on the scale indicated higher child shyness.

The CSQ was created by asking 8- to 11-year old children to write down everything they could think of when they heard “being shy.” From children’s answers to this question, the most common responses were characterized as either fearful or self-conscious shyness by independent coders. In addition, items to the questionnaire were devised to include a number of situations in which shyness could occur, children’s responses to the “being shy” question also aided in this aspect of the scale development (Crozier, 1995).

The CSQ had been previously used on children from ages 9 to 12 (Crozier, 1995; Findlay & Coplan, 2008; Spooner et al., 2005). In the current sample there were some children who were 8 years- old. Although the CSQ had not been used previously on children as young as 8-years-old, there were children who were 8-years-old in the sample that helped create the questionnaire, suggesting that 8-year-olds know the characteristics of shy behaviours. From the current dissertation it can be determined that the scale is appropriate for use on children as young as 8-years-old.

Previous studies have reported good internal consistency for the CSQ (Crozier, 1995; Findlay & Coplan, 2008; Spooner et al., 2005). For the original 26-item scale, Crozier (1995) reported a Cronbach’s alpha of .82 for the CSQ in both studies 2 and 3. With one item deleted (the above mentioned item), Spooner et al. (2005) reported a

Cronbach's alpha of .88 for the scale. In a one year longitudinal study in which the CSQ was used at two time periods, Findlay and Coplan (2008) reported a Cronbach's alpha of .77 at the first assessment and a Cronbach's alpha of .80 one year later (also using the 25-item assessment). In Study 1 of the present dissertation the CSQ had a Cronbach's alpha of .86. Crozier (1995) reported the CSQ as having face validity because the items were similar to previously developed assessments of shyness, including the Cheek and Buss scale. In addition, using the self-report CSQ, shyness has been found to be related to lower self-esteem using two measures of self-esteem, adding to the concurrent validity of the CSQ (Crozier, 1995).

Social anxiety. The revised version of the *Social Anxiety Scale for Children* (SASC-R; La Greca & Stone, 1993) was also administered to the participants in Study 1 (see Appendix F). The SASC-R contains 22 items, 18 items concerning social anxiety and 4 filler items (La Greca & Stone, 1993; Ginsburg, La Greca, & Silverman, 1998). Factor analysis and confirmatory factor analysis on the SASC-R have demonstrated that the scale consists of 3 subscales: Fear of Negative Evaluation from Peers (FNE, 8 items), Social Avoidance and Distress-Specific to New Peers or Situations (SAD-New; 6 items), and Generalized Social Avoidance and Distress (SAD-General; 4 items) (Ginsburg et al., 1998; La Greca & Stone, 1993). The FNE subscale contains items pertaining to children's worries about peers' negative perceptions of them (e.g., "I'm afraid that other kids will not like me"). The SAD-New consists of questions related to social avoidance or distress felt in new situations or when around unfamiliar peers ("I get nervous when I talk to kids I don't know very well"). The SAD-General is a different construct from the SAD-New because it contains items that reflect social avoidance or distress in more

general situations, other than when the situations or the peers are unfamiliar (e.g., “I feel shy even with kids I know very well”). For the SASC-R children are asked to indicate how true each statement is for them. The items on the SASC-R are rated on the following 5-point Likert scale: 1) not at all, 2) hardly ever, 3) sometimes, 4) most of the time, and 5) all the time. Higher scores indicate more socially anxious feelings. To reduce the number of analyses, a total social anxiety score was created (by taking the average score of the items) as opposed to calculating the scores for the individual subscales.

The SASC-R has been shown to be appropriate for use with children who are in the age range of the participants in the current dissertation (Ginsburg et al., 1998; La Greca, Dandes, Wick, Shaw, & Stone, 1988; La Greca & Stone, 1993). The measure has been found to have satisfactory internal consistency (Coplan et al., 2006; Ginsburg et al., 1998; La Greca & Stone, 1993), for Study 1 in the present investigation the Cronbach’s alpha for the total anxiety scale was .92.

The SASC-R has also been found to have good validity. For instance, using the SASC-R Ginsburg et al. (1998) found that children who had a clinical diagnosis containing a social anxiety disorder could be discriminated from children who had a diagnosis that did not include a social anxiety component. Specifically, children who were socially anxious had higher scores on the total score of the SASC-R and on all 3 of the measure’s subscales than the children who were not socially anxious. Further, girls have been found to score higher on each of the subscales than boys (Ginsburg et al., 1998; La Greca & Stone, 1993). In addition, children who score high on the FNE, SAD-New, and SAD-General have also been found to perceive themselves as being less socially accepted and as having lower global self-worth than children who score lower on

the subscales (Ginsburg et al., 1998; La Greca & Stone, 1993). Moreover, neglected and rejected children have been found to be more socially anxious on the SASC-R than children with average sociometric status (La Greca & Stone, 1993).

Victimization. Victimization was assessed by the 4-item self-report victimization scale developed by Ladd and Kochenderfer-Ladd (Ladd & Kochenderfer, 1996; Ladd & Kochenderfer-Ladd, 2002). The 3 practice items on Ladd and Kochenderfer-Ladd's self-report measure of victimization were also included (see Appendix G). Ladd and Kochenderfer-Ladd (2002) performed a confirmatory factor analysis on the 4 items across five grades (kindergarten to grade 4). The authors found that each of the 4 items was among the same overall construct for each of the grades.

The 4 items on the self-report assessment ask children to indicate whether anyone in their class a) picks on them at school, b) says mean things to them, c) says bad things about them to other kids, and whether anyone d) hits or kicks them. For each of these 4-items on the scale, the children circle "never", "sometimes", or "a lot" (Ladd & Kochenderfer-Ladd, 2002). The self-report victimization items were averaged to create a total self-report victimization score.

The scale has been used with children in kindergarten (Kochenderfer & Ladd, 1996, 1997; Ladd, Kochenderfer, & Coleman, 1997) and up to grades 4 and 5 (Bollmer et al., 2005; Buhs, 2005; Buhs, Ladd, & Herald, 2006; Ladd & Kochenderfer-Ladd, 2002). Children's responses on the questionnaire have been found to be relatively stable (Buhs et al., 2006; Ladd & Kochenderfer-Ladd, 2002), higher stability has been reported for successive grade levels and for children in higher grades (middle childhood; Ladd & Kochenderfer-Ladd, 2002). The self-report victimization scale has been found to have

satisfactory internal consistency (Buhs et al., 2006; Kochenderfer & Ladd, 1996, 1997; Ladd & Kochenderfer-Ladd, 2002; Ladd et al., 1997), for instance, in their longitudinal study from kindergarten to grade 5 Ladd and Kochenderfer-Ladd (2002, study 1) reported alpha coefficients ranging from .72 (for the kindergarten assessment) to .87 (for the grade 2 assessment). The Chronbach's alpha for the self-report victimization scale in Study 1 of the current project was .75.

The self-report victimization assessment has been found to have good construct validity (Ladd & Kochenderfer-Ladd, 2002). Ladd and Kochenderfer-Ladd (2002) found that children who scored high on the victimization measure were more likely to report being lonely, were more rejected by their classmates, and were more likely to be rated by teachers as having social difficulties.

Loneliness and social dissatisfaction. Children's loneliness and levels of social dissatisfaction at school were measured using Asher and Wheeler's (1985) adapted version of Asher, Hymel, and Renshaw's (1984) *Loneliness and Social Dissatisfaction Questionnaire* (LSDQ, see Appendix H). Asher and Wheeler (1985) modified the items on Asher et al.'s (1984) measure to pertain specifically to loneliness and social dissatisfaction in the school setting. By focusing on the school setting, Asher and Wheeler's (1985) adapted version taps at children's feelings while they are at school.

The LSDQ is a frequently used measure of children's feeling of loneliness (e.g., Boivin et al., 1995; Fordham & Stevenson-Hinde, 1999; Ladd & Burgess, 1999; Nangle et al., 2003; Parker & Asher, 1993; Rubin et al., 1993). The LSDQ contains 16 items that measure loneliness and social dissatisfaction at school and 8 filler items that ask children how much they enjoy engaging in a number of activities. The items on the LSDQ tap

children's perceptions of their loneliness (e.g., "I'm lonely at school"), their perceptions of how socially competent they are (e.g., "I'm good at working with other children in my class"), and their perceptions of how socially accepted they are by their peers (e.g., "I am well liked by the kids in my class"). The children were asked to indicate how true each item was for them on the following 1 to 5 Likert scale: 1) not true at all, 2) hardly ever true, 3) true sometimes, 4) true most of the time, 5) always true (Asher et al., 1984). Before completing the actual items on the LSDQ the participating children were trained on how to answer the items on the measure with some practice items (e.g., "I like toast", "I like to watch movies"). Asher et al. (1984) also gave children in their study some practice items before having them complete the actual measure.

Asher et al. (1984) and Asher and Wheeler (1985) demonstrated that the items load on one principal factor. Following procedures outlined by Asher et al. (1984), children's loneliness and social dissatisfaction scores were calculated by adding their responses for each of the 16 items on the loneliness and social dissatisfaction measure. Children's average responses to the items on the scale were calculated. Higher scores indicated more feelings of loneliness and social dissatisfaction.

The scale has been shown to have high internal consistency, both the original and adapted versions of the LSDQ were found to have Cronbach's alphas of .90 (Asher et al., 1984; Asher & Wheeler, 1985), comparable Cronbach's alphas have been found in subsequent studies (e.g., Nangle et al., 2003; Parker & Asher, 1993). In Study 1 of the current dissertation the LSDQ had a Cronbach's alpha of .88. In addition, children have been shown to have fairly stable responses on the questionnaire across assessments (Hymel & Franke, 1985). Further, as would be expected, studies have found that children

with few or no friends are lonelier than children with a lot of friends when loneliness is examined with the LSDQ (e.g., Asher et al., 1984). In addition, consistent with the literature on low-status children, rejected children have been found to report being significantly more lonely than higher-status children, also using the LSDQ as the assessment of loneliness (Asher & Wheeler, 1985). The LSDQ has been extensively used with children from grades three to six, which includes the age range of the participants in the current dissertation (e.g., Asher & Wheeler, 1985; Nangle et al., 2003; Parker & Asher, 1993).

Self-Concept. Children were also asked to complete the Peer Relations and General School subscales on the *Self-Description Questionnaire-I* (Marsh, 1992, see Appendix I). The *Self-Description Questionnaire-I* is based on the Marsh/Shavelson model of self-concept (Kaminski, Shafer, Neumann, & Ramos, 2005; Marsh, 1988, 1990; Marsh & Shavelson, 1985). The *Self-Description Questionnaire-I* examines seven aspects of self-concept, three of which are academic (i.e., Reading, Math, and General School) and four of which are non-academic (i.e., Peer Relations, Parent Relations, Physical Abilities, and Physical Appearance). However, only the Peer Relations and the General School subscales were used in the present dissertation. The Peer Relations subscale consists of 9-items that ask children to indicate their perceptions of how easy it is for them to make friends and their level of popularity with their peers (e.g., Other kids want me to be their friend). The General School subscale has 10 items that ask children to indicate their perceptions of their abilities in all subjects at school (e.g., "I get good marks in all school subjects"). The items are rated on a 1 to 5 scale: 1) false, 2) mostly false, 3)

sometimes false/sometimes true, 4) mostly true, 5) true. The scores for each of the items on the subscales were added and then averaged to create a subscale score.

The *Self-Description Questionnaire-I* was designed for use with children ages 8 to 12, so the scale was appropriate for use in the current investigation. The factors of the *Self-Description Questionnaire-I* have been shown to be stable across age and the factors have been found to emerge for both genders (Marsh, 1988 as cited in Marsh & Holmes, 1990; Marsh & Hocevar, 1985). Both the Peer Relations and the General School subscales have been shown to have adequate internal consistencies (Kaminski et al., 2005; Marsh, 1988 as cited in Kaminski et al., 2005; Marsh, 1990, 1992), for instance Kaminski et al. (2005) reported alphas of .86 and .87 for the Peer Relations and the General School subscales, respectively. In Study 1 of the current dissertation the Cronbach's alpha for the Peer Relations subscale was .90 and for the General School subscale the Cronbach's alpha was .88. The overall measure has also been shown to have good validity (Marsh, 1988 as cited in Marsh & Holmes, 1990; Marsh, 1992; Marsh & Holmes, 1990).

Procedure

Upon receiving approval from the Carleton University Ethics Committee for Psychological Research, a school board in a small city in Alberta was contacted for potential recruitment of children as participants. Once the school board approved the project principals were contacted, told the purpose of the project, and asked if parental consent forms could be sent home with children in grades 3 to 5 at their schools. Of course, teachers were also asked to approve the project, since they sent the parental

consent forms home with the children in their classes, collected the forms upon their return, and data collection occurred during class time.

Data collection for Study 1 occurred in the spring of 2007. All of the questionnaires in Study 1 were administered on one occasion. The questionnaires were group administered in either the children's classroom or in another room at the school allotted for the study. The children were informed that the study was on children's friendships as well as children's thoughts and feelings at school. Children were told that they were free to withdraw from the study at any time and that they should omit any questions they felt uncomfortable answering. Moreover, children were told there were no right or wrong answers to the questions but that they should answer the questions as honestly as possible. Further, they were asked to concentrate on their own questionnaires and not to look at the questionnaires of their classmates.

Each child received a questionnaire booklet with the questionnaires described above. The questionnaires were in the following order in the booklet: self-report victimization questionnaire, social surrogate questionnaire, shyness questionnaire, social anxiety questionnaire, loneliness and social dissatisfaction questionnaire, and the peer relations and general school subscales of the *Self-Description Questionnaire-I*. All of the items were read aloud to ensure that reading ability was not a concern for some children. After the questionnaires were collected, children were thanked for their time and cooperation. They were also given a pamphlet that contained my contact information as well as a number for the Kids Help Phone. In addition, as a token of my gratitude, all children (the participating as well as the nonparticipating children) were given a pencil.

Study 1 – Results

Preliminary Analyses

Data screening. Missing data were replaced with the subject's mean for that particular subscale (with the proviso that no more than 10 % of items for that scale were missing). A few outlying cases (cases more than three standard deviations from the mean) were found. However in a large sample some outliers are expected (Stevens, 2002). The Cook's distance for the outliers was examined and the results were run with the outliers deleted, both techniques demonstrated that these outliers were not highly influential to the results of the study. Thus, these cases remained in the data. The assumptions of linearity, normality, and homoscedasticity were also checked. Examination of the residuals scatterplots (standardized predicted scores vs. standardized residual scores) indicated no major violations of any of these assumptions. Thus, no transformations were performed on the data. The tolerance values also indicated no problems with multicollinearity in the analyses (Tabachnick & Fidell, 2007).

Initial Analyses of the Child Social Surrogate Questionnaire (CSSQ)

Factor analyses. A preliminary screening of the data set indicated that it met the necessary assumptions to proceed with factor analyses, including $n > 300$, correlations greater than .30, linearity, sphericity, and sampling adequacy (Pallant, 2001; Tabachnick & Fidell, 2007). Skewness (positive) was found for some of the CSSQ items demonstrating a problem with normality. However, Tabachnick and Fidell (2007) suggest that meeting the normality assumption is not strictly necessary for meaningful results. Thus, transformations were not performed for any of the items on the CSSQ.

A separate principal components analysis (PCA, with Varimax rotation) was performed on the 10 items of the CSSQ for each of the four scenarios (omitting the “Why would you want this friend to go with you?” question for each of the scenarios). Using Kaiser’s criterion both the Teacher and the Cafeteria (new kids) scenarios had two components with eigenvalues greater than one whereas both the Party (familiar peers) and Skit (performance) scenarios had three components with eigenvalues higher than one. However, upon inspection of the scree plots (see Figure 1), each of the scenarios revealed a clear break after the first component. Thus, it was determined that a one-factor solution was most appropriate for each of the scenarios. The factor analyses were then rerun with a forced one-factor solution. All of the items loaded highly on this factor within scenarios except for question five [“I wouldn’t usually ask a friend to come with me (to the event)”], which did not load above .30 on any of the four scenarios. Therefore the PCAs were performed again with question five from each of the scenarios omitted from the analyses. All of the remaining items loaded highly.

The final one-factor solution within each scenario consisted of the same nine items, which were aggregated to create the subscale scores of *social surrogate-teacher* (accounting for 46.01% of the variance), *social surrogate-familiar peers* (accounting for 48.80% of the variance), *social surrogate-new peers* (accounting for 51.01% of the variance) and *social surrogate-performance* (accounting for 54.10% of the variance). The eigenvalues for the social surrogate-teacher, social surrogate-familiar peers, social surrogate-new peers, and social surrogate-performance were 4.14, 4.39, 4.59, and 4.87, respectively. Factor loadings for each of the items on the CSSQ are presented in Table 1.

Figure 1

Scree Plots from the PCA of Social Surrogacy Items

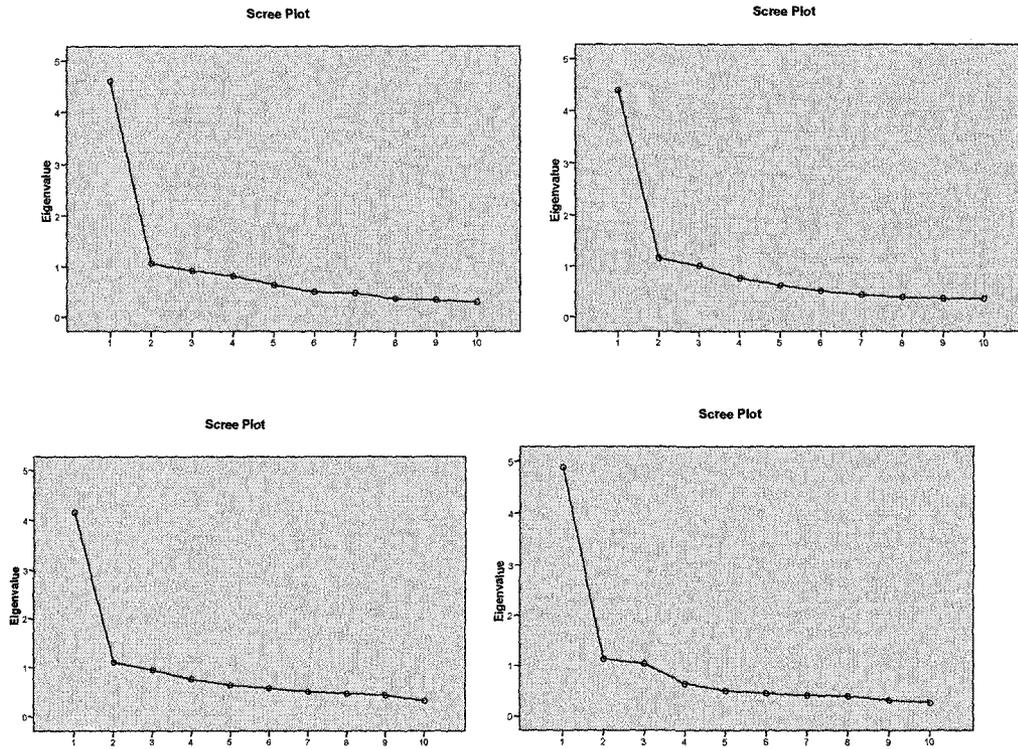


Table 1
Factor Loadings for CSSQ Items (Study 1)

| Items (some abbreviated) | Social Surrogate-Teacher |
|---|---------------------------------|
| <i>Teacher Scenario</i> | |
| 1. I would try to get a friend to go with me. | .67 |
| 2. Hard to ask the teacher a question without friend. | .62 |
| 3. If I couldn't get a friend to go with me I would not ask the teacher the question. | .54 |
| 4. I would need a friend with me. | .66 |
| 6. Friend would do most of the talking. | .62 |
| 7. I would stay close to my friend. | .73 |
| 8. I would talk more with my friend. | .73 |
| 9. I would be less nervous with friend. | .73 |
| 10. I would be more outgoing with my friend. | .78 |
| Items (some abbreviated) | Social Surrogate-Familiar Peers |
| <i>Party Scenario</i> | |
| 1. I would try to get a friend to go with me. | .68 |
| 2. Hard for me to go to the party without friend. | .74 |
| 3. If I couldn't get a friend to go with me I would not go to the party. | .66 |
| 4. I would need a friend with me. | .75 |
| 6. Friend would do most of the talking. | .60 |
| 7. I would stay close to my friend. | .68 |
| 8. I would talk more with my friend. | .69 |
| 9. I would be less nervous with friend. | .73 |
| 10. I would be more outgoing with my friend. | .75 |

Table 1 (continued)

| Items (some abbreviated) | Social Surrogate-New Peers |
|--|----------------------------|
| <i>Cafeteria Scenario</i> | |
| 1. I would try to get a friend to go with me. | .67 |
| 2. Hard to eat lunch with new kids without friend. | .70 |
| 3. If I couldn't get a friend to go with me I would not eat lunch with the new kids. | .75 |
| 4. I would need a friend with me. | .77 |
| 6. Friend would do most of the talking. | .51 |
| 7. I would stay close to my friend. | .70 |
| 8. I would talk more with my friend. | .72 |
| 9. I would be less nervous with friend. | .80 |
| 10. I would be more outgoing with my friend. | .77 |
| <i>Items (some abbreviated)</i> | |
| <i>Social Surrogate-Performance</i> | |
| <i>Skit Scenario</i> | |
| 1. I would try to get a friend to go with me. | .74 |
| 2. Hard for me to perform in the skit without friend. | .83 |
| 3. If I couldn't get a friend to go with me I would not perform in the skit . | .65 |
| 4. I would need a friend with me. | .78 |
| 6. Friend would do most of the talking. | .63 |
| 7. I would stay close to my friend. | .72 |
| 8. I would talk more with my friend. | .74 |
| 9. I would be less nervous with friend. | .77 |
| 10. I would be more outgoing with my friend. | .74 |

The factors also demonstrated good internal consistency, with the following Cronbach's alphas: .85 (social surrogate-teacher), .87 (social surrogate-familiar peers), .88 (social surrogate-new peers), and .89 (social surrogate-performance). Results from item analyses revealed that the Cronbach's alphas would either remain the same or decrease if any of the items were removed. The bivariate correlations among the factors of the CSSQ are presented in Table 2. Not surprisingly, the factors were significantly correlated with each other.

To determine whether there were gender and/or grade effects for the social surrogate factors, a mixed repeated measures analysis of variance was performed on the CSSQ scale scores with gender and grade serving as between subjects variables and scenario (teacher, familiar peers, new peers, performance) as a within subjects variable. For the multivariate effects there was a significant main effect for scenario [Wilks' λ = .61, $F(3, 314) = 66.27$, $p < .001$, partial $\eta^2 = .39$], a significant gender x scenario interaction [Wilks' λ = .96, $F(3, 314) = 3.99$, $p < .01$, partial $\eta^2 = .04$], and a significant grade x scenario interaction [Wilks' λ = .93, $F(6, 628) = 3.61$, $p < .01$, partial $\eta^2 = .03$]. The gender x grade x scenario interaction was not significant [Wilks' λ = .97, $F(6, 628) = 1.45$, $p = .19$, partial $\eta^2 = .01$]. Univariate results indicated a significant main effect for scenario [$F(3, 948) = 79.17$, $p < .001$, partial $\eta^2 = .20$] and a trend for the gender main effect [$F(1, 316) = 3.33$, $p = .07$, partial $\eta^2 = .01$], but no significant main effect for grade [$F(2, 316) = 1.38$, $p = .25$, partial $\eta^2 = .01$]. The gender x scenario interaction [$F(3, 948) = 3.82$, $p < .05$, partial $\eta^2 = .01$] and the grade x scenario interaction [$F(6, 948) = 3.76$, $p < .01$, partial $\eta^2 = .02$] were both significant. However, the gender x grade interaction ($F(2, 316) = 2.11$, $p = .12$, partial $\eta^2 = .01$) was not significant.

Table 2

Intercorrelations between all Study 1 Variables

| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|------------------------------------|-------|--------|--------|--------|--------|--------|--------|--------|---------|---------|
| 1. SS-Teacher | _____ | .44*** | .34*** | .31*** | .27*** | .11* | .00 | .29*** | .15** | .05 |
| 2. SS-Familiar Peers | | _____ | .39*** | .45*** | .24*** | .19** | .10 | .31*** | -.01 | -.05 |
| 3. SS-New Peers | | | _____ | .53*** | .40*** | .08 | .07 | .35*** | -.08 | .01 |
| 4. SS-Performance | | | | _____ | .41*** | .04 | .10 | .31*** | -.03 | -.18** |
| 5. Shyness | | | | | _____ | .24*** | .39** | .72*** | -.39*** | -.24*** |
| 6. Victimization | | | | | | _____ | .38*** | .34*** | -.15** | -.18** |
| 7. Loneliness | | | | | | | _____ | .42*** | -.65*** | -.38*** |
| 8. Anxiety | | | | | | | | _____ | -.34*** | -.19** |
| 9. Peer Self- Concept | | | | | | | | | _____ | .37*** |
| 10. General School Self-Concept | | | | | | | | | | _____ |

* $p < .05$, ** $p < .01$, *** $p < .001$

In terms of gender, girls ($M = 2.61, SD = .71$) reported the use of social surrogates more than boys ($M = 2.46, SD = .70$). For the scenario main effect, results from follow-up analyses using Tukey's Honestly Significant Difference (HSD) test revealed that children were significantly more likely to report using a friend as a social surrogate for the cafeteria (new peers) scenario ($M = 3.00, SD = .99$) than in the other three scenarios. Children were also more likely to use a friend as a social surrogate in the skit (performance) scenario ($M = 2.64, SD = 1.01$) than in the teacher ($M = 2.26, SD = .87$) and party scenarios ($M = 2.25, SD = .90$). There was no significant difference between children's use of social surrogates in the teacher and party scenarios.

