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The Role of Attachment and Caregiving in the Emergence of Generativity from
Early to Middle Adolescence

Heather Lawford

A Thesis

in

The Department

of

Psychology

Presented in Partial Fulfillment of the Requirements

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ABSTRACT

The Role of Attachment and Caregiving in the Emergence of Generativity
from Early to Middle Adolescence

Heather Leigh Lawford, Ph.D.
Concordia University, 2008

Generativity, defined as care and concern for future generations as a legacy of the self, has typically only been studied in midlife samples (Erikson, 1959/1969). This research includes two studies that examine the presence of generative concern in early to middle adolescence.

The first study examined the reliability and validity of the Loyola Generativity Scale (LGS; McAdams & de St. Aubin, 1992) as a measure of generative concern, changes in generative concern over time in adolescents (N=138) from age 14 to 16 years old, and associations of adolescent generative concern with adjustment, attachment style, parenting style, and maternal generative concern. As in studies of non-parent midlife adults, adolescents' generative concern was associated with depressive symptoms and self-esteem, and girls reported higher generative concern than boys. Adolescents' generative concern was also associated with adolescent reports of warm parenting and with maternal generative concern. Although generative concern did not increase over time, higher levels were associated with lower anxious attachment. In addition, inverse associations between attachment anxiety and generative concern were stronger for individuals who reported low avoidant attachment than when avoidance was high. Also, changes in generative concern over time were

associated somewhat differently with attachment avoidance for boys than for girls.

The second study examined the longitudinal associations between generative concern and caregiving behaviours towards peers in the same early to middle adolescent sample. Results indicated that early caregiving behaviours predicted generative concern one year later, while early generative concern did not predict later caregiving behaviours. Thus evidence suggests that caregiving behaviour with friends promotes the development of generative concern.

In conclusion, both studies highlight the importance of studying generative concern in adolescence, and suggest that positive relationships with parents and positive behaviour with peers contribute to early generative concern. That is, both a non-anxious attachment style, as well as the caregiving behaviours appear to promote early generative concern. It is hoped that this research will contribute to promoting and maintaining generativity from adolescence into adulthood.

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CONTRIBUTION OF AUTHORS

The thesis comprises of two manuscripts

Lawford, H., Doyle, A.B., & Markiewicz, D. (2008). Generativity from early to middle adolescence: Associations with adjustment, parenting style and attachment style. Revised and resubmitted to *Developmental Psychology*

Lawford, H., Doyle, A.B., & Markiewicz, D. (2008). The association between early generative concern and caregiving with friends from early to middle adolescence. Submitted to the *Journal of Research on Adolescence*.

These studies were part of a larger study headed by Drs. Doyle and Markiewicz (the Relationships and Well-Being Project II). I contributed to the self-report data collection at all three time points, as well as coordinated the collection of the interview data. I also contributed to coding the interviews and managing the larger data set. The Loyola Generativity Scale and Turning Point Story interview were included in the data collection on my initiative for the purpose of this particular project. The internal thesis committee was composed of Dr. Anna-Beth Doyle, Dr. Dorothy Markiewicz and Dr. William Bukowski. Drs. Doyle and Markiewicz served in an advisory capacity in the formulations of research questions and drafts of the manuscript. Dr. Bukowski also offered helpful insight with respect to revisions of manuscripts and statistical analysis. I conducted all data analyses, wrote both manuscripts and completed all revisions based on my advisors comments.

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INTRODUCTION

Generativity, defined as care and concern for future generations as a legacy of the self, is one of the most complex of Erikson's psychosocial stages (Erikson, 1959, 1969). As the main focus of adult development, generativity motivates individuals to make important contributions to their families, communities, culture and society as a whole (de St. Aubin, McAdams, & Kim, 2004). However, not everyone achieves generativity successfully; some remain concerned only with what is to be gained for themselves. It has been proposed that the number of such adults is growing and is a cause of many of our current social problems. Thus, there is a need to better understand how to foster generativity in our society. Until recently however, research in generativity has focused only on midlife, when the stage is most central. More research is needed on the precursors of generativity, to understand when it begins, and what factors predict its presence early on, in order to learn ways of promoting it across the lifespan.