For the gender x scenario interaction, follow-up tests revealed that in the Cafeteria scenario, girls were significantly more likely to use social surrogates than boys. There were no significant gender differences for any of the other scenarios (see Table 3). For the grade x scenario interaction (see Table 4), follow-up tests revealed that children in grade 5 were more likely to use social surrogates when asking their teacher a question than children in grade 4. For the Party scenario, children in grade 5 were more likely to want a surrogate to go with them than children in grade 3. All other differences were not statistically significant.

Validity of the CSSQ. Correlations between all study variables are displayed in Table 2. The descriptive statistics of all study variables are displayed in Table 5. Among the results, social surrogacy use in all four scenarios was significantly and positively related to both shyness and social anxiety. Social surrogate-teacher and social surrogate-familiar peers were both significantly related to peer victimization. Social surrogate-teacher was also found to be significantly related to peer self-concept whereas social

Table 3
Means (Standard Deviations) for Gender x Scenario Interaction

| Scenario | Gender | |
|-----------|-----------------------------|----------------------------|
| | Boys | Girls |
| Teacher | 2.14 (.82) | 2.38 (.90) |
| Party | 2.21 (.88) | 2.30 (.92) |
| Cafeteria | 2.85 _a (1.02) | 3.15 _b (.95) |
| Skit | 2.68 (.97) | 2.63 (1.05) |

- all responses measured on a 5-point scale
- means (in the same row) with different subscripts differ significantly at the .05 level on Tukey's HSD test

Table 4
Means (Standard Deviations) for Grade x Scenario Interaction

| Scenario | Grade | | |
|-----------|----------------------------|-----------------------------|----------------------------|
| | 3 | 4 | 5 |
| Teacher | 2.20 _a (.92) | 2.12 _{ab} (.76) | 2.51 _c (.89) |
| Party | 2.05 _a (.91) | 2.26 _{ab} (.86) | 2.49 _b (.90) |
| Cafeteria | 3.01 (1.09) | 3.04 (.97) | 3.00 (.89) |
| Skit | 2.73 (1.15) | 2.57 (.89) | 2.68 (.98) |

- all responses measured on a 5-point scale
- means (in the same row) with different subscripts differ significantly at the .05 level on Tukey's HSD test

Table 5

Descriptive Statistics of all Variables in Study 1

| Variable | N | Mean | Standard Deviation | Range |
|-----------------------------|-----|------|--------------------|-------------|
| SS-Teacher | 328 | 2.26 | .87 | 1.00 – 4.56 |
| SS-Familiar Peers | 327 | 2.25 | .90 | 1.00 – 4.78 |
| SS-New Peers | 328 | 3.00 | .99 | 1.00 – 5.00 |
| SS-Performance | 327 | 2.65 | 1.01 | 1.00 – 5.00 |
| Shyness | 328 | 1.76 | .36 | 1.08 – 2.84 |
| Victimization | 328 | 1.57 | .48 | 1.00 – 3.00 |
| Loneliness | 327 | 2.04 | .71 | 1.00 – 4.72 |
| Anxiety | 323 | 2.46 | .75 | 1.00 – 5.00 |
| Peer Self-Concept | 325 | 3.62 | .90 | 1.00 – 5.00 |
| General School Self-Concept | 323 | 3.74 | .80 | 1.50 – 5.00 |

SS-Teacher: Social Surrogate-Teacher Scenario

SS-Familiar Peers: Social Surrogate-Party Scenario

SS-New Peers: Social Surrogate-Cafeteria Scenario

SS-Performance: Social Surrogate-Skit Scenario

surrogate-performance was significantly related to general school self-concept. Among the other significant results, the dependent variables were inter-correlated in expected directions. For example shyness was positively related to peer victimization, loneliness, anxiety, and negatively related to peer self-concept and general school self-concept. Further, peer victimization was found to be positively related to loneliness, anxiety, and negatively related to both peer and general school self-concepts.

Relation between gender, shyness, and social surrogate use. To assess whether the correlations between shyness and social surrogate use differed for boys versus girls, correlations between the social surrogate factors and shyness were computed separately by gender. Results (comparing by gender using Fisher's z statistic) indicated no significant differences between the correlation values for boys versus girls.

Reported reasons for social surrogate use. To determine whether children who chose different reasons for wanting a friend to attend an activity with them differed in their levels of shyness a one-way analysis of variance was performed with reasons as the independent variable and shyness as the dependent variable. Different reasons included *enjoyment* (i.e., "it is more fun to have someone to go with me"), *emotional support* (i.e., "I would be less scared if I had a friend with me") and *social support* (i.e., "If my friend came they would talk for me"). This analysis was conducted for each of the four scenarios. A significant effect was found for all four scenarios [teacher: $F(2, 299) = 6.62$, $p < .01$, partial $\eta^2 = .04$; familiar peers: $F(2, 306) = 6.40$, $p < .01$, partial $\eta^2 = .04$; new peers: $F(2, 307) = 13.58$, $p < .001$, partial $\eta^2 = .08$; performance: $F(2, 310) = 12.83$, $p < .001$, partial $\eta^2 = .08$]. For each of the scenarios (see Table 6), the results revealed that

Table 6

Means (Standard Deviations) for the Reasons for Using a Social Surrogate on Shyness

| Social Surrogate Factor | <i>Reasons for Using a Social Surrogate</i> | | |
|-------------------------|---|----------------------------|-----------------------------|
| | Enjoyment | Emotional Support | Social Support |
| Teacher | 1.70 _a (.34) | 1.84 _b (.36) | 1.86 _b (.46) |
| Party | 1.73 _a (.34) | 1.93 _b (.40) | 1.82 _{ab} (.42) |
| Cafeteria | 1.66 _a (.33) | 1.87 _b (.37) | 1.70 _{ac} (.31) |
| Skit | 1.68 _a (.32) | 1.89 _b (.38) | 1.83 _b (.37) |

- all responses measured on a 3-point scale
- means (in the same row) with different subscripts differ significantly at the .05 level on Tukey's HSD test

children who reported using social surrogates for emotional support were significantly more shy than those children who used them for enjoyment. Further, for the teacher and skit scenarios children who reported using social surrogates for social support were significantly more shy than children who used them for enjoyment. For the cafeteria scenario only, children who reported using surrogates for emotional support were significantly more shy than children who used them for social support. No other differences between the responses were detected.

Hierarchical Regression Analyses

Following procedures outlined by Aiken and West (1991), a series of hierarchical regression analyses was performed to explore the main effects and interactions between social surrogate use, shyness, and gender in the prediction of adjustment outcome variables. In particular, it was of interest to explore the moderating role of social surrogate use in the relation between shyness and the child outcome variables. For these analyses, a “total” surrogacy factor was created. This was done to reduce the number of regression equations computed and because of the high correlations among the social surrogate factors (see Table 2). In further support of this decision, results from a principal components analysis of the four individual factors revealed a one-factor solution (with factor loadings ranging from .68 to .78).

Regressions were first computed with grade as a covariate, however, results indicated that the inclusion of this variable did not alter the results. As such, results are presented without the covariate. For each of the analyses, shyness, gender, and social surrogate use were entered in Step 1 of the model. In Step 2 the two-way interaction terms were entered (gender x shyness, gender x social surrogate use, and shyness x social

surrogate use). In Step 3 the three-way interaction term (gender x shyness x social surrogate use) was entered. These procedures were repeated for each of the outcome variables. The results of these analyses are presented in Table 7.

Peer victimization. Shyness was significantly and positively related to peer victimization. There were no significant main effects for gender or for social surrogate use. However, there was a significant shyness x social surrogate interaction in the prediction of peer victimization. To explore this interaction, a simple slopes analysis was performed (Aiken & West, 1991). As displayed in Figure 2, increasing values of social surrogacy use corresponded with an increasing positive association between shyness and peer victimization. Thus, the use of social surrogates appeared to exacerbate the relation between shyness and being victimized by peers.

Loneliness. For loneliness, there was a significant main effect for shyness and a trend for the social surrogate main effect ($p = .07$). Shyness was positively related to loneliness whereas social surrogate use was negatively related to loneliness. The main effect for gender and all of the interactions were not significant.

Anxiety. There was a significant main effect for both shyness and social surrogate use in the prediction of child anxiety. Both shyness and social surrogate use were positively related to child anxiety. However, the gender main effect and the interaction effects were not significant.

Peer self-concept. For peer self-concept, there was a significant shyness main effect and a significant main effect for social surrogate use. Shyness was negatively related to peer self-concept but social surrogate use was positively related to peer self-concept. There was also a significant gender x social surrogate use interaction. Follow-up

Table 7
Hierarchical Regression Analyses predicting Child Outcomes from Gender, Shyness, and Social Surrogate Use

| Outcome Variable | Predictor Variables | R ² | F | ΔR ² | ΔF | β | sr |
|---|--------------------------------|----------------|----------|-----------------|------|--------|------|
| Peer Victimization | Step 1 | .06 | 6.84*** | | | | |
| | Gender | | | | | -.01 | -.01 |
| | Shyness | | | | | .23*** | .20 |
| | Social Surrogate Use | | | | | .03 | .03 |
| | Step 2 | .08 | 4.49*** | .02 | 2.08 | | |
| | Gender x Shyness | | | | | -.01 | -.01 |
| | Gender x Social Surrogate Use | | | | | -.08 | -.07 |
| | Shyness x Social Surrogate Use | | | | | .13* | .13 |
| | Step 3 | .08 | 4.00*** | .00 | 1.04 | | |
| Gender x Shyness x Social Surrogate Use | | | | | .06 | .06 | |
| Loneliness | Step 1 | .17 | 21.59*** | | | | |
| | Gender | | | | | -.07 | -.07 |
| | Shyness | | | | | .45*** | .40 |
| | Social Surrogate Use | | | | | -.11+ | -.09 |
| | Step 2 | .18 | 11.26*** | .01 | .93 | | |
| | Gender x Shyness | | | | | -.01 | -.01 |
| | Gender x Social Surrogate Use | | | | | .07 | .06 |
| | Shyness x Social Surrogate Use | | | | | .05 | .05 |
| | Step 3 | .18 | 9.78*** | .00 | .94 | | |
| Gender x Shyness x Social Surrogate Use | | | | | .06 | .05 | |

+ $p < .08$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table 7 (continued)

Hierarchical Regression Analyses predicting Child School Outcomes from Gender, Shyness, and Social Surrogate Use

| Outcome Variable | Predictor Variables | R ² | F | ΔR ² | ΔF | β | sr |
|-------------------|---|----------------|-----------|-----------------|-------|---------|------|
| Anxiety | Step 1 | .54 | 122.02*** | | | | |
| | Gender | | | | | .05 | .05 |
| | Shyness | | | | | .66*** | .58 |
| | Social Surrogate Use | | | | | .12** | .11 |
| | Step 2 | .54 | 61.47*** | .00 | .96 | | |
| | Gender x Shyness | | | | | .01 | .01 |
| | Gender x Social Surrogate Use | | | | | -.05 | -.04 |
| | Shyness x Social Surrogate Use | | | | | -.04 | -.04 |
| | Step 3 | .54 | 52.53*** | .00 | .03 | | |
| | Gender x Shyness x Social Surrogate Use | | | | | .01 | .01 |
| Peer Self-Concept | Step 1 | .19 | 25.61*** | | | | |
| | Gender | | | | | .01 | .01 |
| | Shyness | | | | | -.49*** | -.43 |
| | Social Surrogate Use | | | | | .22*** | .20 |
| | Step 2 | .21 | 13.55*** | .01 | 1.39 | | |
| | Gender x Shyness | | | | | .04 | .04 |
| | Gender x Social Surrogate Use | | | | | -.12* | -.10 |
| | Shyness x Social Surrogate Use | | | | | .02 | .02 |
| | Step 3 | .21 | 12.18*** | .01 | 3.36+ | | |
| | Gender x Shyness x Social Surrogate Use | | | | | -.10+ | -.09 |

+ $p < .08$, * $p < .05$, ** $p < .01$, *** $p < .001$

Table 7 (continued)

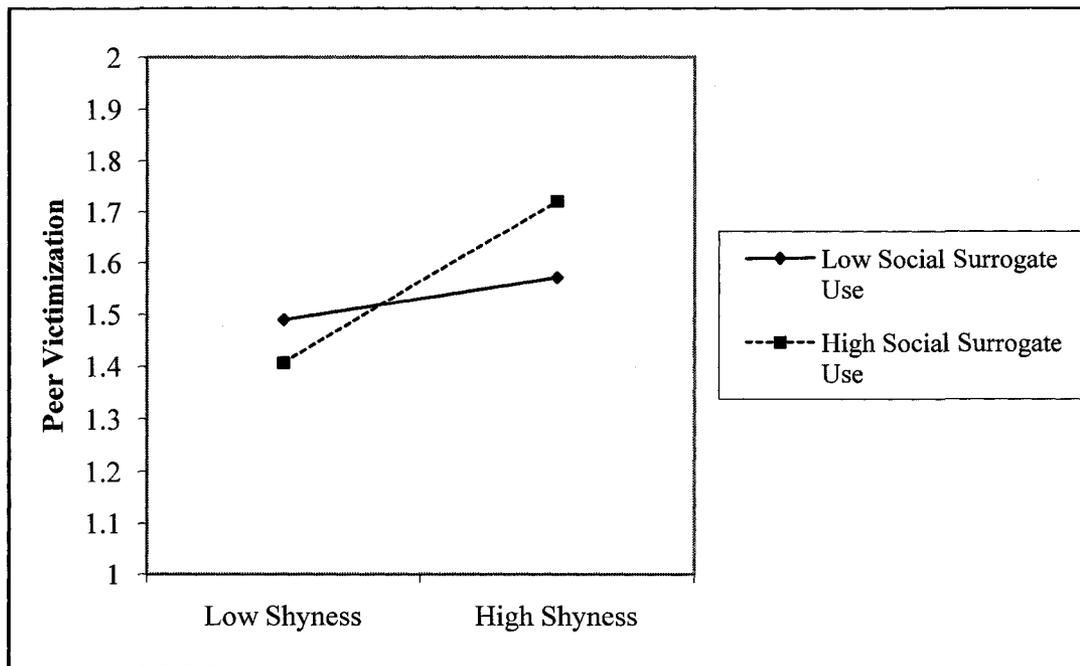
Hierarchical Regression Analyses predicting Child School Outcomes from Gender, Shyness, and Social Surrogate Use

| Outcome Variable | Predictor Variables | R ² | F | ΔR ² | ΔF | β | sr |
|--------------------------------|--|----------------|---------|-----------------|-------|---------|------|
| General School Self-Concept | Step 1 | .09 | 9.88*** | | | | |
| | Gender | | | | | .16** | .15 |
| | Shyness | | | | | -.30*** | -.27 |
| | Social Surrogate Use | | | | | .06 | .05 |
| | Step 2 | .11 | 6.46*** | .02 | 2.87* | | |
| | Gender x Shyness | | | | | .09 | .08 |
| | Gender x Social Surrogate Use | | | | | -.16** | -.14 |
| | Shyness x Social Surrogate Use | | | | | .08 | .08 |
| | Step 3 | .11 | 5.53*** | .00 | .05 | | |
| | Gender x Shyness x Social Surrogate Use | | | | | -.01 | -.01 |

+ $p < .08$, * $p < .05$, ** $p < .01$, *** $p < .001$

Figure 2

Interaction between Shyness and Social Surrogate Use to predict Peer Victimization



analyses indicated that social surrogate use was more strongly positively associated with peer self-concept for boys ($\beta = .09, p = .25$) than for girls ($\beta = -.06, p = .44$). The three-way interaction term (gender x shyness x social surrogacy) approached statistical significance ($p = .07$). The gender main effect, the gender x shyness interaction, and the shyness x social surrogate use interaction were not significant.

General school self-concept. There was a significant main effect for gender and a significant main effect for shyness for general school self-concept, however the social surrogate use main effect was nonsignificant. Girls tended to report having higher general school self-concepts than boys. Moreover, shyness was found to be negatively related to general school self-concept. In addition, there was a significant gender x social surrogate use interaction for general school self-concept. Follow-up analyses revealed that social surrogate use was negatively related to school self-concept for girls ($\beta = -.14, p = .07$) but not for boys ($\beta = .01, p = .93$). The shyness x social surrogate use interaction, the gender x shyness interaction, and the three-way interaction were all not significant.

Study 1 - Discussion

The purpose of Study 1 was to examine the factor structure, internal consistency, and preliminary construct validity of the newly developed *Child Social Surrogate Questionnaire* (CSSQ). Social surrogacy had previously only been examined in adulthood (Bradshaw, 1998; Souma et al., 2008). It is important to note that in Study 1, children's social surrogate use in "general" was examined, meaning that children were asked whether they would want a friend (regardless of their friendship status) to go with them to the events in the scenarios. The use of social surrogacy with a specific reciprocal best friend was explored in Study 2.

Overall, the CSSQ was found to have an adequate factor structure and good psychometric properties. Moreover, CSSQ scale scores were strongly related to theoretically relevant variables, including shyness and anxiety. This supports the conceptually derived prediction that children who more frequently used social surrogates might lack social confidence. However, social surrogacy also displayed a rather complex pattern of associations with other indices of social-emotional functioning. For example, social surrogate use was positively related to peer self-concept (particularly for boys) but was negatively related to school self-concept for girls. As well, surrogacy was negatively related to loneliness but positively related to victimization. Moreover, the relation between shyness and peer victimization *increased* with higher social surrogate use. Taken together, the results of Study 1 suggest that the effects of social surrogate use in general (i.e., a perceived friendship) may have both beneficial and negative implications and may also vary as a function of child characteristics (i.e., shyness). These results are discussed in more detail in the following sections.

Psychometric Properties of the CSSQ

Results from the PCAs suggested that a one-factor solution for each of the scenarios was most appropriate. The single item that did not load above .30 in each scenario was “reverse worded” and may have caused some confusion for children. Accordingly, this item was dropped from future use (i.e., not included in the CSSQ in Study 2). Within each scenario (teacher, familiar peers, new peers, performance), the social surrogacy scale demonstrated high factor loadings and strong internal consistency.

As predicted, girls reported greater overall social surrogate use than boys. Girls have been found to have more reciprocal friendships (e.g., Parker & Asher, 1993) and

tend to be more “cliquey” (Eder, 1985; Hutchinson & Rapee, 2007) and exclusive in their friendships (e.g., Berndt & Hoyle, 1985). Thus, girls may be more likely to want their friends with them during social situations. During this age group, girls view their friends as extremely important to them (Besag, 2006; Lansford et al., 2006), suggesting that they may wish to maintain close contact with their friends whenever they can.

Interestingly, children reported wanting a social surrogate most in the cafeteria (new peers) scenario (this was especially true for girls). Perhaps children view meeting new children for the first time as being a highly stressful situation (Stansbury & Harris, 2000). A friend in this situation could potentially help relieve the stress of trying to make a good first impression. They may be less nervous and may feel less likely to say something awkward if they have a friend with them. They could both share in the communication with the new children. In addition, if the new children stopped talking to them and started talking amongst themselves, they would always have their friend to socialize with as they both ate their lunches.

Meeting new children may also be more stressful for girls than for boys because girls worry about their social reputation more than boys (Underwood, 2003). Girls may be wary of accepting an invitation from these children due to the fact that the reason for the invitation was not clear in the scenario. Perhaps these children are more interested in making fun of them during lunch (so they would be a source of entertainment during their meal) than wanting to develop a friendship with them. Or perhaps girls may be more worried about upsetting their friends they usually eat lunch with at recess. Thus, bringing their friends with them may prevent damaging their current friendships.

Children were also more likely to report using a social surrogate in the skit (performance) scenarios than in the teacher and party scenarios. Acting in a play (i.e., performing in front of an audience of peers) is potentially quite stressful. Children may be comforted in knowing that their friend will be on the stage with them. The teacher scenario and the party scenarios may be the least stressful scenarios because both situations involve familiar individuals. Children spend a large part of their day with their teachers and if a child is invited to a party there will likely be other children he or she knows also at the party.

There was also grade effects found for the teacher and party scenarios. For the teacher scenario grade 5 children reported they were more likely to use social surrogates than children in grade 4 and for the party scenario children in grade 5 were more likely to report using social surrogates than children in grade 3. These findings were most likely due to children becoming more social and more concerned about their reputations with age (Gifford-Smith & Brownell, 2003; Rogosch & Newcomb, 1989). Perhaps as they get older children who are seen as friendless are more likely to become targets of peer victimization (Moultapa, Valente, Gallaher, Rohrbach, & Unger, 2004).

Preliminary Validity of the CSSQ

As expected, social surrogacy use was significantly correlated with both shyness and anxiety. Bradshaw (1998) also reported significant relations between shyness in adulthood and aspects of social surrogate usage. It is conceptually plausible that shy/anxious children would be more likely to use social surrogates. Such children may bring a friend with them to social events to provide emotional support by helping to alleviate some of the intense physiological symptoms they may feel at social activities

(Reznick, Kagan, Snidman, Gersten, Baak, & Rosenberg, 1986). Moreover, shy/anxious children may use their friend for social support in social situations. By bringing a friend with them to a social activity, shy children know they will have at least one person at the event they can socialize with, so they can avoid “hovering” around other children (Coplan et al., 1994). The friend may also be able to protect the shy child from enduring social awkwardness when they are unable to communicate effectively to their peers or adults. Social surrogates may also help shy children increase the size of their social networks by helping them to interact with new people (Souma et al., 2008). Bringing a social surrogate with them to social events may be a type of coping strategy for shy/anxious children.

Adding support to this theory, children who reported using social surrogates specifically to provide emotional support (i.e., “help me feel less scared”) and social support (i.e., “talk for me”) were more shy than children who described using social surrogates to increase enjoyment (i.e., “more fun”). Bradshaw (1998) reported very similar results with adults. Adults who reported recruiting a person to attend a situation with them to “help make the situation less stressful” or “because the other person was superior at the task” were higher in shyness than those individuals who believed that the situation would be “more fun with another person.” These findings suggest that shy individuals may recruit friends to attend social events with them as a sort of coping mechanism for dealing with the social pressures and intense anxiety they may feel in social situations.

Interestingly, although social surrogacy use was associated with greater shyness and social anxiety, it was also *negatively* related to loneliness (a trend). Thus, despite

feeling more shy and anxious, children who more frequently use a social surrogate appear to be less lonely. This may be because social surrogacy use provides increased opportunities to enter more social situations and to develop more friendships. These situations may result in increased anxiety but also provide social contacts that may also reduce feelings of loneliness.

In terms of the relations between self-concept and social surrogacy use – there appears to be a moderating effect of gender. For boys, social surrogacy use was related to more positive self-perceptions (in the realm of peers). For girls, on the other hand, social surrogate use was negatively related to both peer and school self-concept. This intriguing contrast suggests social surrogate use may be more beneficial for the self-concepts of boys' than for girls'. It may be that having a social surrogate is more negative for girls' self-images. Perhaps since girls are perceived as being more socially skilled (Walker, 2004), girls who need to have another person with them at social events or activities may feel less confident in their abilities to interact with their peers. They may compare their social skills with those of their social surrogate's and may realize their surrogate is much better at interacting with others. Girls may also worry about how their peers view this type of behaviour. Girls may be more aware of their social deficits than boys and as a result may have an overall lower self-image. In contrast, boys may not be overly concerned about their social relationships. Those boys who have a "buddy" to go with them to social venues may just enjoy having the company; they may not worry about what other boys will think of them. Since boys engage in more rough-and-tumble interactions with each other (e.g., Martin & Forbes, 2001; Pellegrini, 1993), rather than self-disclosure (as girls have been found to do with their friends) (e.g., Parker & Asher,

1993; Rose, 2002), just by being with another person boys may not be viewed as being different from their male peers. Interestingly, M. E. Schmidt and Bagwell (2007) suggested that boys may not be able to recognize when they are in need of help, if boys actually acknowledged that they needed help from friends they may feel worse about themselves, so they deny needing the support. Thus, perhaps boys who use social surrogates do not acknowledge that they “need” the social surrogate friend to go with them. This avoidant thinking may have protected boys from suffering similarly low self-images as the girls who reported using social surrogates.

Alternatively, it is also possible that girls who have lower self-perceptions are more likely to seek out social surrogates. Perhaps girls with lower self-images are prone to want their friends with them in social situations because they do not feel they are capable of handling them on their own. Similarly, perhaps boys with higher peer self-concepts are more likely to feel comfortable asking a friend to attend a social event with them. It is conceivable that boys who have a lot of friends may believe it would not be good for their reputation to show up at a social activity alone. Popular boys may also fear the potential risks associated with being viewed as withdrawn (Rubin & Coplan, 2004).

Social surrogacy, shyness, and adjustment. One goal of this study was to explore if social surrogate use might moderate the relations between shyness and outcomes variables. Overall, shyness was positively related to peer victimization, loneliness, anxiety, and negatively related to peer self-concept and general school self-concept. These findings support past research which have found that shyness is related to internalizing difficulties (e.g., Crozier, 1995; Fordham & Stevenson-Hinde, 1999; Rubin, Chen, et al., 1995) as well as harassment by ones peers (e.g., Boivin et al., 1995).

Surprisingly, there were no interactions between shyness and gender in the prediction of any of the outcome variables. Previous literature has found that shyness is more strongly associated with negative outcomes for boys than girls (e.g., Morison & Masten, 1991; Rubin et al., 1993). This issue will be addressed in more detail in the general discussion.