Research on adults' life story narratives reveals that highly generative people retrospectively report positive interactions with others as a child. Generative people also discuss being influenced by positive role models or "heroes", throughout their lives (McAdams et al., 1997). Moreover, researchers have identified "belief in the species", defined as an expectation that others will be worthy and responsive to one's generative efforts, as an important precursor to achieving generativity (de St. Aubin & McAdams, 1992; McAdams, 2001). Therefore, investigating the association between generativity and the quality of

close relationships, such as with parents and friends, seemed an appropriate starting place for the current research project.

Bowlby's attachment theory includes two separate yet interrelated systems, specifically, the attachment system and the caregiving system (Bowlby 1976, 1980). In infancy, individuals develop an attachment bond to their primary caregiver, to whom they turn in times of distress. This first attachment bond contributes to an individual's interactions with close others across the lifespan (Bowlby, 1976). In adolescence and later adulthood, individuals start to develop reciprocal attachment relationships, where they begin to provide care for close others in times of distress (Allen & Land, 1999). According to attachment theory, individuals develop "internal working models" regarding how close others both give and receive care. These working models shape how individuals view themselves as well as how they relate to others. That is, working models of attachment influence both giving and receiving of care, especially in stressful times.

Although theoretically linked, associations of attachment style and caregiving behaviour with generativity have not been empirically examined (McAdams, 2001). This research project examined how attachment style and caregiving behaviours contribute to the development of generativity over time. Specifically, Study 1 investigated the reliability and validity of measuring *generative concern*, the most widely used measure of generativity, from early to middle adolescence. Moreover, the role of parenting style, maternal generative concern, and general attachment style were investigated as predictors of early

generative concern. Study 2 of this project was concerned with the role that caregiving behaviours with close peers plays in changes in an individual's generative concern over time.

What is Generativity?

Although the idea of generativity has been around since Plato, the term was coined and discussed in detail in the context of Erikson's (1959,1969) theory of eight stages of psychosocial development. Generativity refers to a sense of purpose, to provide for the survival, well-being, and development of succeeding generations. Generative individuals are, by definition, motivated to contribute in ways that have lasting benefits beyond their lifetime, thus leaving a legacy, or, as Kotre (1984) put it, "outliving the self." Individuals might express their generativity within many different contexts, whether it be teaching skills to a new employee, imparting an important value to one's children, creating a lasting piece of artwork or architecture, or volunteering with an organization committed to supporting or improving the community.

McAdams and de St. Aubin (1992) developed a model of generativity that is widely used in current research. Their model of generativity consists of seven components. The first component is *inner desire*. This is a desire to leave something behind, stemming from either a "need to be needed" or from a need for "symbolic immortality" (Kotre, 1984). These *inner desires* to be generative are part of what drives all other components of generativity. *Cultural demand* is an additional driving force in the model. Generativity is important for maintaining the traditions and values of a culture. Therefore, societies offer opportunities and

encouragement for individuals to make a lasting contribution along these lines. Inner desire and cultural demand for generativity, in conjunction, lead to *generative concern*. This refers to an individual's felt sense of caring about the next generation, as well as a legacy of self. Another component of the model is *belief in the species*, defined as a belief in the future of the human race. This component serves to enhance or hinder *generative commitment* and *generative action*, two additional components. Generative commitment refers to one's public intentions to act in such a way as to benefit the next generation or society, whereas generative action is an action or behaviour contributing to future generations. These six components are combined in the development of a *generative narrative*, which is embedded in what narrative researchers call the life story schema (Habermas & Bluck, 2000). Here, in creating their life stories, individuals integrate their identities with their generative nature in a style of life story that McAdams calls a "commitment script." Whether it be through procreation, productivity or creativity, individuals give generativity personal meaning in their lives. Individuals learn how to think about and how to make sense of generativity in terms of how it relates to their life and sense of self.

The most widely used measure of generativity is the Loyola Generativity Scale (the LGS; McAdams & de St. Aubin, 1992), designed to measure generative concern specifically. This self report questionnaire contains aspects of legacy (e.g., "I feel as though my contributions will exist after I die."), caring for future generations (e.g., "If I were unable to have children of my own, I would like to adopt children."), and caring in general (e.g., "I try to help others by

sharing what I've learned.”). The authors found good internal consistency, test-retest reliability, and positive correlations with measures of generative behaviours as well as with generative themes derived from narratives. The LGS has since been used throughout the literature on adult generativity (e.g., McAdams et al., 1997).