In terms of moderation effects, one significant interaction was found between shyness and social surrogate use in the prediction of child self-reported victimization by peers. The pattern of the results indicated that shyness became increasingly associated with victimization at higher levels of self-reported surrogacy use. One explanation of this finding is that use of social surrogates increases the risk of shy children experiencing victimization at school. For example, it is possible that the child's surrogate is the person who is bullying the child. Indeed, Crick and Nelson (2002) reported that children often face victimization by their friends. It is also possible that bullies perceive children who cling to their friends as easy targets. However, an alternative explanation of this finding is that shy children who are more victimized are more likely to use social surrogates. Shy children who are victimized may tend to surround themselves with their friends at social events to decrease the likelihood that they will be picked on, perhaps having a friend with them makes them less likely to stand out.

Social surrogacy did not moderate the relation between shyness and any other child outcome. Thus, contrary to expectations, from Study 1 the findings do not suggest that social surrogacy is a protective factor for shy children. Conversely, shy children who use social surrogates may be at an increased risk for peer victimization (or may be more victimized to begin with). Future research employing longitudinal methods will be

required in order to help sort out the likely complex underlying causal mechanisms linking shyness, social surrogacy, and outcomes.

Study 2 – The Effects of Friends, Friendship Quality, and Potential Use of a Best Friend as a Social Surrogate on Shy Children’s Adjustment

In Study 1 children were asked to report whether they would use social surrogates in general, thus they were asked to imagine whether they would like any friend to go with them to an event. One goal of Study 1 was to determine whether children would report using social surrogates in general. However, in Study 2 children were asked whether they would specifically bring their reciprocal best friend to each of the events. Thus, one of the main purposes of Study 2 was to determine whether children would use a reciprocal best friend as a social surrogate. As well, additional outcome variables were added to broaden the scope of the study. Moreover, alternate sources of assessment were included (i.e., teachers) to avoid the continued sole reliance on self-reports.

Another aim of Study 2 was to explore the effects of having a reciprocal best friend on children’s adjustment, particularly in regard to shy children’s adjustment. Past research has demonstrated the positive effects of having a best friend (e.g., Bagwell et al., 1998), in Study 2 the positive effects of friendships were expected to replicate. In addition, friendship quality was examined in Study 2. High friendship quality with a reciprocal best friend was expected to be beneficial for all children but especially for socially withdrawn children who may be at risk for a host of adjustment problems. Friendship quality was also expected to moderate the relation between social surrogacy and child adjustment problems.

Study 2 – Method

Participants

Approval was first sought from the Carleton University Ethics Committee for Psychological Research to collect data for Study 2. Once approved by the Ethics Committee then school boards and school principals were contacted for possible recruitment opportunities. The children were recruited from two school boards, one school board in a large city in Alberta and one school board in a small rural area in New Brunswick. There were 2 participating schools in Alberta and 6 participating schools in New Brunswick. The data for Study 2 was collected from November 2007 to January 2008. There were 618 participants in grades 3 to 5 in the current study; however there were a number of child absences in either one or both data collection sessions (there were 578 children who completed friendship assessments). The children were 7 to 11 years old ($M_{age} = 9.12, SD = .89$). There was a 75% consent rate in Study 2. The gender distribution in the study was fairly even with 316 boys and 302 girls participating in Study 2. There were 143 children in grade 3, 260 children in grade 4, and 215 children in grade 5. Approximately 2% of mothers and 6% of fathers had not completed high school, 30% of mothers and 40% of fathers only had a high school diploma, 39% of mothers and 35% of fathers graduated from community college, 23% of mothers and 11% of fathers had a university degree, and 4% of mothers and 5% of fathers had a graduate degree. The majority of the mothers and fathers of the participants in Study 2 were Caucasian, with a variety of other ethnicities also represented (mothers: 91.4% Caucasian, 2.8% Asian, 2.6% Aboriginal, .2% Black, 3% Other; fathers: 92.2% Caucasian, 1.5% Asian, 4.4% Aboriginal, 0% Black, 1.9% Other). For 94% of the participants English was their first

language. In Study 2 data was collected on the participating children from both child self-reports and teacher assessments. There were 40 classrooms involved in this project, 34 teachers sent back their questionnaires (31 female teachers and 3 male teachers).

Measures

Parents. The parental information letter, parental consent form, and demographic questionnaire in Study 2 were very similar to the forms given to parents in Study 1 (see Appendix J). Again, parents were asked if their child had a best friend and if that best friend was from their school, from the neighborhood or from an extracurricular activity, however in Study 2 the question regarding where their child knew their friend from was broken up into four separate specific questions. In Study 1 a lot of parents chose more than one location on this question thus separate questions were used for each location in Study 2.

Child Social Surrogate Questionnaire. The questions on the CSSQ remained the same; except for the deletion of one question (from each of the scenarios) due to the question having low factor loadings in Study 1 (e.g., I wouldn't usually ask a friend to come with me to ask the teacher a question.). In addition, in Study 2 the participant's reciprocal friend's name was inserted in each of the questions (see Appendix K). This was done to test whether shy children use their best friends as social surrogates. Children without reciprocal friendships were asked whether they would use a child they had listed as a friend as a surrogate, children who did not list any friends were provided with a same-sex classmate's name in each of the questions. Further, the following response was added to the reasons for wanting their friends to go with them question for each scenario: "I would not want (friend's name) to go with me". This response was added because a

number of the children in Study 1 were uncomfortable picking a reason because they perceived not needing a friend with them. The factor structure and psychometric properties of the CSSQ for Study 2 will be discussed in the results section.

Shyness. In Study 2 the self-report CSQ was again used to measure child shyness. The Cronbach's alpha for the scale in Study 2 was .83.

Friendship assessments. From a roster of the participating same-gender children's names in their grade, children were asked to write the names of up to three of their best friends from their grade at school¹ (see Appendix L). In particular, they were asked to indicate their "very best friend", "second best friend", and "third best friend". Children were informed that they did not need to fill in all of the blanks, that if they have fewer than three best friends they should only write the names of the children they considered to be their friends. Children were also told they could write none if they did not consider any of their grademates on the list of participants to be their friend (Keefe & Berndt, 1996). It was made explicit in the directions, both written and verbal, that the children should be as honest as possible. Keefe and Berndt (1996) reported that 91% of the children in their study named three children as their best friends, about 8% of the children listed two children as their best friends, and only about 1% claimed they only had one or did not have any friends. Similarly 1.5% of the children in Study 2 of the current project did not indicate a best friend in the blanks provided.

Children were considered reciprocal friends if they wrote each other's name on their list of friends. If a child had more than one reciprocal friendship, the highest ranked

¹ In Study 1 we tested whether same grade friendships would give us a reasonable estimate of children's "best" friendships. According to parent reports 71.1% of children who had a best friend were either in the same class or grade as their best friend at their school. Thus, the assessment of reciprocal best friendships from the same grade at their school were deemed appropriate for Study 2.

friendship was considered their primary reciprocated friendship and was used in subsequent assessments of and in the appropriate analyses on friendship. Previous studies have assessed friendships in middle childhood in a similar manner (e.g., Crick & Nelson, 2002; Grotzinger & Crick, 1996; Hodges et al., 1999; Parker & Asher, 1993; Rubin et al., 2004, 2006; Schneider, 1999; Wentzel & Caldwell, 1997). In Study 2 there were 364 children who had a reciprocal best friendship, 205 children who were without a reciprocal best friendship, and 9 children who did not report a friendship with at least one participating child from their grade (left the question blank). There were 40 children absent on the day the friendship assessment question was administered.

Friendship quality. Friendship quality has been assessed in previous studies by interviews (e.g., Bagwell et al., 1998; Ladd et al., 1996), observations (Brendgen et al., 2001; Dishion et al., 1995), and self-reports (e.g., Berndt & Perry, 1986; Bukowski, Hoza, & Boivin, 1994; Furman & Buhrmester, 1985; Jantzer et al., 2006; Parker & Asher, 1993; Wright, 1982). The current study used Parker and Asher's (1993) self-report *Friendship Quality Questionnaire* (FQQ; Parker & Asher, 1993, see Appendix M) because it is a widely used assessment of children's friendship quality in middle childhood (e.g., Fordham & Stevenson-Hinde, 1999; Franco & Levitt, 1998; Nangle et al., 2003; Rubin et al., 2004, 2006), plus the FQQ's conflict resolution subscale was of interest in the present dissertation. All friendships have conflicts but how fair and quickly they are resolved is also an important aspect of friendships (Parker & Asher, 1993). It has been found that self-report assessments of friendship quality are related to adolescents' actual behaviours towards their friends and their friends' actual behaviours towards them

when children are observed directly, which suggests that self-reports are an adequate way to assess friendship quality (Brendgen et al., 2001).

In the current study, the participants were asked to complete the 40-item FQQ on their highest reciprocated friendship. Those without a reciprocated friendship were asked questions on the quality of their highest ranked friendship. Those who did not indicate a friend answered the questions regarding their relationship with a randomly chosen participating same-sex child from their class. The FQQ consists of six subscales, these subscales have been labeled as validation and caring (e.g., 'Makes me feel good about my ideas'), conflict and betrayal (e.g., 'Sometimes says mean things about me to other kids'), companionship and recreation (e.g., 'Always pick each other as partners for things'), help and guidance (e.g., 'Help each other with school work a lot'), intimate exchange (e.g., 'Talk about the things that make us sad'), and conflict resolution (e.g., 'Make up easily when we have a fight'). The response choices for the items on the scale are 1) not at all true, 2) little true, 3) somewhat true, 4) pretty true, and 5) really true. To ensure that the children were thinking about their relationship with their mutual friend, instead of their friendships in general or an idealized friendship, the name of the child's reciprocal friend was inserted at the top of the page and included in each item of the questionnaire (Parker & Asher, 1993).

Parker and Asher (1993) reported that the Cronbach alphas for the subscales ranged from .73 to .90, suggesting good internal consistency of the subscales (similar alphas have been reported for the subscales in subsequent studies, e.g., Franco & Levitt, 1998) and that children can reliably report on the features of their friendship. Parker and Asher (1993) also found the subscales to be moderately to highly intercorrelated with

each other, all subscales were positively correlated except the conflict and betrayal subscale which was negatively correlated with the other subscales. Parker and Asher (1993) reported that the positive qualities subscales were related to higher friendship satisfaction whereas the conflict and betrayal subscale was associated with less satisfaction in the relationship, providing validity for the subscales of the FQQ. As in previous studies (e.g., Fordham & Stevenson-Hinde, 1999), the current study combined the positive subscales (validation and caring, help and guidance, companionship and recreation, intimate exchange, and conflict resolution) to form a positive qualities score for each child's perceptions of the friendship (Rubin, Wojslawowicz et al., 2006). The FQQ was originally assessed on children in grades three to five and has been subsequently used with children in this age range, thus good psychometric properties for the measure have been found for children in the age group of the participants in the present investigation (e.g., Fordham & Stevenson-Hinde, 1999; Parker & Asher, 1993). The Cronbach's alpha for the positive friendship quality scale in Study 2 was .97.

Outcome Measures

Social anxiety. Social anxiety was again assessed using the SASC-R. The Cronbach's alpha for the total anxiety score in Study 2 was .93.

Victimization. The self-report victimization items previously described in Study 1 again assessed victimization in Study 2. The Cronbach's alpha for the items in Study 2 was .75.

Childhood depression. Children were also asked to complete the *Children's Depression Inventory – Short Form* (CDI; Kovacs, 1980/1981, see Appendix N). The CDI – Short Form is a 10-item self-report assessment of depressive symptoms, including

sadness, pessimism, and irritability among other symptoms. Children are asked to choose the response amongst three potential responses that best describes him or her in the past 2 weeks (e.g., “I feel like crying every day”, “I feel like crying many days”, “I feel like crying once in a while”).

The CDI- Short Form was designed as a quick assessment of child depressive symptoms. The longer version of the CDI consists of 27 items, but both the short and long versions generally give comparable findings (Kovacs, 1992). The CDI was developed based on the 21-item Beck Depression Inventory for adults (Beck, 1967), because the symptoms for childhood depression seemed to be quite similar to the symptoms of depression in adulthood (Kovacs, 1980/1981, 1985). Some items were added to assess specific difficulties associated with depression in childhood and adolescence, for instance difficulties at school (Kovacs, 1980/1981).

The CDI is a well reportedly used measure of childhood depression for children ages 7 to 17-years-old (e.g., Barrett, Lock, & Farrell, 2005; Coplan et al., 2006; Dallaire et al., 2006; Emerson, Mollet, & Harrison, 2005; Nangle et al., 2003; Noll, Sandstrom, Cillessen, & Eisenhower, 2003; Trickett, Susman, & Putnam, 2006). Studies have reported adequate internal consistency for the measure (e.g., Charman & Pervova, 2001; Kovacs, 1980/1981, 1985; Ollendick & Yule, 1990; Saylor, Spirito, & Finch, 1984; Smucker et al., 1986), for example, Dallaire et al. (2006) reported an internal consistency of .90 for the CDI for their study. Split-half reliability and test-retest reliability have also been demonstrated (Charman & Pervova, 2001; Finch, Saylor, Edwards, & McIntosh, 1987; Kovacs, 1985; Smucker et al., 1986). The Cronbach’s alpha for the CDI in Study 2 of the current dissertation (using the short form) was .84.

The CDI has also been found to adequately differentiate children who are clinically depressed from those who are not from a clinical sample (Carey, Faulstich, Gresham, Ruggiero, & Enyart, 1987). Timbremont, Braet, and Dreesen (2004) claimed that the CDI is capable of differentiating children who have a depressive disorder from those who have anxiety or disruptive behaviour disorders. Saylor et al. (1984) reported that children who were higher on depression according to the CDI were also found to have lower self-concepts. Positive social skills have been found to be negatively related with depression assessed using the CDI (Helsel & Matson, 1984). In addition, girls have been found to score higher on the CDI than boys (Ollendick & Yule, 1990; Worchel et al., 1990), and older children have been found to score higher than younger children (Helsel & Matson, 1984). Although no gender and age effects have also been reported for the CDI (Kovacs, 1985). The CDI has been found to be significantly related to a peer and teacher assessment of child depression (Worchel et al., 1990).

Loneliness and social dissatisfaction. Loneliness and social dissatisfaction was again assessed with the LSDQ. The Cronbach's alpha for the measure in Study 2 was .87.

Self-concept. The Peer Relations and General School subscales of the *Self-Description Questionnaire-I* were also administered to the participants in Study 2. However, to reduce the number of analyses the Peer Relations and General School subscales were aggregated to create a total self-concept score. The Cronbach's alpha for the self-concept score was .89.

Teacher-rated behavioural problems. Homeroom teachers were asked to complete the *Strengths and Difficulties Questionnaire* (SDQ) on each participating child (see Appendix O). The SDQ is a short behavioural assessment that has been shown to be

adequate for use by both teachers and parents of children 4 to 16-years-old (Bourdon, Goodman, Rae, Simpson, & Koretz, 2005; Goodman, 1997; Goodman, Ford, Simmons, Garward, & Meltzer, 2003; Goodman & Scott, 1999), there is also a self-report measure that can be used for older children and adolescents 11 to 16 years-old (Goodman et al., 2003; Goodman, Meltzer, & Bailey, 1998). Teachers were chosen to complete the assessment as opposed to parents because classroom behaviour problems were of interest in the current investigation.

The SDQ consists of 5 subscales with 5 items on each of the scales. The measure includes a Hyperactivity-Inattention scale (e.g., “Restless, overactive, cannot stay still for long”), an Emotional Symptoms scale (e.g., “Nervous or clingy in new situations, easily loses confidence”), a Conduct Problems scale (e.g., “Often fights with other children or bullies them”), a Peer Problems scale (e.g., “Rather solitary, tends to play alone”), and a Prosocial scale (e.g., “Considerate of other people’s feelings”; Goodman, 1997). There is also an Overall Total Difficulties score that is obtained by summing the scores on all of the subscales except the Prosocial Scale (Goodman, 1997). For each item, assessors are asked to indicate if the statement is “not true”, “somewhat true”, or “certainly true” of the child (Goodman, 1997). Only the items on the Emotional Symptoms and Peer Problems subscales were included in Study 2 because these subscales were the most conceptually relevant to this project.

The SDQ has been shown to be a reliable and valid measure of adjustment (Bourdon et al., 2005; Goodman, 1997, 2001; Goodman & Scott, 1999; Goodman et al., 2003). For teacher assessors, Goodman (2001) reported satisfactory Cronbach’s alphas for the 5 factors and total difficulties score, these ranged from .70 for the Peer Problems

factor to .88 for the Hyperactivity-Inattention factor. In Study 2 of the current dissertation, the Cronbach's alphas for the Emotional Symptoms subscale and the Peer Problems subscales were .78 and .73, respectively. Goodman (2001) supported the 5-factor solution of the SDQ, and reported high interrater agreement between parents, teachers, and self-reports (higher than previously found for other measures). Goodman (2001) also reported a mean teacher-report test-retest reliability of .73 after 4 to 6 months (ranging from .65 for the Emotional Symptoms factor to .82 for the Hyperactivity-Inattention factor). Goodman (2001) argued that the true test-retest reliability would most likely be higher due to the large time interval between assessments and that some of the changes in children's scores might actually be due to changes in their behaviours.

In addition, Goodman (1997) found that the SDQ was highly associated with the Rutter questionnaire and Goodman and Scott (1999) reported high correlations between the SDQ and the Child Behavior Checklist (CBCL). It has also been found that the items on the internalizing and externalizing scales of the SDQ contain little overlapping content (Goodman, 2001; Goodman & Scott, 1999), less overlap than the CBCL (Goodman & Scott, 1999). The SDQ also has the potential of being useful in detecting psychiatric disorders in childhood (Goodman, 2001).

Procedure

The data collection for Study 2 began in November 2007 so the children could become accustomed to the new school year and teachers could become acquainted with the children in their classes before being asked to rate children in their class on adjustment and behaviour indices. Only children with parental consent were allowed to participate in this study; children who did not participate completed work assigned by

their teacher while the questionnaires were being administered. Data collection was group administered in the children's homeroom classroom or in another convenient location at the school. There were two data collection sessions, each lasting approximately 30 minutes. The second session occurred within two weeks after the first session. During each session children received a booklet with their name and grade indicated on top of the page.

Children were told that the purpose of the study was to better understand children's thoughts and feelings about their friendships and about their experiences at school. Before each session, children were reminded that there were no right or wrong answers, and that any information they provided was confidential and thus would not be told to their teacher, friends, or parents. Further, children were told that it was acceptable to leave questions blank if there were some questions they did not want to answer and that they could withdraw from the study at any time. Children were also encouraged to concentrate on their own questionnaires and not to look at or discuss their responses with their fellow classmates. The items were read out loud to each class to avoid confusion and to aid children with reading difficulties.

During the first visit children completed the CSQ, friendship assessments, the victimization items, the LSDQ, and the Peer Relations and General School subscales on the *Self-Description Questionnaire-I*. During the second assessment children were given booklets containing the newly developed CSSQ, the FQQ, and the SASC-R. The questionnaires appeared in the booklets in the order they are presented above. On the first visit to the classroom the homeroom teachers were given the SDQ to complete on every participating child in their class. If the teachers did not have the questionnaires completed

by the time the second set of data was collected the teachers could mail the questionnaires in the provided stamped-addressed envelope when they had completed them.

After the second set of questionnaires were collected, the children were thanked for their participation and hard work. Children were also given a pencil or an eraser for their help with the project, a token was given to all children in the class including the nonparticipating children. A pamphlet was also distributed (see pamphlet Appendix P) indicating the primary researcher's contact information and the contact information for the Kid's Help Phone, just in case any of the children ever needed someone to talk to about their problems.

Study 2 – Results

Preliminary Analyses

Data screening. Missing data was again replaced by imputing participants' mean scores on the respective subscales. There were a few outliers found in the data, however these cases were not found to be influential (Stevens, 2002), so they remained in the data. Finally, no assumptions were found to be violated, thus none of the data underwent transformations.

Further Analyses of the Child Social Surrogate Questionnaire (CSSQ)

Factor analyses. Prior to conducting the factor analyses, the assumptions underlying the procedure were again checked. The data met the assumptions of $n > 300$, correlations greater than .30, linearity, sphericity, and sampling adequacy (Pallant, 2001; Tabachnick & Fidell, 2007). As in Study 1, some evidence of nonnormality was found

but was not corrected (Tabachnick & Fidell, 2007). Thus, factor analyses were deemed appropriate for the CSSQ in Study 2.

Exploratory principal components analyses were again conducted for the CSSQ data in Study 2. The conservative procedure was chosen (as opposed to confirmatory factor analyses) due to the changes made to the wording of the CSSQ in Study 2 (i.e., a specific friend's name was inserted for each of the questions). The factor analyses were conducted first including the entire sample and then again including only those children who had a reciprocal friend ($n=364$). The results revealed no differences in the findings, thus the principal components analyses reported below include all participants (however, it should be noted that the $n=9$ children who did not indicate *any* friends from the provided list of participating children were not included in any of the analyses). Some subsequent analyses focused solely on children with reciprocal friendships².

Separate principal components analyses were conducted for each of the four scenarios (as previously in Study 1). For each of the scenarios, Kaiser's criterion and the scree plot test indicated a clear one-factor solution. The factors consisted of the same nine items and they were aggregated and labeled the same as in Study 1: *social surrogate-teacher* (accounting for 50.49% of the variance), *social surrogate-familiar peers* (accounting for 50.90% of the variance), *social surrogate-new peers* (accounting for 54.72% of the variance) and *social surrogate-performance* (accounting for 58.67% of the variance). The eigenvalues for the social surrogate-teacher, social surrogate-familiar peers, social surrogate-new peers, and social surrogate-performance were 4.54, 4.58,

² Since the individual rather than the dyad was the focus of the friendship analyses in the present study, each friend in a reciprocal friendship was included in all of the analyses presented in the current study. However, similar to Parker and Asher (1993) the analyses were rerun on a randomly selected member of each friendship. The pattern of results was similar for the analyses performed on the entire sample compared to the analyses performed on one member of the friendship dyad.

4.93, and 5.28, respectively. Factor loadings for each of the items on the CSSQ are presented in Table 8. The factors again demonstrated high internal consistency, with Cronbach's alphas ranging from .88-.91. As expected, the factors were all significantly inter-correlated (see Table 9).

To examine the effects of child grade and gender on social surrogate use a 2 x 3 x 4 mixed repeated measures analysis was performed with child gender and grade (3, 4, 5) as the between-subjects factors and social surrogate scenario (teacher, familiar peer, new peer, skit) as the within-subjects factor. These analyses were computed for both the entire sample and again for just the children who had reciprocal friends. The results were again identical and thus findings for the entire sample are described. The multivariate tests revealed a significant effect for scenario [Wilks' $\lambda = .63$, $F(3, 526) = 101.90$, $p < .001$, partial $\eta^2 = .37$]. There was no significant multivariate effect for the gender x scenario interaction [Wilks' $\lambda = 1.00$, $F(3, 526) = .67$, $p = .57$, partial $\eta^2 = .00$], the grade x scenario interaction [Wilks' $\lambda = .99$, $F(6, 1052) = .92$, $p = .48$, partial $\eta^2 = .01$], or the gender x grade x scenario interaction [Wilks' $\lambda = 1.00$, $F(6, 1052) = .48$, $p = .82$, partial $\eta^2 = .00$]. A significant univariate main effect of social surrogate scenario was also found [$F(2.78, 1466.58) = 126.92$, $p < .001$, partial $\eta^2 = .19$]. Moreover, there was a significant main effect of gender [$F(1, 528) = 49.22$, $p < .001$, partial $\eta^2 = .09$] and a significant gender x grade interaction [$F(2, 528) = 3.26$, $p < .05$, partial $\eta^2 = .01$]. The grade main effect was not significant [$F(2, 528) = 1.74$, $p = .18$, partial $\eta^2 = .01$].

Table 8

Factor Loadings for CSSQ Items (Study 2)

| Items (some abbreviated) | Social Surrogate-Teacher |
|--|--------------------------|
| <i>Teacher Scenario</i> | |
| 5. I would try to get _____ to go with me. | .71 |
| 6. Hard to ask the teacher a question without _____. | .74 |
| 7. If I couldn't get _____ to go with me I would not ask the teacher the question. | .62 |
| 8. I would need _____ with me. | .76 |
| 11. _____ would do most of the talking. | .54 |
| 12. I would stay close to _____. | .77 |
| 13. I would talk more with _____. | .76 |
| 14. I would be less nervous with _____. | .77 |
| 15. I would be more outgoing with _____. | .69 |
| <i>Party Scenario</i> | |
| 5. I would try to get _____ to go with me. | .66 |
| 6. Hard for me to go to the party without _____. | .76 |
| 7. If I couldn't get _____ to go with me I would not go to the party. | .68 |
| 8. I would need _____ with me. | .77 |
| 5. _____ would do most of the talking. | .48 |
| 6. I would stay close to _____. | .76 |
| 11. I would talk more with _____. | .75 |
| 12. I would be less nervous with _____. | .76 |
| 13. I would be more outgoing with _____. | .76 |

Table 8 (continued)

| Items (some abbreviated) | Social Surrogate-New Peers |
|---|------------------------------|
| <i>Cafeteria Scenario</i> | |
| 5. I would try to get _____ to go with me. | .71 |
| 6. Hard to eat lunch with new kids without _____. | .78 |
| 7. If I couldn't get _____ to go with me I would not eat lunch with the new kids. | .72 |
| 8. I would need _____ with me. | .80 |
| 5. _____ would do most of the talking. | .48 |
| 11. I would stay close to _____. | .79 |
| 12. I would talk more with _____. | .78 |
| 13. I would be less nervous with _____. | .81 |
| 14. I would be more outgoing with _____. | .73 |
| <hr/> | |
| Items (some abbreviated) | Social Surrogate-Performance |
| <i>Skit Scenario</i> | |
| 5. I would try to get _____ to go with me. | .74 |
| 6. Hard for me to perform in the skit without _____. | .83 |
| 7. If I couldn't get _____ to go with me I would not perform in the skit . | .69 |
| 8. I would need _____ with me. | .78 |
| 5. _____ would do most of the talking. | .63 |
| 6. I would stay close to _____. | .78 |
| 11. I would talk more with _____. | .84 |
| 12. I would be less nervous with _____. | .82 |
| 13. I would be more outgoing with _____. | .78 |

Table 9

Intercorrelations between the Predictor Variables

| Variables | 1 | 2 | 3 | 4 | 5 | 6 |
|-----------------------|-------|--------|--------|--------|--------|--------|
| 1. SS-Teacher | _____ | .72*** | .65*** | .64*** | .23*** | .48*** |
| 2. SS-Familiar Peers | | _____ | .76*** | .76*** | .22*** | .54*** |
| 3. SS-New Peers | | | _____ | .77*** | .27*** | .56*** |
| 4. SS-Performance | | | | _____ | .27*** | .55*** |
| 5. Shyness | | | | | _____ | .02 |
| 6. Friendship Quality | | | | | | _____ |

* $p < .05$, ** $p < .01$, *** $p < .001$

SS-Teacher: Social Surrogate-Teacher Scenario

SS-Familiar Peers: Social Surrogate-Party Scenario

SS-New Peers: Social Surrogate-Cafeteria Scenario

SS-Performance: Social Surrogate-Skit Scenario

For the gender main effect, as in Study 1, girls ($M = 3.20$, $SD = .84$) reported using social surrogates (this time a particular “best friend”) more than boys ($M = 2.67$, $SD = .87$). Follow-up Tukey’s HSD tests for the social surrogate main effect indicated a significant difference between each of the four scenarios: social surrogate-teacher ($M = 2.61$, $SD = .96$), social surrogate-familiar peers ($M = 2.84$, $SD = .99$), social surrogate-new peers ($M = 3.25$, $SD = 1.05$), and social surrogate-performance ($M = 3.04$, $SD = 1.08$). Tukey’s HSD test was also employed to examine the significant gender x grade interaction, the analyses revealed that in grade 4 girls ($M = 3.29$, $SD = .76$) used their “best friends” as social surrogates more than boys ($M = 2.53$, $SD = .89$) (although the effect size here was quite small, with a partial η^2 of only .01). There were no gender differences in either grades 3 (girls: $M = 3.17$, $SD = .94$, boys: $M = 2.90$, $SD = .93$) or grade 5 (girls: $M = 3.14$, $SD = .88$, boys: $M = 2.56$, $SD = .79$).

As in Study 1, for the main analyses in Study 2 the “total” social surrogacy score was used. The four individual surrogacy factors were again highly inter-correlated (see Table 9), in addition a principal components analysis of the four factors once again revealed a one-factor solution (with factor loadings ranging from .84 to .92). Thus, the creation of a “total” social surrogacy score was deemed appropriate.

Validity of the CSSQ. Correlations between all study variables are displayed in Tables 9, 10, and 11 (descriptive statistics of all study variables are displayed in Table 12). To determine whether demographic variables should be controlled for in the analyses, initial correlations were run between child age and parental education and the study variables. Only a few significant differences arose and these were not large in magnitude. Thus, demographic variables were not controlled for in subsequent analyses.

Table 10

Intercorrelations between the Outcome Variables

| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|-----------------------------------|-------|--------|--------|---------|---------|-------|---------|
| 1. Loneliness | _____ | .57*** | .35*** | -.62*** | .39*** | .04 | .23*** |
| 2. Depressive Symptoms | | _____ | .25*** | -.52*** | .36*** | .09 | .26*** |
| 3. Anxiety | | | _____ | -.14** | .20*** | .03 | .02 |
| 4. Self-Concept | | | | _____ | -.26*** | -.06 | -.24*** |
| 5. Victimization | | | | | _____ | .05 | .16*** |
| 6. Teacher-Report Emotional Symp. | | | | | | _____ | .47*** |
| 7. Teacher-Report Peer Problems | | | | | | | _____ |

* $p < .05$, ** $p < .01$, *** $p < .001$

³ this value for only those with reciprocal friendships is significantly different from the value for the total sample

Table 11

Intercorrelations between the Predictor and Outcome Variables

| Variables | Social Surrogate Total | Shyness | Friendship Quality |
|--------------------------------------|---------------------------|---------|-----------------------|
| <u>Outcome Variables</u> | | | |
| 1. Loneliness | -.03 | .42*** | -.25*** |
| 2. Depressive Symptoms | -.01 | .30*** | -.20*** |
| 3. Anxiety | .49*** | .54*** | .22*** |
| 4. Self- Concept | .14** | -.28*** | .33*** |
| 5. Victimization | .92* | .22*** | -.01 |
| 6. Teacher-Report Emotional Symp. | -.08 | .02 | -.02 |
| 7. Teacher-Report Peer Problems | -.14** | .02 | -.15** |

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 12

Descriptive Statistics of all Variables in Study 2

| Variable | N | Mean | Standard Deviation | Range |
|-------------------------------------|-----|------|--------------------|-----------|
| Shyness | 517 | 1.72 | .34 | 1.00-2.84 |
| Social Surrogate | 534 | 2.91 | .91 | 1.00-5.00 |
| Friendship Quality | 537 | 3.73 | .92 | 1.00-5.00 |
| Loneliness | 569 | 1.93 | .71 | 1.00-5.00 |
| Depressive Symptoms | 567 | 1.24 | .34 | 1.00-3.00 |
| Anxiety | 528 | 2.42 | .81 | 1.00-5.00 |
| Self-Concept | 538 | 3.62 | .76 | 1.00-5.00 |
| Victimization | 571 | 1.48 | .48 | 1.00-3.00 |
| Teacher-Reported Emotional Symptoms | 518 | 1.32 | .41 | 1.00-2.80 |
| Teacher-Reported Peer Problems | 518 | 1.31 | .38 | 1.00-3.00 |

Across the entire sample, “best friend” social surrogate use was positively related to shyness, friendship quality, anxiety, self-concept, victimization, and negatively related to teacher-reported peer problems. Among the other findings, shyness was found to be positively related to self-reported victimization, loneliness, anxiety, depressive symptoms, and negatively related to self-concept. Moreover, child loneliness was positively related to self-reported victimization, anxiety, depressive symptoms, teacher-reported peer problems, and negatively related to self-concept.

The correlations in Tables 9, 10, and 11 were rerun with only those participants who had reciprocal friendships. Fisher’s z-statistic was used to compare the correlations in the two types of analyses. Only one Fisher’s z-statistic was found to be significantly different (the reciprocal correlation of this difference is displayed in the bottom diagonal in Table 10).

To assess whether the correlations between shyness and social surrogate use differed by gender, the correlations between these variables were run separately for boys and girls. Fisher’s z statistic was used to examine whether the correlations between the genders differed significantly for any of the social surrogate scenarios (or for the total social surrogate variable). The analyses were calculated for the entire sample and then rerun only including children who had a reciprocal friendship. None of the Fisher’s z statistics were found to be significant (for either the entire sample or the sample of children who had reciprocal friends).

Reported reasons for social surrogate use. As in Study 1, children were asked to choose a reason for why they would want a friend to go with them to each of the social events. The purpose of the following analyses was to examine whether children who

responded with specific answers differed on levels of shyness. One-way ANOVAs were conducted for the “Why would you want (friend’s name) to go with you?” for each of the scenarios. However, in Study 2 an “I would not want (friend’s name) to go with me” option was added.

In the one-way ANOVAS, the reasons for social surrogacy use (enjoyment, emotional support, social support) or the desire to “do it alone” served as the independent variable and shyness was the dependent variable. A significant effect of reasons was found for each of the scenarios [teacher: $F(3, 509) = 13.05, p < .001, \text{partial } \eta^2 = .07$; familiar peers: $F(3, 497) = 9.86, p < .001, \text{partial } \eta^2 = .06$; new peers: $F(3, 504) = 4.82, p < .01, \text{partial } \eta^2 = .03$; performance: $F(3, 493) = 4.78, p < .01, \text{partial } \eta^2 = .03$]. Tukey’s HSD test was performed to follow-up each of these significant effects (see Table 13). For the teacher, cafeteria (new peers), and skit (performance) scenarios children who reported using a social surrogate for emotional support or social support were significantly more shy than children who wanted a social surrogate for enjoyment or preferred to engage in the activity alone. For the party (familiar peers) scenario children who chose the emotional support option were more shy than children who chose the enjoyment option. There were no other significant differences found between the responses.

Comparing Children with and without Reciprocal Friendships

The goal of the next set of analyses was to explore differences between children with reciprocal versus without reciprocal friendships. To begin with, a chi-square analysis was performed to assess whether girls versus boys were more likely to have reciprocal best friendships. Results indicated that girls (66.9%) and boys (61.2%) did not

Table 13

Means (Standard Deviations) for the Reasons for Using a "Specific Friend" as a Social Surrogate on Shyness

| <i>Scenario</i> | <i>Reasons for Using a Social Surrogate</i> | | | |
|-----------------|---|-----------------------------|----------------------------|-----------------------------|
| | Do it Alone Support | Enjoyment | Emotional Support | Social |
| Teacher | 1.69 _a (.35) | 1.67 _a (.33) | 1.88 _b (.32) | 1.89 _b (.31) |
| Party | 1.86 _{bc} (.38) | 1.68 _{ab} (.32) | 1.93 _c (.36) | 1.81 _{bc} (.34) |
| Cafeteria | 1.69 _a (.40) | 1.68 _a (.32) | 1.80 _b (.33) | 1.83 _b (.34) |
| Skit | 1.67 _a (.40) | 1.69 _a (.33) | 1.81 _b (.34) | 1.88 _b (.26) |

- means with different subscripts (horizontally) differ significantly at the .05 level on Tukey's HSD test

differ significantly in terms of having a reciprocal best friendship, $\chi^2(1, N = 569) = 1.79$, $p = .18$. Results from a one-way ANOVA indicated that children with and without reciprocal friends also did not differ significantly in terms of shyness [$F(1, 567) = .76$, $p = .38$, partial $\eta^2 = .00$].

Multivariate analysis was used to compare children with and without reciprocal friends in terms of social surrogate use and friendship quality. Results indicated a significant effect for friendship reciprocity [Wilks' $\lambda = .94$, $F(2, 530) = 16.42$, $p < .001$, partial $\eta^2 = .06$]. Significant univariate effects were evident for social surrogate use [$F(1, 531) = 6.68$, $p < .05$, partial $\eta^2 = .01$], and friendship quality [$F(1, 531) = 31.94$, $p < .001$, partial $\eta^2 = .06$]. For social surrogate use, children who had reciprocal friendships were *more* likely to use their friend as a social surrogate ($M = 2.99$, $SD = .88$) than children who were without reciprocal friendships ($M = 2.78$, $SD = .94$). For friendship quality, children with reciprocal friendships reported higher positive features in their friendship ($M = 3.89$, $SD = .85$) than children without reciprocal friendships ($M = 3.44$, $SD = .98$).

Finally, a MANOVA was conducted to explore differences between children with and without reciprocal friends in terms of social-emotional functioning (i.e., self-reported loneliness, depressive symptoms, anxiety, self-concept, and peer victimization, as well as teacher-reported emotional symptoms and problems with peers). The overall multivariate effect was significant [Wilks' $\lambda = .95$, $F(7, 410) = 3.23$, $p < .01$, partial $\eta^2 = .05$]. Follow-up univariate analyses indicated a significant effect of friendship reciprocity for loneliness [$F(1, 416) = 9.23$, $p < .01$, partial $\eta^2 = .02$], depressive symptoms [$F(1, 416) = 11.19$, $p < .01$, partial $\eta^2 = .03$], self-concept [$F(1, 416) = 9.20$, $p < .01$, partial $\eta^2 = .02$], and teacher-reported problems with peers [$F(1, 416) = 12.12$, $p < .01$, partial $\eta^2 = .03$].

The univariate analyses were not significant for peer victimization [$F(1, 416) = .06, p = .80$, partial $\eta^2 = .00$], anxiety [$F(1, 416) = 2.27, p = .13$, partial $\eta^2 = .01$] and teacher-reported emotional symptoms [$F(1, 416) = 2.30, p = .13$, partial $\eta^2 = .01$]. For each of the significant effects, children without reciprocal friendships displayed more negative outcomes (see Table 14).

Shyness, Friendships, and Child outcomes.

The goal of these analyses was to determine if having a reciprocal friendship was particularly beneficial for shy children. Thus, in order to explore the moderating role of friendship status in the relations between shyness and outcomes, a series of hierarchical regression analyses were computed (see Aiken & West, 1991). Effects of gender were also considered. In Step 1 gender, shyness, and friendship reciprocity (with vs. without a reciprocal friendship) were entered. In Step 2 the gender x shyness, the gender x friendship reciprocity, and the shyness x friendship reciprocity interactions were entered into the equation. In Step 3 the three-way interaction was entered.

The findings for these analyses are displayed in Table 15. In terms of “main effects”, boys reported being significantly more lonely and depressed, but also less anxious than girls. Boys also reported lower self-concepts than girls and were rated by teachers as having more problems with their peers. Similar to the correlation analyses, shyness was significantly and positively related to loneliness, depressive symptoms, anxiety, and peer victimization, and negatively related to self-concept. Finally, children with reciprocal friendships were found to be less lonely, less depressed, to have less difficulties with their peers, and to have higher self-concepts as compared to children without reciprocal friends.

Table 14

Means (Standard Deviations) for Child Outcome Variables among Children with Reciprocal vs. without Reciprocal Friendships

| Child Outcome Variables | With Reciprocal Friendship | Without Reciprocal Friendship |
|-------------------------------------|----------------------------|-------------------------------|
| Loneliness | 1.81 _a (.64) | 2.02 _b (.76) |
| Depressive Symptoms | 1.19 _a (.27) | 1.30 _b (.39) |
| Anxiety | 2.37 (.80) | 2.49 (.82) |
| Self-Concept | 3.71 _a (.70) | 3.48 _b (.86) |
| Peer Victimization | 1.48 (.48) | 1.49 (.48) |
| Teacher-Reported Peer Problems | 1.27 _a (.33) | 1.40 _b (.44) |
| Teacher-Reported Emotional Symptoms | 1.30 (.37) | 1.36 (.44) |

- means with different subscripts differ significantly at the .05 level on Tukey's HSD test

Table 15
Hierarchical Regression Analyses predicting Child Outcomes from Gender, Shyness, and Friendship Reciprocity

| Outcome Variable | Predictor Variables | R ² | F | ΔR ² | ΔF | β | sr |
|---------------------|---|----------------|----------|-----------------|-----|---------|------|
| Loneliness | Step 1 | .21 | 48.84*** | | | | |
| | Gender | | | | | -.15*** | -.14 |
| | Shyness | | | | | .44*** | .43 |
| | Friendship Reciprocity | | | | | -.10** | -.10 |
| | Step 2 | .21 | 24.47*** | .00 | .28 | | |
| | Gender x Shyness | | | | | .03 | .03 |
| | Gender x Friendship Reciprocity | | | | | -.01 | -.01 |
| | Shyness x Friendship Reciprocity | | | | | .00 | .00 |
| | Step 3 | .21 | 20.97*** | .00 | .20 | | |
| | Gender x Shyness x Friendship Reciprocity | | | | | .02 | .02 |
| Depressive Symptoms | Step 1 | .12 | 24.59*** | | | | |
| | Gender | | | | | -.12** | -.12 |
| | Shyness | | | | | .31*** | .31 |
| | Friendship Reciprocity | | | | | -.11** | -.11 |
| | Step 2 | .12 | 12.73*** | .00 | .89 | | |
| | Gender x Shyness | | | | | -.01 | -.01 |
| | Gender x Friendship Reciprocity | | | | | .02 | .02 |
| | Shyness x Friendship Reciprocity | | | | | -.06 | -.06 |
| | Step 3 | .12 | 10.90*** | .00 | .00 | | |
| | Gender x Shyness x Friendship Reciprocity | | | | | .00 | .00 |

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 15 (continued)
 Hierarchical Regression Analyses predicting Child Outcomes from Gender, Shyness, and Friendship Reciprocity

| Outcome Variable | Predictor Variables | R ² | F | ΔR ² | ΔF | β | sr |
|------------------|---|----------------|----------|-----------------|------|---------|------|
| Anxiety | Step 1 | .32 | 81.36*** | | | | |
| | Gender | | | | | .15*** | .15 |
| | Shyness | | | | | .52*** | .51 |
| | Friendship Reciprocity | | | | | -.04 | -.04 |
| | Step 2 | .33 | 41.93*** | .01 | 2.02 | | |
| | Gender x Shyness | | | | | -.07* | -.07 |
| | Gender x Friendship Reciprocity | | | | | -.04 | -.04 |
| | Shyness x Friendship Reciprocity | | | | | .05 | .05 |
| | Step 3 | .33 | 36.67*** | .01 | 3.80 | | |
| | Gender x Shyness x Friendship Reciprocity | | | | | .07 | .07 |
| Self-Concept | Step 1 | .17 | 35.21*** | | | | |
| | Gender | | | | | .28*** | .27 |
| | Shyness | | | | | -.32*** | -.32 |
| | Friendship Reciprocity | | | | | .09* | .09 |
| | Step 2 | .17 | 17.66*** | .00 | .26 | | |
| | Gender x Shyness | | | | | -.02 | -.02 |
| | Gender x Friendship Reciprocity | | | | | .00 | .00 |
| | Shyness x Friendship Reciprocity | | | | | .03 | .03 |
| | Step 3 | .12 | 15.13*** | .00 | .12 | | |
| | Gender x Shyness x Friendship Reciprocity | | | | | -.01 | -.01 |

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 15 (continued)

Hierarchical Regression Analyses predicting Child Outcomes from Gender, Shyness, and Friendship Reciprocity

| Outcome Variable | Predictor Variables | R ² | F | ΔR ² | ΔF | β | sr |
|---|----------------------------------|----------------|---------|-----------------|------|--------|------|
| Victimization | Step 1 | .05 | 9.82*** | | | | |
| | Gender | | | | | .04 | .04 |
| | Shyness | | | | | .21*** | .21 |
| | Friendship Reciprocity | | | | | .00 | .00 |
| | Step 2 | .05 | 5.10*** | .00 | .41 | | |
| | Gender x Shyness | | | | | -.02 | -.02 |
| | Gender x Friendship Reciprocity | | | | | -.04 | -.04 |
| | Shyness x Friendship Reciprocity | | | | | .00 | .00 |
| | Step 3 | .06 | 4.74*** | .00 | 2.55 | | |
| Gender x Shyness x Friendship Reciprocity | | | | | .07 | .07 | |
| Teacher-Reported Emotional Symptoms | Step 1 | .01 | .89 | | | | |
| | Gender | | | | | .01 | .01 |
| | Shyness | | | | | .02 | .02 |
| | Friendship Reciprocity | | | | | -.07 | -.07 |
| | Step 2 | .01 | 1.02 | .01 | 1.14 | | |
| | Gender x Shyness | | | | | -.08 | -.08 |
| | Gender x Friendship Reciprocity | | | | | -.03 | -.03 |
| | Shyness x Friendship Reciprocity | | | | | .03 | .03 |
| | Step 3 | .01 | .87 | .00 | .00 | | |
| Gender x Shyness x Friendship Reciprocity | | | | | .00 | .00 | |

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 15 (continued)

Hierarchical Regression Analyses predicting Child Outcomes from Gender, Shyness, and Friendship Reciprocity

| Outcome Variable | Predictor Variables | R ² | F | ΔR ² | ΔF | β | sr |
|-----------------------------------|--|----------------|---------|-----------------|------|---------|------|
| Teacher-Reported Peer Problems | Step 1 | .04 | 7.31*** | | | | |
| | Gender | | | | | -.12* | -.12 |
| | Shyness | | | | | .03 | .03 |
| | Friendship Reciprocity | | | | | -.17*** | -.17 |
| | Step 2 | .05 | 4.35*** | .01 | 1.37 | | |
| | Gender x Shyness | | | | | -.07 | -.07 |
| | Gender x Friendship Reciprocity | | | | | -.04 | -.04 |
| | Shyness x Friendship Reciprocity | | | | | -.04 | -.04 |
| | Step 3 | .05 | 3.73*** | .00 | .11 | | |
| | Gender x Shyness x Friendship Reciprocity | | | | | -.02 | -.02 |

* $p < .05$, ** $p < .01$, *** $p < .001$

There was also a significant gender x shyness interaction effect in the prediction of anxiety. Despite the significant interaction effect, results of follow-up analyses did not indicate a difference between these associations for boys ($B = .55, p < .001$) versus girls ($B = .52, p < .001$).

Somewhat surprisingly, there were no significant interaction effects involving shyness and friendship reciprocity in the prediction of outcomes. Thus, both shyness and having a reciprocal friendship were both uniquely associated with socio-emotional outcomes. However, having a reciprocal friendship itself did not serve a stronger buffering role for shy children. Due to the number of significant differences found for children with reciprocal friendships compared to children without reciprocal friendships (and consistent with the analytical approach of previous studies in this area, e.g., Rubin, Wojslawowicz et al., 2006), it was decided that *only children with reciprocal friendships* would be included in subsequent analyses.

Shyness, Gender, Friendship Quality and Social Surrogate Use

Significant gender differences were found for both shyness [$F(1, 569) = 14.98, p < .001$, partial $\eta^2 = .03$] and friendship quality [$F(1, 341) = 25.17, p < .001$, partial $\eta^2 = .07$]. Girls were found to be significantly more shy ($M = 1.78, SD = .34$) than boys ($M = 1.67, SD = .33$) and girls were also more likely to report having higher quality friendships with their reciprocal best friends ($M = 4.11, SD = .74$) than boys ($M = 3.66, SD = .89$).

To answer the conceptual question of whether friendship quality moderated the relation between shyness and social surrogate use, a series of hierarchical regression analyses was performed. The goal of these analyses was to examine the main effects and interactions between gender, shyness, and friendship quality in the prediction of social

surrogate use. Only children with reciprocal friendships were included in the following analyses. The regressions were first run controlling for grade and parental education, however the inclusion of these control variables did not alter the findings. Thus, the results are presented without control variables. In the first Step, gender, shyness, and friendship quality were entered into the model. In the second Step, the gender x shyness interaction, the gender x friendship quality interaction, and the shyness x friendship quality interaction were entered. In Step 3, the three-way interaction between gender, shyness, and friendship quality was imputed. The results of these analyses are presented in Table 16.

There was a significant main effect for gender, shyness, and friendship quality. As already described earlier, girls reported using social surrogates more than boys. Shyness and positive friendship quality were also both uniquely positively associated with total social surrogate use. Although none of the two-way interactions were significant, the gender x shyness x friendship quality interaction was significant. Analyses were computed again separately for girls and boys, the results were found to be significant for girls ($n = 177$, $B = -.16$, $p < .05$) but were not significant for boys ($n = 165$, $B = .10$, $p = .11$). Simple slopes were performed as follow-up analyses for the girls (see Figure 3). For girls, shyness was more strongly associated with surrogacy use at lower levels of friendship quality than at higher levels of friendship quality.

Shyness, Friendship Quality, Social Surrogate Use, and Child Outcomes

The final set of analyses explored the moderating roles of both friendship quality and social surrogacy use in the relations between shyness and child outcome variables.

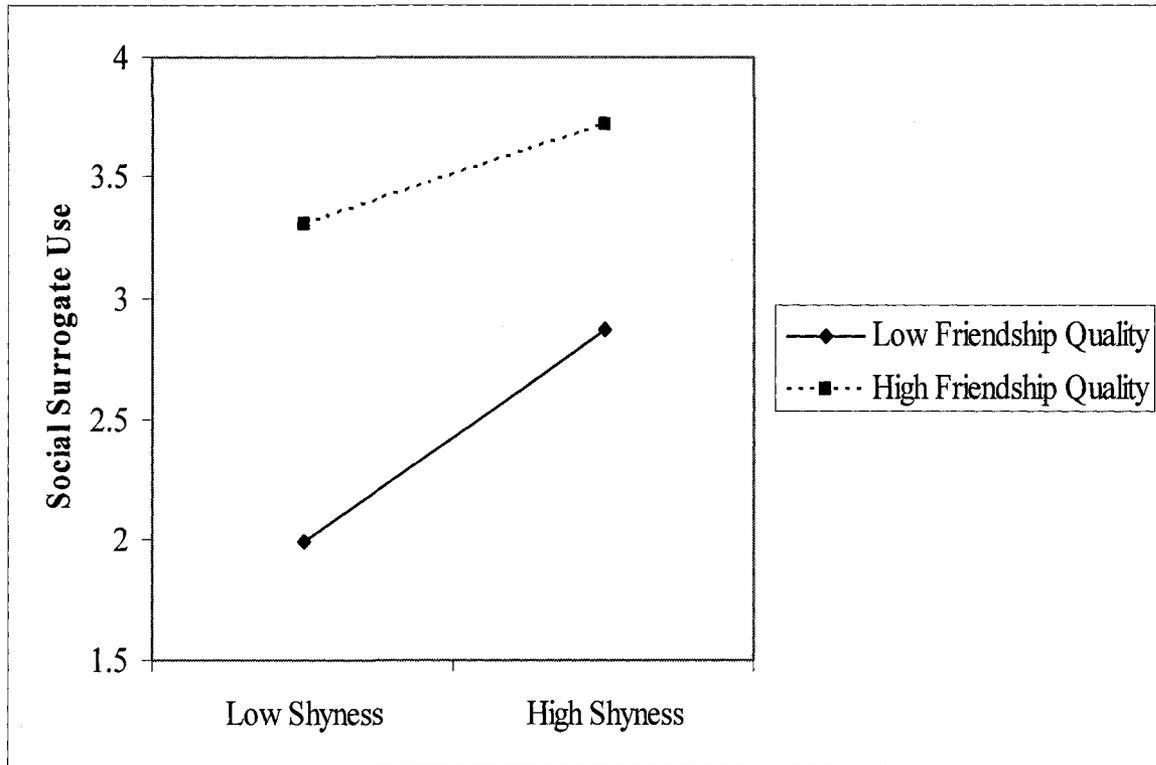
Table 16
 Hierarchical Regression Analyses predicting Social Surrogate Use from Gender, Shyness, and Friendship Quality

| Outcome Variable | Predictor Variables | R ² | F | ΔR ² | ΔF | β | sr |
|-----------------------------------|--|----------------|----------|-----------------|--------|--------|------|
| Social Surrogate Use (n = 342) | Step 1 | .43 | 85.52*** | | | | |
| | Gender | | | | | .11* | .11 |
| | Shyness | | | | | .29*** | .28 |
| | Friendship Quality | | | | | .52*** | .51 |
| | Step 2 | .43 | 42.53*** | .00 | .17 | | |
| | Gender x Shyness | | | | | .03 | .02 |
| | Gender x Friendship Quality | | | | | .00 | .00 |
| | Shyness x Friendship Quality | | | | | -.02 | -.02 |
| | Step 3 | .45 | 38.24*** | .01 | 7.53** | | |
| | Gender x Shyness x Friendship Quality | | | | | -.13** | -.11 |

* $p < .05$, ** $p < .01$, *** $p < .001$

Figure 3

Interaction between Shyness and Positive Friendship Quality to predict Social Surrogate Use for Girls



As previously, only children who had reciprocal friendships were included in these analyses.