Studies on midlife samples show that women tend to express more generativity than men, when the adults do not have children (McAdams, de St. Aubin, & Logan, 1993; Pratt, Danso, Arnold, Norris, & Filyer, 2001; Pratt, Norris, Arnold, & Filyer, 1999). These gender differences disappear, however using samples of individuals who are parents (McAdams & de St. Aubin, 1992; Snarey, 1993). Findings from other studies also show that in adulthood, generativity is positively related to both psychological and social well-being (e.g., An & Cooney, 2006; Grossman & Bates, 2002; Keyes & Ryff, 1998).

Generativity in Adolescence

Generativity in adolescence has been the subject of theoretical debate (McAdams, 2001). Some researchers assert that the societal pressure to be concerned with caring for future generations or creating a legacy is not present until adulthood (McAdams & de St. Aubin, 1992; McAdams et al., 1993). Alternatively, other researchers claim that generativity can be acquired simultaneously with identity and intimacy (Kotre, 1984; Stewart & Vandewater, 1998), rather than subsequently as outlined in Erikson's model. It is noteworthy that Erikson viewed each stage as intertwined, with each one occurring in some form across the life course. Thus, although each stage of development was

focussed on a particular crisis, all crises continue to play an important role throughout the lifespan.

Despite theoretical discussion, there is little empirical research on when and how generativity develops. Adolescence is the period where cognitive developmental prerequisites appear, including abstract and morally sophisticated modes of reasoning, which are necessary for developing a sense of caring for generations to come. Also, a more sophisticated ability to take the perspective of others, and consider others' points of view develops in early adolescence. Adolescence has long been associated with the period for developing a sense of identity and purpose (Erikson, 1969; Marcia, 1983). According to McAdams (1993), generative concern is a major focus of an adult's identity development. If generativity and identity are closely linked in adulthood, generativity might also be a concern in adolescence, when identity begins to develop.

The few empirical papers on this topic suggest that aspects of generativity are found in adolescence. A recent study found that adolescents' reports of both warm parenting and community involvement at age 17 predicted greater levels of generative concern (measured using the LGS) at ages 19 and 23 (Lawford, Pratt, Hunsberger, & Pancer, 2005). Moreover, generative concern at ages 19 and 23 was related to concurrent overall adjustment. In a subsample of the same study, redemptive themes in Turning Point stories at all three ages were associated with generative concern at age 19 (Lawford, 2002). Redemptive themes also increased significantly over time. These results provide support for the importance of

generativity in late adolescence. Although it is still unknown whether generative concern was present earlier than age 19, or if it increased over the earlier years.

Another study examined “Turning Point” and “Proud” narratives longitudinally in adolescents from ages 16 to 20 (Frensch, Pratt, & Norris, 2007). They found evidence of generative themes, such as caring and general generativity (i.e., discussions of legacy or concern for future generations), as early as age 16, and an increase in generative themes from age 16 to age 20. These studies point to the presence of generativity as early as mid adolescence, although the relatively small sample sizes warrant some replication of the findings.

Further, a qualitative study investigating the impact of youth conferences, found that adolescents appreciated opportunities to express generative concern (Pancer, Rose-Krasnor, & Loiselle, 2002). Specifically, adolescents reported enthusiasm about being part of “making the world a better place”, as well as appreciating the opportunity to express their views, and learn ways to impact their community, government, and society.

Thus, although there is some evidence suggesting that generativity is present in middle to late adolescence, no research to date has investigated generativity in an early adolescent sample. Moreover, there is very little longitudinal evidence investigating whether generative concern develops over time during this period. Although it seems that generative themes develop from later adolescence to early adulthood, generative concern did not in the one extant study. Nevertheless, according to McAdams’ model, generative concern usually

precedes generative themes. Therefore, developmental change in generative concern might appear earlier in adolescence.