Following procedures outlined by Aiken and West (1991), a series of hierarchical regression analyses were executed to explore the main effects and interactions between social surrogate use, positive friendship quality, shyness, and gender in the prediction of child outcomes. The analyses were initially run controlling for parental education and grade. However, the results of these analyses were identical to those run without control variables, thus the results without control variables are presented below. In Step 1, the main effects were entered (gender, shyness, social surrogate use, positive friendship quality). In Step 2, all possible two-way interaction terms were included. In Step 3, conceptually relevant three-way interaction terms were entered (i.e., those involving *shyness*). These procedures were repeated for each of the outcome variables. The results of these analyses are presented in Tables 17 through to 23.

Loneliness. For loneliness (see Table 17), there were significant main effects for gender, shyness, and friendship quality. Boys were significantly lonelier than girls, shyness was positively related to loneliness, and friendship quality was negatively related to loneliness. However, these main effects were superseded by a significant 3-way shyness x social surrogate x friendship quality interaction. Figure 4 displays the associations between shyness and loneliness at different levels of friendship quality and surrogacy use.

Among children with high quality friendships and high social surrogate use ($B = .47, p < .05$), among children with low friendship quality and high social surrogate use ($B = .27, p = .06$), and among children with low friendship quality and low social surrogate

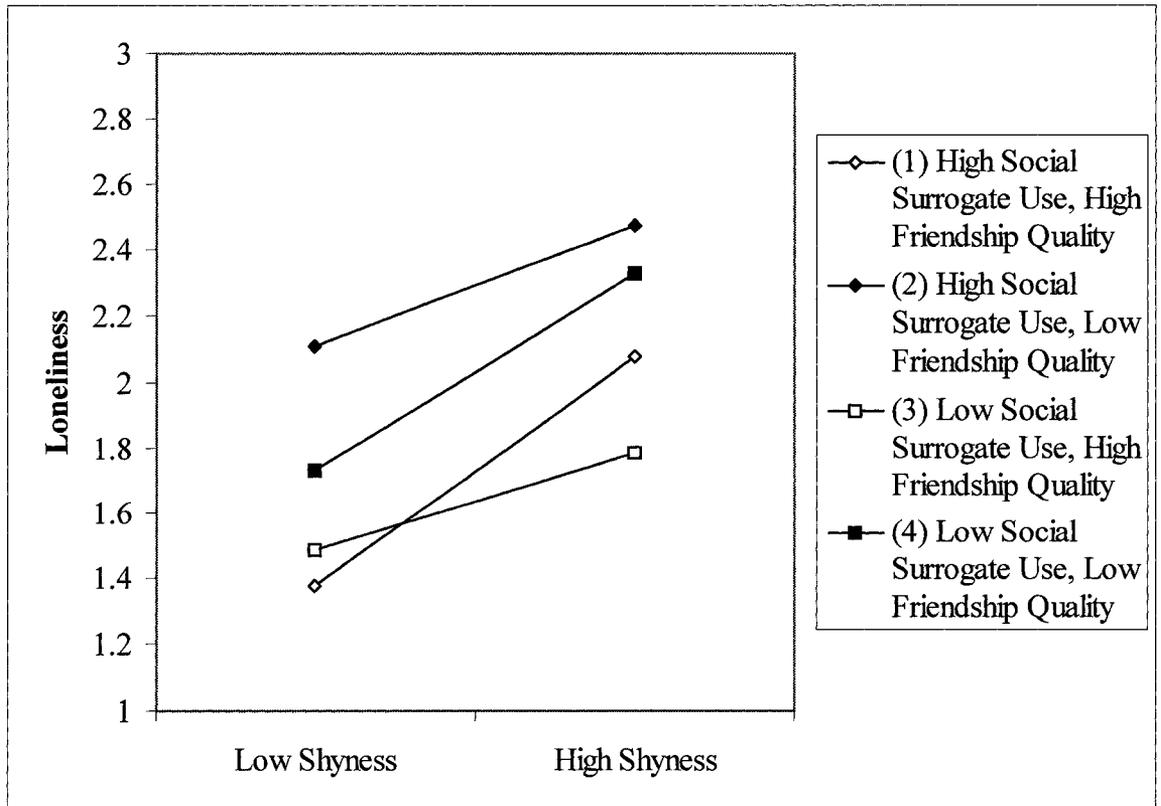
Table 17
 Hierarchical Regression Analyses predicting Loneliness from Gender, Shyness, Social Surrogate Use, and Friendship Quality

| Outcome Variable | Predictor Variables | R ² | F | ΔR ² | ΔF | β | <i>sr</i> |
|--|--|----------------|----------|-----------------|------|---------|-----------|
| Loneliness (<i>n</i> = 364) | Step 1 | .25 | 27.86*** | | | | |
| | Gender | | | | | -.12* | -.11 |
| | Shyness | | | | | .43*** | .40 |
| | Social Surrogate | | | | | .09 | .07 |
| | Friendship Quality | | | | | -.25*** | -.20 |
| | Step 2 | .26 | 11.69*** | .01 | .93 | | |
| | Gender x Shyness | | | | | .00 | .00 |
| | Gender x Social Surrogate | | | | | .02 | .02 |
| | Gender x Friendship Quality | | | | | -.07 | -.05 |
| | Shyness x Social Surrogate | | | | | .07 | .05 |
| | Shyness x Friendship Quality | | | | | -.02 | -.02 |
| | Social Surrogate x Friendship Quality | | | | | -.06 | -.05 |
| | Step 3 | .27 | 9.41*** | .01 | 1.60 | | |
| | Gender x Shyness x Social Surrogate | | | | | -.01 | -.01 |
| | Gender x Shyness x Friendship Quality | | | | | -.06 | -.04 |
| Shyness x Social Surrogate x Friendship Quality | | | | | .16* | .10 | |

* $p < .05$, ** $p < .01$, *** $p < .001$

Figure 4

Interaction between Shyness, Social Surrogate Use, and Friendship Quality to predict Loneliness



use ($B = .39, p < .05$), shyness was more positively related to child loneliness than among children with higher quality friendships and lower social surrogate use ($B = .13, p = .28$). Thus, the combination of low social surrogacy and high friendship quality appeared to “buffer” shy children from loneliness. Or alternatively, shy children with better quality friendships and who were less lonely were not more likely to use these friends as social surrogates.

Depressive symptoms. In the prediction of depressive symptoms, significant main effects were observed for gender (boys reported significantly more depressive symptoms than girls) and shyness (which was positively related to depressive symptoms). The social surrogate and friendship quality main effects and all of the interactions were not significant (see Table 18 for results).

Anxiety. The results for anxiety are displayed in Table 19. Shyness and social surrogate use were significantly and positively related to self-reported social anxiety. The main effects for gender and friendship quality were both not significant. All of the interactions were also not significant for anxiety.

Self-concept. For self-concept there were significant main effects for gender, shyness, and friendship quality (see Table 20). Girls were found to report having higher self-concepts than boys, shyness was negatively related to self-concept whereas friendship quality was positively related to self-concept. There was no main effect for social surrogate use.

There was also a significant shyness x friendship quality interaction. Simple slopes analyses were performed to examine this significant effect (see Figure 5). Contrary

Table 18
 Hierarchical Regression Analyses predicting Depression from Gender, Shyness, Social Surrogate Use, and Friendship Quality

| Outcome Variable | Predictor Variables | R ² | F | ΔR ² | ΔF | β | sr |
|---|---------------------------------------|----------------|---------|-----------------|-----|--------|------|
| Depressive Symptoms (<i>n</i> = 363) | Step 1 | .10 | 8.95*** | | | | |
| | Gender | | | | | -.12* | -.11 |
| | Shyness | | | | | .26*** | .24 |
| | Social Surrogate | | | | | .11 | .08 |
| | Friendship Quality | | | | | -.12 | -.10 |
| | Step 2 | .11 | 3.96*** | .01 | .67 | | |
| | Gender x Shyness | | | | | -.06 | -.05 |
| | Gender x Social Surrogate | | | | | .01 | .01 |
| | Gender x Friendship Quality | | | | | -.03 | -.02 |
| | Shyness x Social Surrogate | | | | | .12 | .09 |
| | Shyness x Friendship Quality | | | | | -.04 | -.03 |
| | Social Surrogate x Friendship Quality | | | | | -.03 | -.03 |
| | Step 3 | .11 | 3.16*** | .01 | .56 | | |
| | Gender x Shyness x Social Surrogate | | | | | -.02 | -.02 |
| | Gender x Shyness x Friendship Quality | | | | | -.06 | -.04 |
| Shyness x Social Surrogate x Friendship Quality | | | | | .00 | .00 | |

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 19
Hierarchical Regression Analyses predicting Anxiety from Gender, Shyness, Social Surrogate Use, and Friendship Quality

| Outcome Variable | Predictor Variables | R ² | F | ΔR ² | ΔF | β | sr |
|--|--|----------------|----------|-----------------|------|--------|------|
| Anxiety (<i>n</i> = 339) | Step 1 | .46 | 71.67*** | | | | |
| | Gender | | | | | .03 | .03 |
| | Shyness | | | | | .43*** | .40 |
| | Social Surrogate | | | | | .38*** | .29 |
| | Friendship Quality | | | | | .01 | .01 |
| | Step 2 | .48 | 30.43*** | .02 | 2.04 | | |
| | Gender x Shyness | | | | | -.02 | -.02 |
| | Gender x Social Surrogate | | | | | -.04 | -.03 |
| | Gender x Friendship Quality | | | | | -.10 | -.07 |
| | Shyness x Social Surrogate | | | | | .02 | .01 |
| | Shyness x Friendship Quality | | | | | .07 | .05 |
| | Social Surrogate x Friendship Quality | | | | | .08 | .06 |
| | Step 3 | .49 | 23.76*** | .01 | 1.27 | | |
| | Gender x Shyness x Social Surrogate | | | | | .00 | .00 |
| | Gender x Shyness x Friendship Quality | | | | | .10 | .07 |
| Shyness x Social Surrogate x Friendship Quality | | | | | -.03 | -.02 | |

* $p < .05$, ** $p < .01$, *** $p < .001$

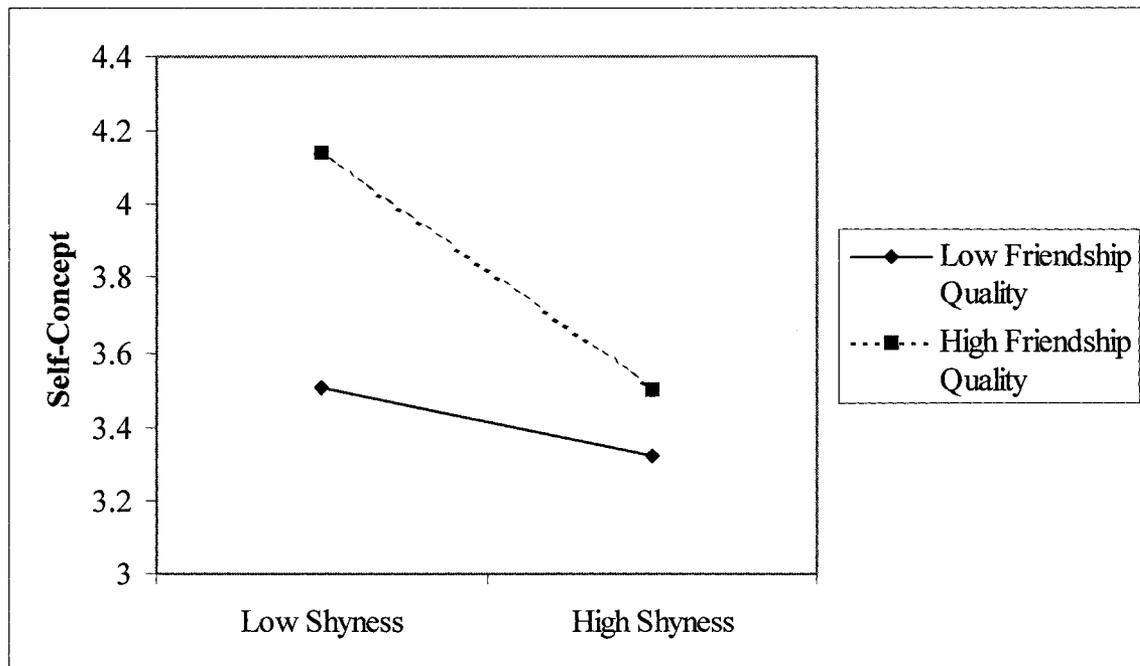
Table 20
 Hierarchical Regression Analyses predicting Self-Concept from Gender, Shyness, Social Surrogate Use, and Friendship Quality

| Outcome Variable | Predictor Variables | R ² | F | ΔR ² | ΔF | β | sr |
|-----------------------------------|---|----------------|----------|-----------------|-------|---------|------|
| Self-Concept (<i>n</i> = 346) | Step 1 | .20 | 19.84*** | | | | |
| | Gender | | | | | .25*** | .23 |
| | Shyness | | | | | -.30*** | -.28 |
| | Social Surrogate | | | | | -.04 | -.03 |
| | Friendship Quality | | | | | .24*** | .19 |
| | Step 2 | .22 | 8.80*** | .02 | 1.35* | | |
| | Gender x Shyness | | | | | -.01 | -.01 |
| | Gender x Social Surrogate | | | | | -.01 | -.01 |
| | Gender x Friendship Quality | | | | | -.03 | -.03 |
| | Shyness x Social Surrogate | | | | | .08 | .06 |
| | Shyness x Friendship Quality | | | | | -.17* | -.12 |
| | Social Surrogate x Friendship Quality | | | | | .07 | .06 |
| | Step 3 | .23 | 6.94*** | .01 | .79 | | |
| | Gender x Shyness x Social Surrogate | | | | | .09 | .06 |
| | Gender x Shyness x Friendship Quality | | | | | -.10 | -.07 |
| | Shyness x Social Surrogate x Friendship Quality | | | | | .01 | .01 |

* $p < .05$, ** $p < .01$, *** $p < .001$

Figure 5

Interaction between Shyness and Friendship Quality to predict Self-Concept



to expectations, the negative relation between shyness and self-concept appeared to become *stronger* with *increasing* levels of friendship quality.

Peer victimization. The results for peer victimization are presented in Table 21. There was a significant main effect for shyness and social surrogate use. Shyness and social surrogate use were both positively related to peer victimization. The gender main effect, the friendship quality main effect and all of the interactions were not significant.

Teacher-reported emotional symptoms. Somewhat surprisingly, there was only a significant main effect for social surrogate use in the prediction of teacher-reported emotional symptoms. Contrary to the previous findings concerning social surrogate use, more frequent use of a best friend as a social surrogate was related to *fewer* emotional problems (see Table 22). There were no main effects for gender, shyness, or friendship quality. However, there was a significant gender x shyness interaction, with boys displaying a stronger positive relation between shyness and teacher-reported emotional difficulties ($n = 150, B = .11, p = .19$) than girls ($n = 154, B = -.03, p = .69$). There was also a significant gender x social surrogate interaction. For boys, social surrogate use was negatively related to emotional symptoms ($n = 150, B = -.15, p = .08$), but for girls social surrogate use was unrelated to teacher-reported emotional symptoms ($n = 154, B = -.01, p = .90$).

There was also a significant shyness x friendship quality interaction (see Figure 6). As hypothesized, the association between shyness and teacher-reported emotional symptoms was strongest at *lower* levels of friendship quality. At higher levels of friendship quality, shyness was no longer associated with teacher-rated emotion problems. There were no other significant interactions.

Table 21
 Hierarchical Regression Analyses predicting Victimization from Gender, Shyness, Social Surrogate Use, and Friendship Quality

| Outcome Variable | Predictor Variables | R ² | F | ΔR ² | ΔF | β | sr |
|--|--|----------------|--------|-----------------|------|-------|------|
| Victimization (<i>n</i> = 364) | Step 1 | .06 | 5.08** | | | | |
| | Gender | | | | | .00 | .00 |
| | Shyness | | | | | .16** | .15 |
| | Social Surrogate | | | | | .16* | .12 |
| | Friendship Quality | | | | | -.11 | -.09 |
| | Step 2 | .08 | 2.88** | .02 | 1.39 | | |
| | Gender x Shyness | | | | | -.03 | -.02 |
| | Gender x Social Surrogate | | | | | .07 | .06 |
| | Gender x Friendship Quality | | | | | .02 | .02 |
| | Shyness x Social Surrogate | | | | | .12 | .09 |
| | Shyness x Friendship Quality | | | | | -.07 | -.05 |
| | Social Surrogate x Friendship Quality | | | | | -.11 | -.09 |
| | Step 3 | .08 | 2.28** | .00 | .35 | | |
| | Gender x Shyness x Social Surrogate | | | | | .02 | .01 |
| | Gender x Shyness x Friendship Quality | | | | | -.06 | -.04 |
| Shyness x Social Surrogate x Friendship Quality | | | | | -.02 | -.01 | |

* $p < .05$, ** $p < .01$, *** $p < .001$

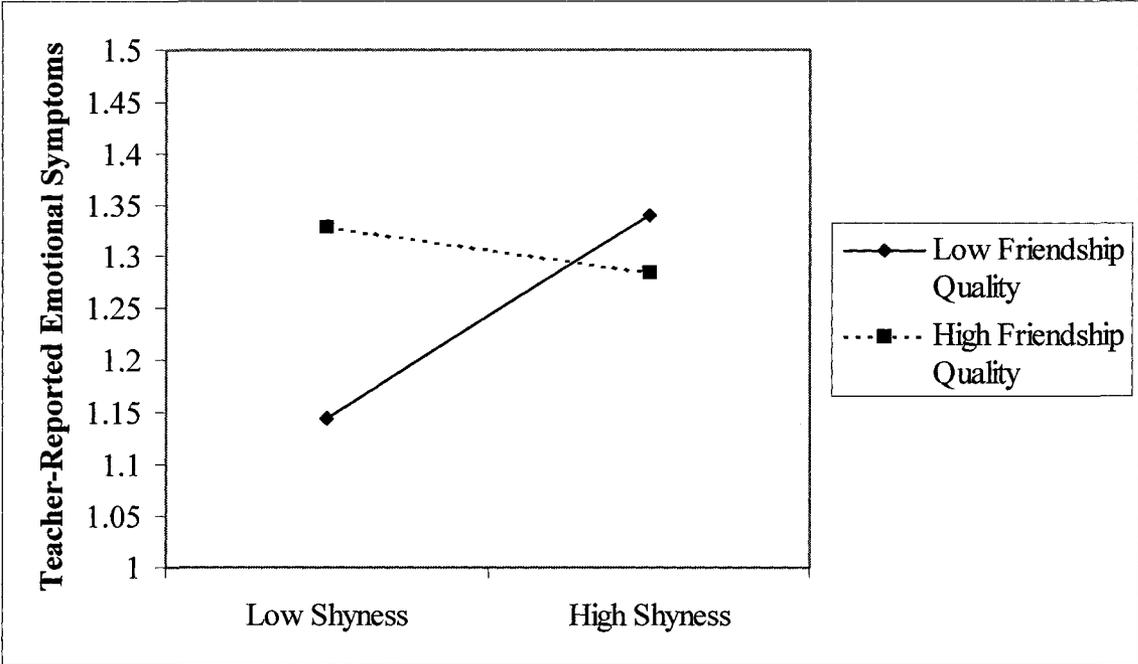
Table 22
 Hierarchical Regression Analyses predicting Emotional Problems from Gender, Shyness, Social Surrogate Use, and Friendship Quality

| Outcome Variable | Predictor Variables | R ² | F | ΔR ² | ΔF | β | <i>sr</i> |
|--|---------------------------------------|----------------|-------|-----------------|-------|-------|-----------|
| Teacher-Reported Emotional Symptoms (<i>n</i> = 304) | Step 1 | .02 | 1.09 | | | | |
| | Gender | | | | | .02 | .02 |
| | Shyness | | | | | .08 | .08 |
| | Social Surrogate | | | | | -.15* | -.12 |
| | Friendship Quality | | | | | .05 | .04 |
| | Step 2 | .07 | 2.07* | .05 | 2.70* | | |
| | Gender x Shyness | | | | | -.14* | -.12 |
| | Gender x Social Surrogate | | | | | .17* | .13 |
| | Gender x Friendship Quality | | | | | -.14 | -.11 |
| | Shyness x Social Surrogate | | | | | .12 | .09 |
| | Shyness x Friendship Quality | | | | | -.17* | -.12 |
| | Social Surrogate x Friendship Quality | | | | | .08 | .06 |
| | Step 3 | .09 | 1.95* | .02 | 1.51 | | |
| Gender x Shyness x Social Surrogate | | | | | .14 | .10 | |
| Gender x Shyness x Friendship Quality | | | | | -.10 | -.06 | |
| Shyness x Social Surrogate x Friendship Quality | | | | | .10 | .07 | |

* $p < .05$, ** $p < .01$, *** $p < .001$

Figure 6

Interaction between Shyness and Friendship Quality to predict Teacher-Reported Emotional Symptoms



Teacher-reported peer problems. Boys were significantly more likely than girls to be rated by teachers as having problems with peers. There were no other significant main effects for teacher-reported peer problems (see Table 23). There was also a significant gender x shyness interaction. For girls, shyness was *negatively* related to teacher-reported problems with peers ($n = 154, B = -.12, p = .13$) whereas for boys shyness was *positively* related to teacher-reported peer problems ($n = 150, B = .08, p = .36$). There were no other significant interactions for teacher-reported problems with peers.

Table 23
 Hierarchical Regression Analyses predicting Peer Problems from Gender, Shyness, Social Surrogate Use, and Friendship Quality

| Outcome Variable | Predictor Variables | R ² | F | ΔR ² | ΔF | β | sr |
|---|---------------------------------------|----------------|-------|-----------------|------|-------|------|
| Teacher-Reported Peer Problems (<i>n</i> = 304) | Step 1 | .03 | 2.32 | | | | |
| | Gender | | | | | -.14* | -.13 |
| | Shyness | | | | | .01 | .01 |
| | Social Surrogate | | | | | -.09 | -.06 |
| | Friendship Quality | | | | | .00 | .00 |
| | Step 2 | .06 | 1.86* | .03 | 1.53 | | |
| | Gender x Shyness | | | | | -.17* | -.14 |
| | Gender x Social Surrogate | | | | | .11 | .09 |
| | Gender x Friendship Quality | | | | | -.14 | -.10 |
| | Shyness x Social Surrogate | | | | | .11 | .08 |
| | Shyness x Friendship Quality | | | | | -.03 | -.02 |
| | Social Surrogate x Friendship Quality | | | | | .02 | .02 |
| | Step 3 | .08 | 1.72 | .01 | 1.24 | | |
| | Gender x Shyness x Social Surrogate | | | | | -.06 | -.04 |
| | Gender x Shyness x Friendship Quality | | | | | -.09 | -.06 |
| Shyness x Social Surrogate x Friendship Quality | | | | | .16 | .10 | |

* $p < .05$, ** $p < .01$, *** $p < .001$

General Discussion

The purpose of this dissertation research was to conduct an in depth examination of shy children's friendships in middle childhood. A particularly novel component of this research was the exploration of social surrogate use among shy children. Social surrogacy was previously introduced in the adult literature but was examined here for the first time in childhood. Social surrogacy refers to the use of a companion to help a shy individual feel more comfortable in a social situation (Bradshaw, 1998). In Study 1, children's reported use of social surrogates "in general" was explored. This included children's reported preference and recruitment of any friend (regardless of whether the child actually had a best friend) with them at a social event. In addition, the role of social surrogate use in shy children's adjustment was also examined. In Study 2, the specific effects of using a reciprocal "best friend" as a potential social surrogate were explored. The potential moderating role of friendship quality was also added in Study 2.

Results indicated that the use of friends as social surrogates appears to be a phenomenon that is both understood and used in childhood. A new self-reported measure of social surrogacy was successfully developed. This measure had good psychometric properties and demonstrated evidence of convergent validity. However, the implications of social surrogacy use for shy children remains somewhat unclear. Indeed, the specific role of various aspects of friendship (e.g., reciprocity, relationship quality, surrogacy use) in the socio-emotional adjustment of shy children appears to be quite complex.