The Role of Attachment as a Predictor of Generativity

Youniss and colleagues comment that “political socialization is not something that adults do to adolescents, it is something youth do for themselves.” Thus it is the adolescents who choose to become active or educated politically, and one might expand this to say that adolescents can choose to become generative. Where might this motivation come from? Flanagan (2003) proposes that the development of trust is the key to developing greater civic contributions in individuals. Moreover, she asserts that this trust is first built in our earliest relationships, and then in close peer relations, and finally through our interactions with a broad range of others, particularly those dissimilar from us. McAdams states that this trust comes in part from a positive outlook on the world, or “belief in the species”, and reports evidence supporting this hypothesis. Taken together, these researchers suggest that the motivation for generativity may be influenced in part, by the internal schemas, or models, of our close relationships and of our society in general. Moreover, one might expect that a belief in an entire species would be influenced by belief in one’s self and close others. Attachment relationships encompass issues of trust with regard to parental relationships and friendships, and include internal working models of self and other. Therefore, attachment style might be an important factor promoting early generativity.

According to Erikson’s theory, before individuals focus primarily on issues of generativity, they must first “resolve” earlier stages, including the

intimacy stage associated with young adulthood. In the intimacy stage, individuals negotiate their close relationships in an attempt to strike an optimal balance. Adult attachment theory, a theory of close relationships, is an appropriate approach to studying the link between intimacy and generativity. Attachment is often associated with the early crisis of trust vs. mistrust, particularly with respect to the parent-child relationship, especially in infancy. In adolescence and adulthood, however, attachment relationships are formed with close friends and romantic partners, and individuals become caregivers in addition to care-receivers. Thus, further down the lifespan, the attachment bond could also be considered an important component of the intimacy vs. isolation stage.

Brief Overview of Attachment Theory

Bowlby asserted that infants instinctually take an active role in their earliest survival through engaging in behaviours that promote proximity to their caregivers. Over the first year of life, infants develop a special bond with their primary caregiver, usually the mother. Bowlby theorised that the infant develops a mental model, through his/her experiences with the caregiver, that contains information about the caregiver's sensitivity and responsiveness to the infant's needs and allows for an adaptive, organised strategy for maintaining proximity. When an infant moves into the toddler years, s/he has more opportunities to explore the environment independently. Thus the model of the caregiver's availability is used as a "secure base" and the child gauges how far from the caregiver s/he can safely explore.

Bowlby clearly stated that the importance of the attachment relationship between parent and child was not limited to infancy or even childhood, but remained essential for healthy development through adolescence and early adulthood. In the second volume of his trilogy outlining attachment he claimed “an unthinking confidence in the unfailing accessibility and support of attachment figures is the bedrock on which stable and self-reliant personalities are built.” (Bowlby, 1980, p. 322).

In infancy, internal working models are mainly comprised of interactions with the mother (or primary caregiver). Beyond infancy, however, young individuals construct internal working models from the experienced interaction patterns with other principal attachment figures (e.g., fathers, grandparents, etc.) These models are a set of beliefs and expectancies of self and the other figure, based partially on their joint relationship history. According to Bowlby, these working models of self and other are complementary. For example, if a mother acknowledges her infant’s needs for comfort and protection, while simultaneously respecting her infant’s need for independent exploration of the environment, the child is likely to develop not only a positive internal working model of the mother, but also will develop a model of the self as valued and worthy of care. Thus, interactions with attachment figures contribute not only to an individual’s beliefs regarding the availability of close ones in times of need, but these interactions also determine the individual’s belief of how worthy of support he/she is. In later years, individuals seek comfort and support from different sources. Attachment relationships expand beyond parent-child to include close

others, such as romantic partners and best friends, and these friendships and romantic ties begin to play a larger role in terms of fulfilling attachment functions, such as proximity seeking, safe haven and secure base (Hazan & Zeifman, 1999; Markiewicz, Lawford, Doyle, & Haggart, 2006). Attachment style in adolescence is thought to become a function of the individual, not the relationship (Allen & Land, 1999).

Studying attachment in adolescence is particularly interesting because this is the stage when individuals typically expand their attachment figures to include close friendships and romantic partners. While parents continue to be important figures in an adolescent's life, friends and romantic partners begin to fulfil some of the attachment functions previously met by the parent. Peer attachment figures differ somewhat from parent-child attachments in that the care giving and receiving aspects of peer relationships are reciprocal.