The Child Social Surrogate Questionnaire (CSSQ)

A primary goal of this dissertation research was to develop and examine the psychometric properties of the *Child Social Surrogate Questionnaire (CSSQ)*. Results

from both studies provided evidence of a reliable factor structure for this measure, when used either as a general measure of social surrogacy or as a measure of social surrogacy within a specific reciprocal “best friendship”. In both investigations, all items within each scenario were found to load on a single factor. This suggests that children appear to be aware of this construct and report employing it in several different situations.

These scenarios represent four different hypothetical social contexts: a teacher conversation, a situation in which children were invited to a party with a group of familiar peers, an encounter with new peers, and a performance in front of the class. Each of these scenarios represents a potentially stressful situation in which a friend may be used to help a highly anxious/shy child, however the levels of stress provoked in each situation may differ. The participants reported wanting to use social surrogates most when meeting new children and when performing in front of the class. These scenarios likely represented the most unfamiliar, and therefore may be the most stressful situations for children. Children may view trying to make a good first impression on new peers as being very overwhelming. Similarly, performing in front of others is also very anxiety provoking (Huberty & Dick, 2006). Thus children may enjoy the added support of having a close friend with them in these situations. Not surprisingly though, in both studies social surrogacy in each of the situations was highly related. Thus, children who use social surrogates in one context also tend to employ this strategy in other social situations. It may be a type of coping strategy for dealing with all stressful social events (Bradshaw, 1998).

Adding to the convergent validity of the measure, in both studies social surrogacy was strongly correlated with shyness, anxiety, and peer victimization. Thus, more

socially vulnerable children reported increased social surrogate usage. These findings support previous research with adults that have found that high shy individuals use social surrogates in stressful social situations (Bradshaw, 1998). Thus similar to adults, children who have difficulties interacting with others may rely on the support of a companion to help them deal with the stress of attending social situations.

Conceptually, there are several potential reasons why socially vulnerable children might be more likely to use social surrogates. To begin with, social surrogates can be construed as attachment figures (Ainsworth, 1979; Bowlby, 1978) for socially vulnerable individuals. In this regard, socially inept individuals may look to their friends for support in social situations. They may feel more comfortable exploring their surroundings knowing that they have a friend close by who they can go to if they need support. This may be particularly true for children who are shy, socially anxious, and/or frequently victimized by their peers. Indeed, children with internalizing difficulties have been found to become less victimized if they have a friend high in protection (Hodges et al., 1999). Children who are frequent victims of abuse may want a friend with them to potentially protect them in social situations from being picked on by other children. However, the surrogacy relationship may become problematic if the vulnerable child develops an insecure or an overly reliant relationship with their surrogate friend. The shy-anxious child may become jealous or angry if their surrogate is seen with other children or is not visible to them at the social event. This has been suggested in the case of parent-child relationships (e.g., Ainsworth, Blehar, Waters, & Wall, 1978). The friendship may lead to overdependency if the vulnerable child relies on their friend for all of their social interaction and therefore does not attempt to engage in any social interaction on their

own. In essence the socially vulnerable child may be their surrogate friend's "social parasite," which may not bode well for their friendship. The vulnerable child therefore does not attempt to improve their own social abilities. This lack of perceived social ability may lead to increased negative adjustment problems for socially vulnerable children.

Another potential reason why shy/victimized children are inclined to use social surrogates may be to increase the size of their friendship network. If vulnerable children attend social activities with a close friend they may become acquainted with their friend's friends, possibly increasing their own number of friends. Souma et al. (2008) investigated the use of social surrogates by university students and found that when shy individuals used a social surrogate they increased the size of their social network by increasing the number of friendships shared with the surrogate.

On the other hand, it is also possible that having social surrogates inadvertently "causes" individuals to become more shy, anxious, or victimized. Perhaps constantly relying on a friend to accompany them to social events leads children feeling shy and anxious whenever they are faced with entering a social situation alone. Further, children who are seeking others to attend social events with them are likely noticed by other children, particularly in middle childhood. These children may be perceived as socially weak and perhaps believed to be easy victims (Perren & Alsaker, 2006).

Consistent with these results, it was also found that children who reported using social surrogates for emotional and social support were more shy than children who indicated they would bring a friend along for fun or go alone. Thus, children high in shyness reported using social surrogates as a means of helping them cope with being in a

social situation. However, as will be discussed in a proceeding section, social surrogate use may not be a highly effective strategy for shy children.

In further support of the validity of the CSSQ, social surrogacy was found to be related to several aspects of friendship (Study 2). For example, children with reciprocal best friendships reported using their friends as social surrogates more so than children without reciprocated friendships. Not surprisingly, children without reciprocated friendships also reported lower quality friendships (Bukowski, Hoza, & Boivin, 1994). This may account for their lack of usage of this friend as a surrogate. Indeed, friendship quality itself was also positively associated with surrogacy use.

Children who use a friend as a social surrogate may view that friendship positively because of the benefits they receive from the friendship. Children who can rely on their friends to assist them during stressful situations may view that friendship as one high in validation, intimacy, companionship, and helpfulness (Ladd et al., 1996; Parker & Asher, 1993). Alternatively those children who have high quality friendships may begin to depend on their friend as a social surrogate. Children who have a high quality friendship with a peer may feel comfortable asking the friend to help them enter and potentially to help support them during a social event. Perhaps children are more likely to report using their best friend as a social surrogate if the relationship is of higher quality. More vulnerable children may know they can trust their friend in stressful social situations if they have a strong relationship with that friend (Hodges et al., 1999). If a child attempts to use a friend in which their friendship is of lower quality, the child may not be able to trust the friend in a threatening social situation. Instead of protecting/helping the vulnerable child the friend may increase the anxiety felt in the

social situation perhaps by victimizing the child (Crick & Nelson, 2007), or not socializing with the child during the social event.

Finally, social surrogate use was *negatively* related to teacher-reported peer problems (Study 2). This is somewhat in contrast to the self-reported findings and may be attributable to a bias in teacher perceptions. For example, teachers likely view children who have a close friend in their grade as having more positive peer relationships. If vulnerable children stay close to their social surrogate at school (a potentially stressful social context), they may be *perceived by teachers* as having less difficulties in the peer group. Indeed, teachers may not be the most accurate assessors of children's peer relationships at this age period (e.g., Craig & Pepler, 1997).

Role of Gender. In both studies, girls reported using social surrogates more than boys. This finding is not surprising due to the high value girls place on their friendships (Berndt & Hoyle, 1985; Parker & Asher, 1993). Girls also tend to think more about their social reputation than boys (Underwood, 2003). Thus, girls may enjoy the added comfort of having a close companion with them when they enter potentially difficult social situations.

There was also some evidence to suggest that the correlates of social surrogacy differ for boys and girls. For example, in Study 1 for girls social surrogate use was related to a negative self-image for girls, but was related to high peer self-concept for boys (although this finding was not replicated in Study 2 – likely because self-concept variables were aggregated across domains). In Study 2, boys with higher social surrogate usage were found to have lower teacher reports of emotional problems. Teachers may worry more about the social relationships of boys than girls because boys may be more at

risk of developing problems if they are solitary (e.g., Gest, 1997). Further, boys are more likely than girls to have a larger network of friends and tend to be less exclusive in their friendships than girls (Berndt & Hoyle, 1985; Parker & Seal, 1996). However, perhaps those boys who do happen to obtain a close, supportive friendship (as in a friendship that contains social surrogacy) witness a number of benefits from the relationship. It is also possible that boys without adjustment difficulties are more likely to use social surrogates because they are less likely to witness rejection when they ask their friend for social support during a stressful situation.

Finally, it was interesting to note that the relation between shyness and friendship quality and surrogacy was different for boys than for girls. For boys, friendship quality did not moderate the relation between shyness and social surrogate use. In contrast, shy girls tended to use social surrogacy more frequently when they had lower quality friendships. It may be that shy girls with poorer quality friendships feel particularly insecure and thus seek additional support from these friends in the form of social surrogacy.

The General Benefits of Reciprocal Friendships

An additional goal of Study 2 was to replicate past research on as well as to further examine the benefits of having a reciprocal “best friendship” (i.e., both children nominate each other as a best friend, e.g., Rubin, Wojslawowicz, et al., 2006). Overall, girls and boys were equally likely to have a reciprocal friendship. This finding supports past research (Parker & Asher, 1993; Rose & Asher, 2004). Laursen et al. (2007) reported that girls were more likely to have mutual friendships than boys in the first grade,

however in the second grade girls and boys did not differ in reciprocated friendships. Thus, perhaps as boys grow older they are more likely to develop close friendships.

As compared to peers without reciprocal friendships, children with these relationships reported less loneliness, social anxiety, and depressive symptoms, as well as higher self-concepts, and were rated by teachers as having less peer problems. These findings add to the growing literature showing the benefits of friendship and replicate past research indicating that children who are friendless display a wide range of adjustment problems (Bagwell et al., 1998; Brendgen et al., 2000; Ladd & Troop-Gordon, 2003; Parker & Seal, 1996; Wojslawowicz Bowker et al., 2006). Thus, having a friend appears to act as a protective factor against internalizing difficulties and peer problems. As children get older those who play alone are more visible to the peer group (e.g., Younger & Boyko, 1987), thus children with friends may not be viewed by others and by themselves as being different from their peers. In addition, the social support granted by a friendship may help protect children from child adjustment problems (e.g., Rubin et al., 2004). Alternatively, it is possible that children who are better adjusted are more likely to develop reciprocal friendships with their peers at school. That is, the children who have less internalizing problems and better social skills may be more desirable as friends to other children (Flook, Repetti, & Ullman, 2005).

Friendless children may be at a serious disadvantage compared to their peers with friends. For instance, Laursen et al. (2007) recently reported that for children without a mutual friend in grade 1, social isolation predicted further isolation and behaviour problems (internalizing, externalizing) one year later. Friendships provide a number of benefits, including protection (Bukowski & Sippola, 2001), support (Hodges et al., 1999;

Parker & Asher, 1993), social norm and social exchange development, as well as discouraging inappropriate behaviours that may all serve to further improve children's social standing amongst peers (Boivin, Dodge, & Coie, 1995; Dunn, 2004; Hodges et al., 1999; Laursen & Hartup, 2002; Rubin, Bukowski et al., 2006). Bagwell et al. (1998) demonstrated that peer rejection in the fifth grade can have negative effects even in adulthood. Thus children without friends may suffer greatly both in the short and long term. It is important to note that friendless children may have characteristics that make them undesirable to other children. Hence, interventions should be developed to help children become more desirable friends.

Surprisingly, there were no differences found between children with versus without reciprocal friends in terms of self-reported peer victimization. Children without friends are more visible to the peer group and thus may more frequently face peer victimization. Moreover, close friends may help to defend each other against bullies (Bukowski & Sippola, 2001; Hodges et al., 1999). In this regard previous research has reported that children with friends are less likely to experience peer victimization (e.g., Haselager et al., 1998; Hodges et al., 1999; Wojslawowicz Bowker et al., 2006). However, in many of these past studies, peers were the assessors of child victimization (as compared to a self-report measure in the current research). Perhaps peers view children who are without close friends as more likely to face peer abuse due to their increased visibility in the peer group. Peers may be reluctant to befriend victimized children because they fear also becoming targets of the attacks. Studies have found that friends tend to be similar on levels of victimization (Haselager et al., 1998; Rubin, Wojslawowicz et al., 2006).

Shyness, Friendship, and Socio-Emotional Adjustment

Overall, children with and without reciprocal friendships did not differ in terms of shyness. This finding is similar to the results of Rubin, Wojslawowicz et al. (2006), who reported that an “extreme” group (i.e., top 33%) of shy-withdrawn children (as identified through peer nominations) did not differ from comparison children (nonshy, nonaggressive) in terms of the likelihood of having a reciprocal best friendship. Moreover, shyness in the current study was also unrelated to friendship quality. This finding was in contrast to Rubin, Wojslawowicz et al. (2006), who found that shy-withdrawn children did report lower friendship quality than comparison children. The findings may differ due to differences in the definitions of shyness in each of the studies. In the current dissertation, shyness was measured by a self-report assessment and was seen as being on a continuum. In Rubin, Wojslawowicz et al. (2006) shyness was measured by a peer assessment and children were categorized as being shy if they scored above 33% on shyness-withdrawal and below 50% on aggression.

The findings in Study 2 suggest that shy children may not need assistance in making friends nor do they necessarily need help in acquiring higher quality friendships. Thus, perhaps interventions should focus on helping shy children benefit from their friendships by modeling their friend’s behaviour (if prosocial and nonshy) and by practicing more confidently engaging in social interactions with their friend. Since shy children have been shown to have best friends, this dyadic relationship may be ideal for intervention programs. Indeed, peers have been shown to be successful in helping withdrawn children become more social (Furman et al., 1979). Despite having friends and positive relationships with their friends, shy children still suffered from negative

adjustment problems. Overall shyness was related to a host of negative outcome variables, including victimization, loneliness, anxiety, symptoms of depression, and lower self-worth. These results are similar to previous findings in the literature which have suggested that shy children are at risk for internalizing problems and difficulties in the peer group, especially in middle childhood (e.g., Boivin et al., 1995; Crozier, 1995; Rubin, Chen et al., 1995; Rubin et al., 1993).

Self-reported shyness was more strongly associated with self-reported socio-emotional difficulties as compared to teacher ratings. Shared method variance is likely a contributing factor here. However, it may also be that teachers are not as aware of shy children's social difficulties during this age period. For example, Spooner and Evans (2005) reported that girls who considered themselves to be shy but who were not identified as shy according to teacher reports were found to have lower academic self-concepts than girls who teachers rated as shy. Moreover, due to the demands of their job, perhaps teachers are more focused on the externalizing and disruptive behaviours in their classrooms (Arbeau & Coplan, 2007a). In addition, since shy children were found to be just as likely to have a best friendship, perhaps teachers perceive the friendship as being effective in helping to decrease emotional difficulties.

Past research has found that shy boys are more at risk for problems than shy girls (e.g., Morison & Masten, 1991; Rubin et al., 1993). In the current dissertation a few gender differences arose in regards to shyness. Specifically, shyness in boys was more strongly related to teacher reports of emotional symptoms and difficulties with peers. These findings suggest that teachers do perceive shyness as being more problematic for the boys than for the girls in their classrooms. Teachers may be attuned to the more

difficulties shy boys face as compared to shy girls. It is also possible that extremely shy boys display more disruptive behaviours in the classroom than highly shy girls. Indeed, Stevenson-Hinde and Glover (1996) found that high shy boys were reported by playgroup leaders as engaging in more acting out behaviours than high shy girls. Thus, teachers may view highly shy boys as needing more assistance because of the behaviour problems they display in their classrooms.

Interestingly, Arbeau and Coplan (2007a) found that kindergarten teachers perceived helping unsociable boys improve their social abilities more than for unsociable girls. Further they also reported seeking the help of additional individuals to help control unsociable boys' behaviours (e.g., the guidance counselor, parents, principal) more than for unsociable girls. These findings suggest that teachers may be concerned about the withdrawn boys in their classrooms and may actively seek assistance to help improve their behaviours. Optimistically, gender differences did not arise for the self-report measures in the current dissertation. Thus boys may not perceive their shyness as being more detrimental than do girls.

Overall, although shy children were not less likely to have a friend or a poorer quality friendship relationship, they were still at risk for a host of negative adjustment problems. Perhaps shy children are not befriending the "right" children. For example, shy children may tend to develop friendships with other shy children. Indeed, behavioral homophily (i.e., finding someone who plays like you) does appear to be a factor in friendship formation (Rubin, Lynch, Coplan, & Rose-Krasnor, 1994). Shy children with shy friends may not benefit as much from the relationship. For example, shy friends may not encourage each other to be less inhibited and may engage in more dyadic interactions

rather than seeking out additional social contacts. Moreover, the shy friendship pair may be viewed as salient victims for bullies, because neither will protect the other from the aggressor. Indeed, shy children have been found to be similar to their friends in terms of levels of exclusion and victimization (Rubin, Wojslawowicz et al., 2006). Shy children may also develop “convenience” friendships with other children who are rejected by their peers. This may include aggressive children who may encourage deviant behaviour (Brendgen et al., 2000; Dishion et al., 1995) or victimize the shy child. In such cases, the shy child may fare worse than if they did not have a friend (Hartup, 1996; Hartup & Stevens, 1999). Ideally, it would seem particularly beneficial for shy children to develop friendships with sociable and prosocial children. These friends would model appropriate social behaviours and engage in social interactions with other prosocial children.

Vygotsky (1962) argued that children who are experts in an area can teach other children who have not yet mastered the skill. Thus, prosocial/sociable peers may be able to assist and guide their less socially competent shy friends. Although the authors did not specifically test the effects of having a prosocial friend on a shy child’s adjustment, Barry and Wentzel’s (2006) results offer support to the hypothesis that having a prosocial friend can lead to positive outcomes for children. In an adolescent population, Barry and Wentzel examined the longitudinal effects of having a prosocial friend. The researchers found that having a prosocial friend was related to self-reported attempts to engage in prosocial acts which was subsequently related to being nominated by children in their grade as being prosocial the following year. These findings suggest that children may become more prosocial if they are friends with a prosocial child. Perhaps if shy children are friends with a prosocial child they will also strive to become more prosocial.

Friendships as a Moderator of the Relations between Shyness and Adjustment

The main purpose of the present dissertation was to investigate whether different aspects of shy children's friendships might play a protective role in their adjustment. The potential roles of friendship reciprocity, friendship quality, and social surrogacy were examined. Previous research highlights the many benefits of having a close friendship, including higher self-worth, less internalizing problems, and higher peer group acceptance (Bagwell et al., 1998; Berndt, 2002; Rubin et al., 2004). It was hypothesized that shy children would particularly benefit from friendships, offsetting some of the potential negative effects of shyness. For example, a friendship could provide shy children with the opportunity to model appropriate social behaviours. Moreover, a friendship may also offer shy children the opportunity to practice their social skills in a nonthreatening environment. In a close dyadic relationship shy children may be successful in engaging in appropriate interactions, which may transcend into interactions with the larger peer group.

Three components of friendship were examined in the research: (1) having a reciprocal friend; (2) using a (reciprocal) friend as a social surrogate; and (3) the quality of the friendship relationship. A friendship is reciprocal if both members consider each other a friend. As previously discussed social surrogacy refers to the accompaniment and potential assistance of a companion in a social situation. For the current investigation, friendship quality referred to the positive characteristics of a friendship, such as intimacy, support, and validation (e.g., Parker & Asher, 1993). The results for each of these constructs are discussed in turn.

Having a reciprocal friend. Simply having a reciprocal friendship did not appear to “buffer” shy children from socio-emotional problems. However, it should be recalled that children with and without friends did not differ in shyness and that having a reciprocal friendship was beneficial for the entire sample. Thus, having a reciprocal friendship appears to have positive benefits for all children, including shy ones. Friendships have been found to help children adjust to school (e.g., Ladd, 1990). Consequently, interventions should be designed to promote friendship development in the school setting. Having even just one friend may make the school experience more enjoyable for all children.

Social surrogacy. Contrary to expectations, social surrogacy was also not found to be a protective factor for shy children in middle childhood. Indeed, as discussed after Study 1, there was even some evidence to suggest that *not* using a friend as a social surrogate may be a protective factor. In Study 1 social surrogacy use (in general) was found to be associated with increased peer victimization for shy children. In Study 2, the moderating role of social surrogacy use with a reciprocal best friend was explored in the social adjustment of shy children. However, no significant two-way-interaction effects involving shyness and surrogacy were found in the prediction of outcomes. Further, there was only one significant three-way interaction effect involving shyness and surrogacy (and also friendship quality) – that will be discussed in a later section. Taken together, these findings suggest that surrogacy use appears to be neither a risk nor a protective factor for shy children. The slight differences in findings between studies may be due to the assessment of surrogacy use “in general” versus “with a specific best friend”. Perhaps using “nonreciprocal” friends or acquaintances as social surrogates is more problematic

for shy children than using closer, reciprocal friends. Reciprocal friends may be more willing to help shy children during social situations because they are more understanding and supportive of their friend whereas nonreciprocal friends may feel used by the shy children.

Notwithstanding, a central prediction of this dissertation was that social surrogacy would be a protective factor for shy children. It was believed that social surrogates may help shy children by allowing them to enter more social situations, by helping them feel less anxious during the social situations, and by helping them become more involved in social interactions. Thus, it was anticipated that having social surrogates would help shy children by essentially acting as supportive systems for shy children during social events. However, the results simply did not support these assertions.

Thus, although shyness was related to the more frequent use of social surrogates, shy children did not appear to be particularly “helped” by this experience. It is possible that a friendship high in social surrogacy may also indicate an over-dependence of the shy child on their friend. For example, shy children tend to form such dependent relationships with their teachers (e.g., Birch & Ladd, 1998). Teacher-child dependency has been found to be associated with a number of negative adjustment indices (e.g., Birch & Ladd, 1997). It is also possible that instead of gently pushing shy children into social interactions, shy children’s social surrogate friends are actually *overprotecting* them. If the friend is reluctant to let the shy child attempt social interactions on his/her own, this may be similar to the relationship between an overprotective parent and a shy child (e.g., Burgess et al., 2005). Indeed, overcontrolling and overprotective parenting appears to exacerbate socio-emotional difficulties in shy children (e.g., Coplan et al., 2008; Rubin et

al., 2002). In both studies children who chose wanting a friend to go with them to the situations because the friend would interact with others for them (social support reason) were high in shyness. This finding suggests that shy children may be highly reliant on their best friend during social situations.

It is also quite conceivable that children do benefit from social surrogate use *during* the social event but that these effects do not transcend into their overall adjustment. In other words, shy children who use social surrogates may feel less anxious, less lonely, less depressed, and have higher self-esteem when they are at a social event with a close best friend, but when they leave the event they may revert to their general feelings about themselves. Thus having a social surrogate may make them feel better about going to the event (e.g., not having to attend alone), but not about their overall feelings about themselves. Future studies should specifically assess shy children's social behaviors and responses in social contexts with and without a social surrogate.

Friendship quality. There was at least some evidence to suggest that friendship quality may play a protective role in the adjustment of shy children. Among children who perceived their best friendships as being higher in support, intimacy, and helpfulness, shyness was less likely to be associated with teacher-rated internalizing problems (i.e., emotion problems). Perhaps shy children just need "one" good friendship to help them cope with the school setting. It may be that having just one person who is trustworthy and supportive of them is enough for them to feel at ease at school. Children who have positive friendships tend to be viewed by their peers more positively (Berndt, 2002). Thus, perhaps having a close friendship also decreases the likelihood that shy children will be rejected by their peers. Moreover, the good friend may also help the shy child

engage in interactions with their peers, by both demonstrating appropriate peer interactions and also by allowing the shy child to practice their social abilities in a safe atmosphere. Indeed, socially-withdrawn children's rates of interaction increase when they are paired with another child (Furman et al., 1979). However, direction of effect cannot be determined from this study. It is also quite possible that shy children who have less emotional problems are more likely to develop positive friendships.

However, somewhat surprisingly, more positive friendship quality also appeared to increase the negative association between shyness and self-concept. It is possible that shy children who have a high quality friendship may feel badly about themselves because they compare themselves to their friend's social abilities. Perhaps they wish they could be more like their friend. On the other hand, shy children who have lower feelings of self-worth may be more likely to report their friendships as being higher in friendship quality. Perhaps those shy children who have such low feelings about themselves are likely to value any friendship they are able to attain.

There was also a significant three-way interaction effect between shyness, social surrogacy, and friendship quality in the prediction of childhood loneliness. Three-way interactions in regression analyses are often difficult to interpret. However, it appeared as though shy children who had a friendship high in friendship quality but who did not use their friend as a surrogate were less lonely. Shy children with positive friendships who feel less lonely (possibly due to the positive friendship) may become more socially confident and thus less reliant on social surrogates. Perhaps they are able to watch their friend engage in interactions and have learned how to successfully interact with others on their own.

Overall it appeared that shy children's use of social surrogates and positive friendship quality in their reciprocal friendships were related to positive adjustment indices according to teacher reports, but were either unrelated to or negatively related to child assessment outcomes. As mentioned previously, there may be biases associated with teacher reports of child outcomes during this age period. Teachers may be overly optimistic about the social adjustment of shy children in their classrooms who appear to have positive friendships, and more worried about the shy children who are more often by themselves. Shy children who have a good friend may be less likely to seek teacher support and thus may be perceived by teachers as being less dependent (e.g., Birch & Ladd, 1998). However, although these children may appear well-adjusted in class, teachers may be less aware of the children's internalizing problems (Coplan & Arbeau, 2008).

As mentioned previously, it is also possible that friendship relationships represent a stressful context for shy children. Shy children may be worried about maintaining their friendships and being evaluated by their friend. This may lead to rumination and other negative thought patterns that may exacerbate negative feelings (Thomsen, 2006). It is also possible that shy children do feel good about themselves when they are with their friend but these feelings do not generalize to situations in which the friend is not present. Finally, shy children's friendships with positive relationship qualities may also contain negative aspects, such as frequent conflict. Conflict is also considered an important aspect of friendship quality (Bukowski et al., 1994; Parker & Asher, 1993) which was not assessed in the current research. Indeed, there are also other aspects of friendship that

may be important contributors to the outcomes of shy children, including friendship satisfaction and protection (Hodges et al., 1999; Parker & Asher, 1993).

The Complex “Big Picture”

The current findings suggest a complex picture regarding the influence of friendships on shy children’s adjustment. Shy and socially-vulnerable children were shown to more frequently use social surrogates. However, the implications of social surrogacy as a means of coping with social situations were somewhat mixed. Neither social surrogate use “in general” or with a mutual “best friend” evidenced apparent positive effects on shy children’s adjustment. Indeed, there were some findings to suggest that surrogacy use by shy children may even have negative consequences. It may very well be that using social surrogates is not necessarily “good” or “bad” in the short-term. Perhaps the effects are evidenced in later adolescence when children are expected to develop their own identities (e.g., Kroger, 2000). However, at the present time social surrogate use can neither be seen as a protective factor nor as a salient risk factor for shy children.

There was also no evidence to suggest that having a reciprocal friend was a uniquely important protective factor for shy children in particular. Instead, reciprocal friendships appeared to be beneficial for all children in general. Thus, the findings suggest that having a “best friend” is good for all children. These findings replicate past research demonstrating the benefits of having a good friend (e.g., Bagwell et al., 1998; Wojslawowicz Bowker et al., 2006).

Findings regarding friendship quality were also somewhat inconsistent. Although friendship quality was related to a number of positive adjustment indices for children in

general, it actually appeared to be related to some negative outcomes for shy children. Moreover, findings differed across reporters, suggesting that teachers and the shy children themselves may have different perceptions of their adjustment. However, having a high quality friendship was also generally beneficial for all children. Consequently, all children should be encouraged to develop friendships high in support, caring, guidance, and intimacy. These findings are supported by past research, which have also demonstrated the benefits of having a friendship high in quality (e.g., Parker & Asher, 1993; Rubin et al., 2004).

There was also some evidence that teachers perceived a good quality friendship amongst shy children as being particularly beneficial for their emotional adjustment (but these findings did not replicate for child self-report measures). Similarly, teachers perceived having a social surrogate as being positive (for children in general) whereas child self-report measures indicated that surrogates may be negatively related to child adjustment. Past research has also found discrepancies in teacher versus self-reports (Spooner et al., 2005). Teachers have an “outside” perspective on child adjustment, which is narrow due to seeing the child mostly in the classroom. On the other hand, the child “lives” with their emotional and peer difficulties. Both perspectives are important because each adds to the understanding of the factors leading to child adjustment. Thus multi-source assessments should be included in research projects.

Limitations and Future Research

Although the present research adds to the literature on children’s friendships in middle childhood, some limitations merit discussion and are suggestive of future research. First, this research was correlational in nature. Thus, the causal nature of the

links reported between variables cannot be inferred. In both Study 1 and Study 2 data was collected at a single time period. In Study 1 the data was collected in one session and in Study 2 there were two testing sessions but the second session occurred within two weeks of the first session. Although not feasible due to time constraints, the present studies would have benefited from a longitudinal design. Perhaps children who were shy in kindergarten are no longer high in shyness due to a close friendship they obtained in early childhood. An assessment of shyness and friendships from early childhood until later childhood or adulthood would be ideal. Future research should investigate the long-term effects of friendship, in particular social surrogacy, on children's adjustment. Such longitudinal projects are needed to determine the direction of effect of the findings presented in the current dissertation.

In addition, the potential for social surrogate use to lead to increased friendships also needs exploration in childhood. Research on social surrogates in adulthood has found that social surrogate use is related to an expanded social network for shy individuals (Souma et al., 2008). Future research is needed to examine this question in childhood.

Future research should also examine the levels of conflict within a reciprocal friendship to determine whether conflict can moderate the relation between shyness and outcome variables. Perhaps for shy children having a reciprocal friendship with a high level of conflict offsets any benefits of the positive characteristics within the friendship.

Although social surrogacy was related to child vulnerability (e.g., shyness, anxiety, peer victimization) it is also possible that children who are highly social may also report using social surrogates. Children who are very social may report using social

surrogates because they always enjoy being around their friends. Future research should control for sociability when examining the effects of social surrogates on vulnerable children's adjustment.

In Study 2 children were asked to indicate three of their best friends from their grade at school. However, not all children have best friends at school. Indeed, 60% of parents in Study 2 reported that their children had best friends outside of school. Future research would benefit from examining friendships, especially social surrogacy, in "out of school" contexts (e.g., extracurricular activities, neighborhood, etc.). In a similar vein, research is needed on internet use and childhood friendships. Brunet and L. A. Schmidt (2007) examined the effects of online communication on shy adult's self-disclosures. Specifically, the researchers were interested in determining whether shy individuals would differ in their rates of personal self-disclosures when a webcam was absent versus when it was present. The researchers found that shyness was significantly related to decreased prompted self-disclosures (elicited by their online partner) in the webcam condition but was unrelated to personal self-disclosures in the no webcam condition. Thus shy individuals may be more willing to be open with others when they cannot be seen or heard. Face-to-face communication may induce high amounts of arousal in shy individuals, which may inhibit their abilities to engage in social interaction. An interesting question for future research on shy children's peer interactions is "Does using the internet to socialize with your peers act as an additional "surrogate" for shy children's social interactions?" In effect, online communication may act as a crutch for shy children who want to interact with others but have difficulty interacting in social situations. In

addition, does talking to their friends on the internet have any effects on the quality of shy children's relationships with their friends?

Moreover, child "social surrogates" themselves need further investigation. Do children recognize when they are being treated as a social surrogate? Perhaps being used as a social surrogate has beneficial or negative consequences on the friendship depending on whether the social surrogate enjoys this type of role in the friendship. Further the characteristics of child social surrogates should also be explored. What are the effects of having an aggressive social surrogate versus a prosocial social surrogate on a child's adjustment? Perhaps the characteristics of the social surrogate has implications on the shy child's adjustment.

Another avenue of future research should be to examine whether children develop attachment relationships to their friends. Perhaps children with insecure relationships to their friends are the least likely to benefit from their friendships. It is possible that children who are insecurely attached to their friends and who also attempt to use them as social surrogates may be at risk for increased internalizing problems. In addition, overdependence in child friendships should be examined in future studies. Similar to overprotective parenting (e.g., Burgess et al., 2005), shy children who have overprotective friends may not learn to accomplish social tasks on their own.

Future research should also consider examining additional child adjustment outcomes, including academic success and school enjoyment. Shy children have been found to have academic difficulties (Coplan et al., 2001). It is possible that a close friendship may help shy children excel at school. The potential benefits of having reciprocal friendships on teacher-child relationships should also be explored. Perhaps shy

children who have a close friendship with a classmate are less likely to be dependent on their teachers and thus may be more likely to develop healthier close relationships with their teachers.

The results in the current study should be interpreted with caution due to the low effect sizes that were found, thus these findings may not replicate in subsequent investigations. However, lower effects sizes are not unusual in social science research and can still be practically significant (Stevens, 2002).

The majority of the participants in the current dissertation were of Caucasian ethnicity. In addition, although data was collected in two Canadian provinces the values and belief systems of the participants from the two locations were likely quite similar. Thus, future research should include participants of varied ethnicity, socioeconomic status, and culture. Shyness has been found to be perceived differently and to be related to different outcomes depending on the cultural context (e.g., Chen et al., 1998). Therefore, a cross-cultural study examining the effects of friendships on shy children's adjustment would be ideal.

Although multi-source assessments were undertaken, parental assessments and peer reports were lacking. Future research may benefit from having child outcomes measured by children's parents and peers. Moreover, observational assessments also would have been ideal. Future research should perform observations on shy children's friendships in middle childhood.

Further, the results from the current study have potential applied implications. For example, the findings of the current research highlight the benefits of having a good quality friendship. Thus, interventions should be designed to help all children develop

good friends. Programs should be set up in schools to help children learn the characteristics of a good friend so they know how to act appropriately in a friendship. Teachers and parents should discuss the key qualities of a good friendship with children, especially if they have suspicions that a child is not being “nice” to their friend.

Since the benefits of friendship can be seen in the early school years (Ladd, 1990), it may be important for children to attend school with a good friend. Perhaps programs could be set up to help children meet each other and become friends before they begin school (Ladd & Price, 1987). The social support of a friend in the transition to school may have many benefits for children (Ladd, 1990). Perhaps these effects may transcend into middle childhood and later adolescence.

Future research is also needed on the effects of having different types of friends on shy children’s adjustment. Depending on the results of these studies, it may be important for interventions to be set up to help shy children develop friendships with prosocial/sociable children. Rubin, Wojslawowicz et al. (2006) documented that children tend to befriend children who have similar characteristics as they do. However, it may be that shy children who develop friendships with prosocial children will benefit from the relationship more than if they were friends with an equally shy or socially-vulnerable child. If shy children are paired with a prosocial child they may witness how to successfully interact with others and may also practice their own skills in front of their trusted friend. For instance, Storey, Smith, and Strain (1993) demonstrated that socially skilled classmates could be trained to effectively promote social interactions in withdrawn preschool children. Positive peer mentors have also been used in high school in interventions for social anxiety (e.g., Fisher, Masia-Warner, & Klein, 2004).

Since the effects of using a friend as a social surrogate were not clearly evident from the current research, it is too early to suggest having interventions either encouraging or discouraging children from using them. If future research replicates the negative associates found for social surrogacy, future interventions should be set up to help shy children develop less dependent relationships with their friends. However, before these interventions are developed the characteristics of surrogates and how they are being used in social settings (e.g., just as support or as a method to help shy children avoid social interaction) need to be studied.

Conclusion

School may be particularly stressful for socially inhibited children because of the social pressures that exist in this setting. Shy children are faced with the challenges of interacting with both peers and authority figures. Protective factors need to be identified for shy children to help prevent them from developing life long social problems and internalizing difficulties. Once clear protective factors are found interventions can be enforced that encourage shy children to develop these buffers. In the current dissertation the effects of childhood friendships as potential protective factors for shy children were examined. Children in middle childhood spend a lot of time with their friends. Thus friendships may be an appropriate venue to help shy children alleviate some of the negative effects associated with their behaviours.

Although the present dissertation failed to demonstrate the protective role of social surrogacy, it did however show that socially weak children do indeed use their friends as a means of coping with stressful situations. Moreover, there were even some findings that hinted that social surrogate use might be a risk factor for social inhibited

children. Therefore interventions may need to be designed to encourage shy children not to use their friends as social surrogates. However, more research is needed to confirm whether social surrogacy is harmful for socially vulnerable children.

Having a reciprocal best friend and having positive characteristics within the friendship was related to beneficial outcomes for “all children.” In contrast, when shy children were examined, the effects of having a good friendship were not so clear. Friendships may be stressful for shy children, they may worry about keeping their friend happy so they do not leave them for another child. In addition, the types of children shy children attract as friends needs further examination. Perhaps shy children tend to form friendships with other rejected children, having a shy or an aggressive friend may not be beneficial for shy/vulnerable children. However, from this dissertation we can conclude that having good friends is beneficial to all children, regardless of their levels of withdrawal. Thus, interventions should be developed to help all children acquire positive best friendships with peers at school.

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Appendix A

Study 1 - Information Letter to Parents

SCHOOL EXPERIENCES STUDY

Dear Parents,

We are writing to ask your permission for your child to participate in a research study that is being conducted at your child's school. One of the most important aspects of children's school experiences is developing satisfying relationships with other children. The purpose of this study is to better understand how children's relationships with other children in their class may be related to how they feel at school. This study is important because it will help us understand why some children enjoy being at school more than other children.

In this study children will be asked to complete questionnaires about their friendships, about how lonely they feel at school, and about how anxious they feel around their classmates. Also, children will be asked what they *think* about their classroom experiences, how 'liked' they feel they are by their peers, and if they ever feel victimized at school. We will be reading the questions to the kids in a group setting. It is important to us that this process is fun for the children! We will ensure that the children understand that they *do not* have to answer any questions that they don't want to.

This project has been approved by the _____ District as well as Carleton University's Ethics Committee for Psychological Research. All information collected from this study is strictly confidential and will only be made available to the principal investigators. If you are interested, we would be happy to provide you with a summary of our findings once all of the data has been collected.

If you have any questions related to this study and/or concerns about your child as a result of participation in this study, please feel free to contact us directly at (613) 520-2600, ext. 1979. Should you have any ethical concerns about this study then please contact Dr. Janet Mantler (Chair, Carleton University Ethics Committee for Psychological Research, (613) 520-2600, ext. 2664). If you have other concerns about this study, feel free to contact Dr. Robert Coplan (Professor, Department of Psychology, (613) 520-2600, ext. 8691) or Dr. Mary Gick (Chair, Department of Psychology, (613) 520-2600, ext. 2648). If you would like to learn more about children's friendships and social adjustment at school, there are numerous websites on the topic (e.g., <http://www.cfw.tufts.edu/>).

Kimberley Arbeau, M.A.
Ph.D. Candidate
Department of Psychology
Carleton University

Robert Coplan, Ph.D.
Professor
Department of Psychology
Carleton University

CONSENT FORM – (for parents)

The information collected for this project is confidential and protected under the Municipal Freedom of Information and Privacy Act, 1989.

Date: _____

(name of child - please print)

(name of parent or guardian - please print)

Please check one:

_____ I **agree** to have my child participate in the School Experiences Study that is being conducted at my school.

_____ I **do not agree** to have my child participate in the School Experiences Study that is being conducted at my school.

(signature of parent or guardian)

Please keep the letter (first page) and return the signed consent form and the completed questionnaire to your child's teacher sealed in the enclosed envelope. Please return the consent form as soon as possible even if you are not going to be participating in the study.

If you would like to receive a summary of the findings from this study please indicate an e-mail address or mailing address in which we can send the results:

Appendix C

Study 1 – Parent Friendship Questions

Does your child have a best friend? Yes _____ No _____

If so, from where does your child know their best friend?

They are in the same class _____

They are *not* in the same class but are at the same school _____

They are in the same activity outside of school _____

They live in the same neighbourhood _____

Other (be specific) _____

Appendix D

Study 1 - Child Social Surrogate Questionnaire (CSSQ)

Sometimes when we do things we like to bring friends with us. For the following situations you will be asked to answer questions about how true each of the statements are for you and your reasons for bringing a friend to each of these situations.

- 1 = **never true about me**
- 2 = **hardly ever true about me**
- 3 = **sometimes true about me**
- 4 = **most of the time true about me**
- 5 = **always true about me**

1. You have a question for the teacher.

| | | | | | |
|---|---|---|---|---|---|
| I would try to get a friend to go with me. | 1 | 2 | 3 | 4 | 5 |
| It would be hard for me to ask the teacher a question if I could not find a friend to go with me. | 1 | 2 | 3 | 4 | 5 |
| If I couldn't get a friend to go with me, I would not ask the teacher the question. | 1 | 2 | 3 | 4 | 5 |
| I would need a friend with me to ask the teacher my question. | 1 | 2 | 3 | 4 | 5 |
| I wouldn't usually ask a friend to come with me to ask the teacher a question. | 1 | 2 | 3 | 4 | 5 |
| My friend would do most of the talking to the teacher. | 1 | 2 | 3 | 4 | 5 |
| When asking the teacher the question, I would stay close to my friend. | 1 | 2 | 3 | 4 | 5 |
| I would talk more if a friend was with me. | 1 | 2 | 3 | 4 | 5 |
| I would be less nervous to ask the teacher the question if a friend was with me. | 1 | 2 | 3 | 4 | 5 |
| I would be more outgoing if I had a friend with me. | 1 | 2 | 3 | 4 | 5 |

| | | | |
|---|--|--|--|
| Why would you want a friend to go with you? | It is more fun to have someone to go with me | I would be less scared if I had a friend with me | If my friend came they would talk so I wouldn't need to talk |
|---|--|--|--|

- 1 = never true about me
- 2 = hardly ever true about me
- 3 = sometimes true about me
- 4 = most of the time true about me
- 5 = always true about me

2. You have been invited to a party.

| | | | | | |
|--|---|---|---|---|---|
| I would try to get a friend to go with me. | 1 | 2 | 3 | 4 | 5 |
| It would be hard for me to go to the party if I could not find a friend to go with me. | 1 | 2 | 3 | 4 | 5 |
| If I couldn't get a friend to go with me, I would not go to the party. | 1 | 2 | 3 | 4 | 5 |
| I would need a friend with me to go to the party. | 1 | 2 | 3 | 4 | 5 |
| I wouldn't usually ask a friend to come with me to go to a party. | 1 | 2 | 3 | 4 | 5 |
| My friend would do most of the talking at the party. | 1 | 2 | 3 | 4 | 5 |
| When at the party, I would stay close to my friend. | 1 | 2 | 3 | 4 | 5 |
| I would talk more if a friend was with me. | 1 | 2 | 3 | 4 | 5 |
| I would be less nervous to go to the party if a friend was with me. | 1 | 2 | 3 | 4 | 5 |
| I would be more outgoing if I had a friend with me. | 1 | 2 | 3 | 4 | 5 |

| | | | |
|---|--|--|--|
| Why would you want a friend to go with you? | It is more fun to have someone to go with me | I would be less scared if I had a friend with me | If my friend came they would talk so I wouldn't need to talk |
|---|--|--|--|

- 1 = never true about me
- 2 = hardly ever true about me
- 3 = sometimes true about me
- 4 = most of the time true about me
- 5 = always true about me

3. You are in the cafeteria at lunch and you have been invited to sit with kids you don't know.

| | | | | | |
|---|---|---|---|---|---|
| I would try to get a friend to go with me. | 1 | 2 | 3 | 4 | 5 |
| It would be hard for me to go to eat lunch with the kids I did not know if I could not find a friend to go with me. | 1 | 2 | 3 | 4 | 5 |
| If I couldn't get a friend to go with me, I would not eat lunch with the kids I did not know. | 1 | 2 | 3 | 4 | 5 |
| I would need a friend with me to eat lunch with the kids I did not know. | 1 | 2 | 3 | 4 | 5 |
| I wouldn't usually ask a friend to come with me to each lunch with these kids. | 1 | 2 | 3 | 4 | 5 |
| My friend would do most of the talking at lunch. | 1 | 2 | 3 | 4 | 5 |
| At lunch, I would stay close to my friend. | 1 | 2 | 3 | 4 | 5 |
| I would talk more if a friend was with me. | 1 | 2 | 3 | 4 | 5 |
| I would be less nervous to eat lunch with the kids I did not know if a friend was with me. | 1 | 2 | 3 | 4 | 5 |
| I would be more outgoing if I had a friend with me. | 1 | 2 | 3 | 4 | 5 |

| | | | |
|---|--|--|--|
| Why would you want a friend to go with you? | It is more fun to have someone to go with me | I would be less scared if I had a friend with me | If my friend came they would talk so I wouldn't need to talk |
|---|--|--|--|

- 1 = never true about me
- 2 = hardly ever true about me
- 3 = sometimes true about me
- 4 = most of the time true about me
- 5 = always true about me

4. For class you must perform a skit.

| | | | | | |
|--|---|---|---|---|---|
| I would try to get a friend to go with me. | 1 | 2 | 3 | 4 | 5 |
| It would be hard for me to perform in the skit if I could not find a friend to go with me. | 1 | 2 | 3 | 4 | 5 |
| If I couldn't get a friend to go with me, I would not perform in the skit. | 1 | 2 | 3 | 4 | 5 |
| I would need a friend with me to perform in a skit. | 1 | 2 | 3 | 4 | 5 |
| I wouldn't usually ask a friend to come with me to perform in the skit. | 1 | 2 | 3 | 4 | 5 |
| My friend would do most of the talking in the skit. | 1 | 2 | 3 | 4 | 5 |
| In the skit, I would stay close to my friend. | 1 | 2 | 3 | 4 | 5 |
| I would talk more if a friend was with me. | 1 | 2 | 3 | 4 | 5 |
| I would be less nervous to perform in the skit if a friend was with me. | 1 | 2 | 3 | 4 | 5 |
| I would be more outgoing if I had a friend with me. | 1 | 2 | 3 | 4 | 5 |

| | | | |
|---|--|--|--|
| Why would you want a friend to go with you? | It is more fun to have someone to go with me | I would be less scared if I had a friend with me | If my friend came they would talk so I wouldn't need to talk |
|---|--|--|--|

Reason for bringing a friend: last item

Appendix E

Children's Shyness Questionnaire

| | | | |
|---|-----|----|-----------|
| I find it hard to talk to someone I don't know. | YES | NO | Sometimes |
| I am easily embarrassed | YES | NO | Sometimes |
| I am usually quiet when I am with others. | YES | NO | Sometimes |
| Do you blush when people sing "Happy Birthday" to you? | YES | NO | Sometimes |
| I feel nervous when I am with important people. | YES | NO | Sometimes |
| I feel shy when I have to read aloud in front of the class. | YES | NO | Sometimes |
| I feel nervous about joining a new class. | YES | NO | Sometimes |
| I go red when someone teases me. | YES | NO | Sometimes |
| Do you say a lot when you meet someone for the first time? | YES | NO | Sometimes |
| I am usually shy in a group of people. | YES | NO | Sometimes |
| I feel shy when I am the centre of attention. | YES | NO | Sometimes |
| Do you blush a lot? | YES | NO | Sometimes |
| I feel shy when the teacher speaks to me. | YES | NO | Sometimes |
| If the teacher asked for someone to act in a play would you put your hand up? | YES | NO | Sometimes |
| It is easy for me to make friends. | YES | NO | Sometimes |
| I would be embarrassed if the teacher put me in the front row on stage. | YES | NO | Sometimes |
| When grown-ups ask you about yourself do you often not know what to say? | YES | NO | Sometimes |
| I go red when the teacher praises my work. | YES | NO | Sometimes |
| I feel shy why I have to go into a room full of people. | YES | NO | Sometimes |

| | | | |
|---|-----|----|-----------|
| Are you embarrassed when your friends look at photos of you when you were little? | YES | NO | Sometimes |
| Would you be too shy to ask someone to sponsor you for a good cause? | YES | NO | Sometimes |
| I enjoy having my photograph taken. | YES | NO | Sometimes |
| I usually talk to only one or two close friends. | YES | NO | Sometimes |
| I am usually shy when I meet girls (boys). | YES | NO | Sometimes |
| I go red when I have to speak to a girl (boy) of my age. | YES | NO | Sometimes |

Appendix F Social Anxiety Scale for Children – Revised

| | | | | | |
|---|------------|-------------|-----------|------------------|--------------|
| 1. I worry about doing something new in front of other kids. | not at all | hardly ever | sometimes | most of the time | all the time |
| 2. I like to read. | not at all | hardly ever | sometimes | most of the time | all the time |
| 3. I worry about being teased. | not at all | hardly ever | sometimes | most of the time | all the time |
| 4. I feel shy around kids I don't know. | not at all | hardly ever | sometimes | most of the time | all the time |
| 5. I feel that other kids talk about me behind my back. | not at all | hardly ever | sometimes | most of the time | all the time |
| 6. I only talk to kids I know really well. | not at all | hardly ever | sometimes | most of the time | all the time |
| 7. I like to play with other kids. | not at all | hardly ever | sometimes | most of the time | all the time |
| 8. I worry about what other kids think of me. | not at all | hardly ever | sometimes | most of the time | all the time |
| 9. I'm afraid that other kids will not like me. | not at all | hardly ever | sometimes | most of the time | all the time |
| 10. I get nervous when I talk to kids I don't know very well. | not at all | hardly ever | sometimes | most of the time | all the time |
| 11. I like to play sports. | not at all | hardly ever | sometimes | most of the time | all the time |

| | | | | | |
|---|------------|-------------|-----------|------------------|--------------|
| 12. I worry about what other children say about me. | not at all | hardly ever | sometimes | most of the time | all the time |
| 13. I get nervous when I talk to new kids. | not at all | hardly ever | sometimes | most of the time | all the time |
| 14. I worry that other kids don't like me. | not at all | hardly ever | sometimes | most of the time | all the time |
| 15. I am quiet when I'm with a group of kids. | not at all | hardly ever | sometimes | most of the time | all the time |
| 16. I like to play by myself. | not at all | hardly ever | sometimes | most of the time | all the time |
| 17. I feel that kids are making fun of me. | not at all | hardly ever | sometimes | most of the time | all the time |
| 18. If I get into an argument with another kid, I worry that he or she won't like me. | not at all | hardly ever | sometimes | most of the time | all the time |
| 19. I'm afraid to invite others to my house because they might say no. | not at all | hardly ever | sometimes | most of the time | all the time |
| 20. I feel nervous when I'm around certain kids. | not at all | hardly ever | sometimes | most of the time | all the time |
| 21. I feel shy even with kids I know very well. | not at all | hardly ever | sometimes | most of the time | all the time |

| | | | | | |
|--|------------|----------------|-----------|---------------------|-----------------|
| 22. It's hard for me to ask other kids to play with me. | not at all | hardly ever | sometimes | most of the time | all the time |
|--|------------|----------------|-----------|---------------------|-----------------|

Fear of Negative Evaluation (FNE) items: 3, 5, 8, 9, 12, 14, 17, 18

Social Avoidance and Distress-Specific to New Peers or Situations (SAD-New) items: 1, 4, 6, 10, 13, 20

Generalized Social Avoidance and Distress (SAD-General) items: 15, 19, 21, 22

Filler items: 2, 7, 11, 16

Appendix G

Self-Report Victimization Scale

| Items | Never | Sometimes | A lot |
|---|-------|-----------|-------|
| (Training Items) ARE THERE TIMES WHEN YOU: | | | |
| Have ice cream for dessert? | 1 | 2 | 3 |
| Ride the bus to school? | 1 | 2 | 3 |
| Eat breakfast at night-time? | 1 | 2 | 3 |

| WHEN IN SCHOOL, DOES ANYONE IN YOUR CLASS: | Never | Sometimes | A lot |
|--|-------|-----------|-------|
| 1. Pick on you at school? | 1 | 2 | 3 |
| 2. Play games with you? | 1 | 2 | 3 |
| 3. Tell you you're good at doing things? | 1 | 2 | 3 |
| 4. Make you feel better if you are having a bad day? | 1 | 2 | 3 |
| 5. Let you play with them? | 1 | 2 | 3 |
| 6. Say mean things to you? | 1 | 2 | 3 |
| 7. Say bad things about you to other kids? | 1 | 2 | 3 |
| 8. Share things like stickers, toys, and games with you? | 1 | 2 | 3 |
| 9. Hit or kick you? | 1 | 2 | 3 |
| 10. Miss you if you weren't in school? | 1 | 2 | 3 |
| 11. Cheer you up if you feel sad? | 1 | 2 | 3 |
| 12. Help you if kids are being mean to you? | 1 | 2 | 3 |

Victimization items: 1, 6, 7, 9 (the remainder of items are filler items)

Appendix H

Loneliness and Social Dissatisfaction Questionnaire

| | | | | | |
|---|---------------------------------|----------------------------------|--------------------------------|---------------------------------------|-----------------------------|
| (Practice) I like toast. | that's not true at all about me | that's hardly ever true about me | that's sometimes true about me | that's true about me most of the time | that's always true about me |
| (Practice) I like to watch movies. | that's not true at all about me | that's hardly ever true about me | that's sometimes true about me | that's true about me most of the time | that's always true about me |
| 1. It's easy for me to make new friends at school. | that's not true at all about me | that's hardly ever true about me | that's sometimes true about me | that's true about me most of the time | that's always true about me |
| 2. I like to read. | that's not true at all about me | that's hardly ever true about me | that's sometimes true about me | that's true about me most of the time | that's always true about me |
| 3. I have nobody to talk to in class. | that's not true at all about me | that's hardly ever true about me | that's sometimes true about me | that's true about me most of the time | that's always true about me |
| 4. I'm good at working with other children in my class. | that's not true at all about me | that's hardly ever true about me | that's sometimes true about me | that's true about me most of the time | that's always true about me |
| 5. I watch TV a lot. | that's not true at all about me | that's hardly ever true about me | that's sometimes true about me | that's true about me most of the time | that's always true about me |
| 6. It's hard for me to make friends at school. | that's not true at all about me | that's hardly ever true about me | that's sometimes true about me | that's true about me most of the time | that's always true about me |
| 7. I like school. | that's not true at all about me | that's hardly ever true about me | that's sometimes true about me | that's true about me most of the time | that's always true about me |
| 8. I have lots of friends in my class. | that's not true at all about me | that's hardly ever true about me | that's sometimes true about me | that's true about me most of the time | that's always true about me |

| | | | | | |
|---|---------------------------------|----------------------------------|--------------------------------|---------------------------------------|-----------------------------|
| 9. I feel alone at school. | that's not true at all about me | that's hardly ever true about me | that's sometimes true about me | that's true about me most of the time | that's always true about me |
| 10. I can find a friend in my class when I need one. | that's not true at all about me | that's hardly ever true about me | that's sometimes true about me | that's true about me most of the time | that's always true about me |
| 11. I play sports a lot. | that's not true at all about me | that's hardly ever true about me | that's sometimes true about me | that's true about me most of the time | that's always true about me |
| 12. It's hard to get kids in school to like me. | that's not true at all about me | that's hardly ever true about me | that's sometimes true about me | that's true about me most of the time | that's always true about me |
| 13. I like science. | that's not true at all about me | that's hardly ever true about me | that's sometimes true about me | that's true about me most of the time | that's always true about me |
| 14. I don't have anyone to play with at school. | that's not true at all about me | that's hardly ever true about me | that's sometimes true about me | that's true about me most of the time | that's always true about me |
| 15. I like music. | that's not true at all about me | that's hardly ever true about me | that's sometimes true about me | that's true about me most of the time | that's always true about me |
| 16. I get along with my classmates. | that's not true at all about me | that's hardly ever true about me | that's sometimes true about me | that's true about me most of the time | that's always true about me |
| 17. I feel left out of things at school. | that's not true at all about me | that's hardly ever true about me | that's sometimes true about me | that's true about me most of the time | that's always true about me |
| 18. There's no other kids I can go to when I need help in school. | that's not true at all about me | that's hardly ever true about me | that's sometimes true about me | that's true about me most of the time | that's always true about me |
| 19. I like to paint and draw. | that's not true at all about me | that's hardly ever true about me | that's sometimes true about me | that's true about me most of the time | that's always true about me |

| | | | | | |
|--|---------------------------------|----------------------------------|--------------------------------|------------------------------------|-----------------------------|
| 20. I don't get along with other children in school. | that's not true at all about me | that's hardly ever true about me | that's sometimes true about me | that's true about most of the time | that's always true about me |
| 21. I'm lonely at school. | that's not true at all about me | that's hardly ever true about me | that's sometimes true about me | that's true about most of the time | that's always true about me |
| 22. I am well liked by the kids in my class. | that's not true at all about me | that's hardly ever true about me | that's sometimes true about me | that's true about most of the time | that's always true about me |
| 23. I like playing board games a lot. | that's not true at all about me | that's hardly ever true about me | that's sometimes true about me | that's true about most of the time | that's always true about me |
| 24. I don't have any friends in class. | that's not true at all about me | that's hardly ever true about me | that's sometimes true about me | that's true about most of the time | that's always true about me |

Filler items: 2, 5, 7, 11, 13, 15, 19, 23

Appendix I

Self-Description Questionnaire –
Peer Relations and General School Subscales

This is a chance to look at yourself. **It is not a test.** There are no right answers and everyone will have different answers. Be sure that your answers show how you feel about yourself. Please **circle the number** which is the **most correct** statement about you. Please do not leave any statements blank. If unsure, please ASK FOR HELP.

1 = false
 2 = mostly false
 3 = sometimes false, sometimes true
 4 = mostly true
 5 = true

| | | | | | |
|--|---|---|---|---|---|
| 1. I have lots of friends. | 1 | 2 | 3 | 4 | 5 |
| 2. I make friends easily. | 1 | 2 | 3 | 4 | 5 |
| 3. Most kids have more friends than I do. | 1 | 2 | 3 | 4 | 5 |
| 4. I get along with kids easily. | 1 | 2 | 3 | 4 | 5 |
| 5. I am easy to like. | 1 | 2 | 3 | 4 | 5 |
| 6. Other kids want me to be their friend. | 1 | 2 | 3 | 4 | 5 |
| 7. I have more friends than most other kids. | 1 | 2 | 3 | 4 | 5 |
| 8. I am popular with kids of my own age. | 1 | 2 | 3 | 4 | 5 |
| 9. Most other kids like me. | 1 | 2 | 3 | 4 | 5 |
| 10. I am good at all school subjects. | 1 | 2 | 3 | 4 | 5 |
| 11. I enjoy doing work in all school subjects. | 1 | 2 | 3 | 4 | 5 |

| | | | | | |
|--|---|---|---|---|---|
| 12. I get good marks in all school subjects. | 1 | 2 | 3 | 4 | 5 |
| 13. I hate all school subjects. | 1 | 2 | 3 | 4 | 5 |
| 14. I learn things quickly in all school subjects. | 1 | 2 | 3 | 4 | 5 |
| 15. I am interested in all school subjects. | 1 | 2 | 3 | 4 | 5 |
| 16. I am dumb in all school subjects. | 1 | 2 | 3 | 4 | 5 |
| 17. I look forward to all school subjects. | 1 | 2 | 3 | 4 | 5 |
| 18. Work in all school subjects is easy for me. | 1 | 2 | 3 | 4 | 5 |
| 19. I like all school subjects. | 1 | 2 | 3 | 4 | 5 |

Peer Relations Self-Concept Subscale: Items 1 to 9
General School Self-Concept: Items 10 to 19

Appendix J Study 2 - Information Letter to Parents and Demographics Questionnaire



THE FRIENDSHIP STUDY

Dear Parents,

We are writing to ask your permission for your child to participate in a research study that is being conducted at your child's school. One of the most important aspects of children's school experiences is developing satisfying relationships with other children. The purpose of this study is to better understand how children's relationships with other children in their class may be related to how they feel at school. This study is important because it will help us understand why some children enjoy being at school more than other children.

In this study children will be asked to complete questionnaires about their friendships, about how lonely they feel at school, and about how anxious they feel around their classmates. Also, children will be asked how 'liked' they feel they are by their peers, and if they ever feel victimized and sad at school. Further, classroom teachers will also be asked to complete a short questionnaire on each participating child's behaviors in the classroom. We will come to the classroom on 2 school days, and we will be reading the questions to the kids in a group setting. Each session should last approximately 30 minutes. It is important to us that this process is fun for the children! We will ensure that the children understand that they *do not* have to answer any questions that they don't want to and can quit at anytime. If children choose to withdraw from the study all of the information collected on these children will be destroyed.

This project has been approved by the _____ *Board of Education* as well as by Carleton University's Ethics Committee for Psychological Research. There are no known risks associated with this project. All information collected from this study is strictly confidential and will only be made available to the principal investigators. Children will be asked to put their names on their questionnaires only to ensure that we can match up their information from the 2 sessions with the information provided by their teacher. However, when their information is being examined each child will be assigned a number and *no names will be involved in the analyses*. The data will be destroyed in approximately 5 years. If you are interested, we would be happy to provide you with a summary of our findings once all of the data has been collected. However, the responses from individual children will not be analyzed and therefore will not be made available. We are only interested in how children think and feel at school in general, not in individual children's responses. The results from this study (the overall findings, not individual responses) will be used in a Ph.D. thesis and may also be published in research journals and presented at research conferences.

If you have any questions related to this study and/or concerns about your child as a result of participation in this study, please feel free to contact us directly at (403) 271-6239. Should you have any ethical concerns about this study then please contact Dr. Avi Parush (Chair, Carleton University Ethics Committee for Psychological Research, (613) 520-2600,

ext. 6026). If you have other concerns about this study, feel free to contact Dr. Robert Coplan (Professor, Department of Psychology, (613) 520-2600, ext. 8691) or Dr. Anne Bowker (Chair, Department of Psychology, (613) 520-2600, ext. 2648). If you would like to learn more about children's friendships and social adjustment at school, there are numerous websites on the topic (e.g., <http://www.cfw.tufts.edu/>).

Kimberley Arbeau, M.A.
Ph.D. Candidate
Department of Psychology
Carleton University

Robert Coplan, Ph.D.
Professor
Department of Psychology
Carleton University

CONSENT FORM

The information collected for this project is confidential and protected under the Municipal Freedom of Information and Privacy Act, 1989.

Date: _____

(name of child - please print)

(name of parent or guardian - please print)

Please check one:

_____ I **agree** to have my child participate in The Friendship Study that is being conducted at my child's school.

_____ I **do not agree** to have my child participate in The Friendship Study that is being conducted at my child's school.

(signature of parent or guardian)

Please keep the letter (first page) and return the signed consent form and the completed questionnaire to your child's teacher sealed in the enclosed envelope. Please return the consent form as soon as possible even if your child is not going to be participating in the study.

If you would like to receive a summary of the findings from this study please indicate an e-mail address or mailing address in which we can send the results:

Appendix K Study 2 – Child Social Surrogate Questionnaire – Reciprocal Best Friend

Sometimes when we do things we like to bring friends with us. For the following situations you will be asked to answer questions about how true each of the statements are for you and your reasons for bringing (friend's name) to each of these situations.

| | | |
|---------------------------|----------------------|--------------------|
| 1 = never true | 2 = hardly ever true | 3 = sometimes true |
| 4 = most of the time true | 5 = always true | |

1. You have a question for the teacher.

| | | | | | |
|---|---|---|---|---|---|
| I would try to get _____ to go with me. | 1 | 2 | 3 | 4 | 5 |
| It would be hard for me to ask the teacher a question if I could not get _____ to go with me. | 1 | 2 | 3 | 4 | 5 |
| If I couldn't get _____ to go with me, I would not ask the teacher the question. | 1 | 2 | 3 | 4 | 5 |
| I would need _____ with me to ask the teacher my question. | 1 | 2 | 3 | 4 | 5 |
| _____ would do most of the talking to the teacher. | 1 | 2 | 3 | 4 | 5 |
| When asking the teacher the question, I would stay close to _____. | 1 | 2 | 3 | 4 | 5 |
| I would talk more if _____ was with me. | 1 | 2 | 3 | 4 | 5 |
| I would be less nervous to ask the teacher the question if _____ was with me. | 1 | 2 | 3 | 4 | 5 |
| I would be more outgoing if I had _____ with me. | 1 | 2 | 3 | 4 | 5 |

| | | | | |
|--|--------------------------------------|---|--|---|
| Why would you want _____ to go with you? (circle or check 1 answer) | I wouldn't want _____ to go with me. | It is more fun to have _____ to go with me. | I would be less scared if I had _____ with me. | If _____ came they would talk so I wouldn't need to talk. |
| | | | | |

1 = never true 2 = hardly ever true 3 = sometimes true
4 = most of the time true 5 = always true

2. You have been invited to a party.

I would try to get _____ to go with me. 1 2 3 4 5

It would be hard for me to go to the party if I could not get _____ to go with me. 1 2 3 4 5

If I couldn't get _____ to go with me, I would not go to the party. 1 2 3 4 5

I would need _____ with me to go to the party. 1 2 3 4 5

_____ would do most of the talking at the party. 1 2 3 4 5

When at the party, I would stay close to _____. 1 2 3 4 5

I would talk more if _____ was with me. 1 2 3 4 5

I would be less nervous to go to the party if _____ was with me. 1 2 3 4 5

I would be more outgoing if I had _____ with me. 1 2 3 4 5

| | | | | |
|---|---|--|---|--|
| <p>Why would you want _____ to go with you? (circle or check 1 answer)</p> | <p>I wouldn't want _____ to go with me.</p> | <p>It is more fun to have _____ to go with me.</p> | <p>I would be less scared if I had _____ with me.</p> | <p>If _____ came they would talk so I wouldn't need to talk.</p> |
|---|---|--|---|--|

1 = never true 2 = hardly ever true 3 = sometimes true
 4 = most of the time true 5 = always true

3. You are in the cafeteria at lunch and you have been invited to sit with kids you don't know.

I would try to get _____ to go with me. 1 2 3 4 5

It would be hard for me to go to eat lunch with the kids I did not know if I could not get to go with me. 1 2 3 4 5

If I couldn't get _____ to go with me, I would not eat lunch with the kids I did not know. 1 2 3 4 5

I would need _____ with me to eat lunch with the kids I did not know. 1 2 3 4 5

_____ would do most of the talking at lunch. 1 2 3 4 5

At lunch, I would stay close to _____. 1 2 3 4 5

I would talk more if _____ was with me. 1 2 3 4 5

I would be less nervous to eat lunch with the kids I did not know if _____ was with me. 1 2 3 4 5

I would be more outgoing if I had _____ with me. 1 2 3 4 5

| | | | | |
|---|---|--|---|--|
| <p>Why would you want _____ to go with you? (circle or check 1 answer)</p> | <p>I wouldn't want _____ to go with me.</p> | <p>It is more fun to have _____ to go with me.</p> | <p>I would be less scared if I had _____ with me.</p> | <p>If _____ came they would talk so I wouldn't need to talk.</p> |
|---|---|--|---|--|

1 = never true 2 = hardly ever true 3 = sometimes true
4 = most of the time true 5 = always true

4. For class you must perform a skit.

I would try to get _____ to go with me. 1 2 3 4 5

It would be hard for me to perform in the skit if I could not get _____ to go with me. 1 2 3 4 5

If I couldn't get _____ to go with me, I would not perform in the skit. 1 2 3 4 5

I would need _____ with me to perform in a skit. 1 2 3 4 5

_____ would do most of the talking in the skit. 1 2 3 4 5

In the skit, I would stay close to _____. 1 2 3 4 5

I would talk more if _____ was with me. 1 2 3 4 5

I would be less nervous to perform in the skit if _____ was with me. 1 2 3 4 5

I would be more outgoing if I had _____ with me. 1 2 3 4 5

| | | | |
|---|---|--|---|
| <p>Why would you want _____ to go with you? (circle or check 1 answer)</p> | <p>I wouldn't want _____ to go with me.</p> | <p>It is more fun to have _____ to go with me.</p> | <p>I would be less scared if I had _____ with me.</p> |
| <p>If _____ came they would talk so I wouldn't need to talk.</p> | | | |

Appendix L

Friendship Assessments

Below there is a list of names of some of your classmates. From the list choose up to 3 of your “best friends.” You do not have to fill in all 3 blanks. Only put the names of the kids who you think are your best friends.

Very Best Friend _____

2nd Best Friend _____

3rd Best Friend _____

Appendix M

Friendship Quality Questionnaire

The next questions are about your friendship with **(friends name)**. Please be as honest as you can when you are answering these questions.

| | | | | | |
|---|--------------------|------------------|------------------|----------------|----------------|
| 1. (PRACTICE) (friend) and I like to play outside | not at all true | a little true | somewhat true | pretty true | really true |
| 2. (friend) and I always sit together at lunch | not at all true | a little true | somewhat true | pretty true | really true |
| 3. (friend) and I get mad a lot | not at all true | a little true | somewhat true | pretty true | really true |
| 4. (friend) tells me I am good at things | not at all true | a little true | somewhat true | pretty true | really true |
| 5. (friend) sticks up for me if others talk behind my back | not at all true | a little true | somewhat true | pretty true | really true |
| 6. (friend) and I make each other feel important and special | not at all true | a little true | somewhat true | pretty true | really true |
| 7. (friend) and I always pick each other as partners for things | not at all true | a little true | somewhat true | pretty true | really true |
| 8. (friend) says "I'm sorry" if [he/she] hurts my feelings | not at all true | a little true | somewhat true | pretty true | really true |
| 9. (friend) sometimes says mean things about me to other kids | not at all true | a little true | somewhat true | pretty true | really true |
| 10. (friend) has good ideas about games to play | not at all true | a little true | somewhat true | pretty true | really true |
| 11. (friend) and I talk about how to get over being mad at each other | not at all true | a little true | somewhat true | pretty true | really true |
| 12. (friend) would like me even if others didn't | not at all true | a little true | somewhat true | pretty true | really true |

| | | | | | |
|--|-----------------|---------------|---------------|-------------|-------------|
| 13. (friend) tells me I am pretty smart | not at all true | a little true | somewhat true | pretty true | really true |
| 14. (friend) and I always tell each other our problems | not at all true | a little true | somewhat true | pretty true | really true |
| 15. (friend) makes me feel good about my ideas | not at all true | a little true | somewhat true | pretty true | really true |
| 16. I talk to [him/her] when I'm mad about something that happened to me | not at all true | a little true | somewhat true | pretty true | really true |
| 17. (friend) and I help each other with chores a lot | not at all true | a little true | somewhat true | pretty true | really true |
| 18. (friend) and I do special favours for each other | not at all true | a little true | somewhat true | pretty true | really true |
| 19. (friend) and I do fun things together a lot | not at all true | a little true | somewhat true | pretty true | really true |
| 20. (friend) and I argue a lot | not at all true | a little true | somewhat true | pretty true | really true |
| 21. I can count on (friend) to keep promises | not at all true | a little true | somewhat true | pretty true | really true |
| 22. (friend) and I go to each others' houses | not at all true | a little true | somewhat true | pretty true | really true |
| 23. (friend) and I always play together at recess | not at all true | a little true | somewhat true | pretty true | really true |
| 24. (friend) gives advice with figuring things out | not at all true | a little true | somewhat true | pretty true | really true |
| 25. (friend) and I talk about the things that make us sad | not at all true | a little true | somewhat true | pretty true | really true |
| 26. (friend) and I make up easily when we have a fight | not at all true | a little true | somewhat true | pretty true | really true |
| 27. (friend) and I fight a lot | not at all true | a little true | somewhat true | pretty true | really true |

| | | | | | |
|---|-----------------|---------------|---------------|-------------|-------------|
| 28. (friend) and I share things with each other | not at all true | a little true | somewhat true | pretty true | really true |
| 29. (friend) and I talk about how to make ourselves feel better if we are mad at each other | not at all true | a little true | somewhat true | pretty true | really true |
| 30. (friend) does not tell others my secrets | not at all true | a little true | somewhat true | pretty true | really true |
| 31. (friend) and I bug each other a lot | not at all true | a little true | somewhat true | pretty true | really true |
| 32. (friend) and I come up with good ideas on ways to do things | not at all true | a little true | somewhat true | pretty true | really true |
| 33. (friend) and I loan each other things all the time | not at all true | a little true | somewhat true | pretty true | really true |
| 34. (friend) helps me so I can get done quicker | not at all true | a little true | somewhat true | pretty true | really true |
| 35. (friend) and I get over our arguments really quickly | not at all true | a little true | somewhat true | pretty true | really true |
| 36. (friend) and I count on each other for good ideas on how to get things done | not at all true | a little true | somewhat true | pretty true | really true |
| 37. (friend) doesn't listen to me | not at all true | a little true | somewhat true | pretty true | really true |
| 38. (friend) and I tell each other private things | not at all true | a little true | somewhat true | pretty true | really true |
| 39. (friend) and I help each other with schoolwork a lot | not at all true | a little true | somewhat true | pretty true | really true |
| 40. (friend) and I tell each other secrets | not at all true | a little true | somewhat true | pretty true | really true |

| | | | | | |
|--------------------------------------|-----------------|---------------|---------------|-------------|-------------|
| 41. (friend) cares about my feelings | not at all true | a little true | somewhat true | pretty true | really true |
|--------------------------------------|-----------------|---------------|---------------|-------------|-------------|

Validation and Caring items: 4, 5, 6, 8, 10, 12, 13, 15, 30, 41

Conflict Resolution items: 11, 26, 35

Help and Guidance items: 17, 18, 24, 28, 32, 33, 34, 36, 39

Companionship and Recreation items: 2, 7, 19, 22, 23

Intimate Exchange items: 14, 16, 25, 29, 38, 40

Conflict and Betrayal items: 3, 9, 20, 21, 27, 31, 37

Appendix N

Children's Depression Inventory – Short Form

Kids sometimes have different feelings and ideas.

This form lists the feelings and ideas in groups. From each group of three sentences, pick one sentence that describes you *best* for the past two weeks. After you pick a sentence from the first group, go onto the next group.

There is no right or wrong answer. Just pick the sentence that best describes the way you have been recently. Put a mark like this next to your answer. Put the mark in the box next to the sentence that you pick.

Here is an example of how this form works. Try it. Put a mark next to the sentence that describes you best.

Example: I read books I read books once I never read
books. all the time. in a while.

Remember, pick out the sentences that describe you best in the PAST TWO WEEKS. Just choose 1 sentence in each row.

| | |
|--|--|
| 1. <input type="checkbox"/> I am sad once in a while. <input type="checkbox"/> I am sad many times. <input type="checkbox"/> I am sad all the time. | 6. <input type="checkbox"/> Things bother me all the time. <input type="checkbox"/> Things bother me many times. <input type="checkbox"/> Things bother me once in a while. |
| 2. <input type="checkbox"/> Nothing will ever work out for me. <input type="checkbox"/> I am not sure if things will work out for me. <input type="checkbox"/> Things will work out for me O.K. | 7. <input type="checkbox"/> I look O.K. <input type="checkbox"/> There are some bad things about my looks. <input type="checkbox"/> I look ugly. |
| 3. <input type="checkbox"/> I do most things O.K. <input type="checkbox"/> I do many things wrong. <input type="checkbox"/> I do everything wrong. | 8. <input type="checkbox"/> I do not feel alone. <input type="checkbox"/> I feel alone many times. <input type="checkbox"/> I feel alone all the time. |
| 4. <input type="checkbox"/> I hate myself. <input type="checkbox"/> I do not like myself. <input type="checkbox"/> I like myself. | 9. <input type="checkbox"/> I have plenty of friends. <input type="checkbox"/> I have some friends but I wish I had more. <input type="checkbox"/> I do not have any friends. |
| 5. <input type="checkbox"/> I feel like crying everyday. <input type="checkbox"/> I feel like crying many days. <input type="checkbox"/> I feel like crying once in a while. | 10. <input type="checkbox"/> Nobody really loves me. <input type="checkbox"/> I am not sure if anybody loves me. <input type="checkbox"/> I am sure that somebody loves me. |

Appendix O Teacher Questionnaire – Strengths and Difficulties Questionnaire

For each item, please mark the box for Not True, Somewhat True, or Certainly True. It would help us if you answered all the items as best you can even if you are not absolutely certain.

Please give your answers on the basis of the child's behaviour over the last six months or this school year.

Child's name _____

| | Not True | Somewhat True | Certainly True |
|--|--------------------------|--------------------------|--------------------------|
| 1. Considerate of other people's feelings. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Often complains of headaches, stomach-aches or sickness | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Shares readily with other children, for example toys, treats, pencils | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Often loses temper | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Rather solitary, prefers to play alone | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Generally well behaved, usually does what adults request | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. Many worries or often seems worried | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. Helpful if someone is hurt, upset or feeling ill | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. Has at least one good friend | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Often fights with other children or bullies them | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. Often unhappy, depressed or tearful | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. Generally liked by other children | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. Nervous or clingy in new situations, easily loses confidence | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. Kind to younger children | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. Often lies or cheats | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 16. Picked on or bullied by other children | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 17. Often offers to help others (parents, teachers, other children) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 18. Steals from home, school or elsewhere | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 19. Gets along better with adults than with other children | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 20. Many fears, easily scared | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Emotional Symptoms items: 2, 7, 11, 13, 20

Peer Problems items: 5, 9, 12, 16, 19

Appendix P

Pamphlet

Some Contact Information

Thank you so much for your help!!! If you would like to talk to me about any of the questions you just answered please feel free to contact me. My telephone number in Calgary is 271-6239, and my telephone number at my school in Ontario is (613) 520-2600 ext. 1979. You can also e-mail me at karbeau@connect.carleton.ca.

If you are experiencing problems at school or at home you can also contact the Kids' Help Phone at 1-800-668-6868 or visit their website at www.kidshelpphone.ca to get help. These people will not tell anyone what you tell them.

Thank you again for your help! Have fun during the rest of your school year!!!