A self-report measure of attachment using items from multiple attachment measures was developed in order to examine attachment in adulthood (Brennan, Clark, & Shaver, 1998). This scale employs two orthogonal subscales of attachment. The first was anxiety about abandonment and the second was avoidance of closeness. These two scales are somewhat parallel to the Preoccupied and Dismissing categories outlined by Main, as well as the Self and Other scales derived by Bartholomew and Horowitz (1991). While the measure was originally designed to measure romantic attachment, the authors state that the questionnaire can be adapted to measure attachment to other targets (e.g., parents, others in general).

Attachment and Caregiving

Erikson identified caring as a principal characteristic of generativity, partnered with a need to leave a legacy. Quality of care received in close relationships is also central to the development of a healthy attachment style in adolescence and adulthood (Bowlby, 1980).

Bell and Richard define parental caring as an enduring dyadic emotion that continues over the long term and that serves as an autonomous motivation to see that the needs of a specific partner are met. It is interesting to note that these authors define caring as an emotion rather than a cognition. They propose that a parent's caring feelings for a child are derived from both empathy (drive to learn and understand the child's needs) and a sense of responsibility to meet the child's needs, which the authors state is similar to generativity. In attachment literature, caregiving is regarded as a goal-corrected behavioural control system governed by an internal working model, similar to the attachment system. The main goal of this system is to ensure the physical, psychological and emotional safety of the child, or dependant, thus fostering autonomy. Much less is understood about adolescent caregiving from an attachment perspective. The majority of the work on attachment and caregiving in adulthood has been furthered by Collins and Feeney (2000), who have investigated the caregiving system from an attachment perspective. Their research has uncovered that a secure attachment style leads to more effective caregiving through better responsiveness to support seeking behaviours. Essentially, secure individuals were found to be more attuned to the needs of their partner and thus were able to respond more effectively .

As adolescents branch out and begin to form more “balanced” attachments to peers, their caregiving behaviour is an important aspect of these relationships and possibly their moral development.

Caregiving and Friendships in Adolescence

Besides identifying the importance of caring with respect to generativity, Erikson also discussed the importance of friendships in youth as a forum for expressing generative care, as they move away from their parents. Similarly, a motivation to contribute to the well-being of others was proposed by Sullivan (1953) to develop first in preadolescent close friendships. Thus early associations between generativity and intimacy with peers as measured by caregiving behaviours are an important area to explore.

The importance of friendships for positive, healthy development, particularly in adolescence, has been well established (Berndt, 1996; Burk & Laursen, 2005; Hartup & Stevens, 1999). Intimacy and support in relationships are often explored in adolescent friendships (Furman & Burmester, 1992). In fact, adolescent friendships represent the first intimate relationship outside of the parent-child and sibling bond (Dunn, 2004). Friendships are one of the first contexts that allow for exploration of interpersonal responsibility and mutual concern with peers (Youniss, 1981). In fact, friendship represents one of the first relationships in which an individual both gives and receives care. Caring, helping and trust have been defined as characteristics of high-quality friendships (e.g., Berndt, 2002; Bukowski & Sippola, 1996). Caring and helping are also noted as important characteristics of generativity (Erikson, 1980; McAdams, et al., 1997).

Caregiving towards friends could be considered an aspect of prosocial behaviour. One might expect caregiving behaviours in friendship to lead to greater generativity, following Erikson's model of intimacy as preceding generativity. Alternatively, one might expect that concern for community and future generations might act as the motivation for youth to engage in more caregiving behaviours with friends. Thus, a bi-directional association between generative concern and caregiving behaviour is also conceivable, whereby both caregiving and generativity influence each other. Therefore, the current study examines associations between generative concern and caregiving in friendship and the directionality of those associations across time.

The Current Study

The purpose of this research project included three main goals. First, an examination of the reliability and validity of the LGS, the most commonly used measure of generative concern, was explored longitudinally in an early to mid-adolescent sample. Specifically, this study investigated whether generative concern increased over time, and whether adult correlates of generative concern (such as adjustment) were also present in a young adolescent sample. The second overall purpose of this project was to investigate the role of the attachment styles in early generative concern across time. In particular, the role of anxious and avoidant attachment in predicting later generative concern, was examined. A final purpose of this study was to investigate the role that parents and caregiving behaviours with peers play in predicting early generative concern.

Thus, caregiving within friendships in adolescence might contribute to the development of generativity.

In addition to parental caregiving discussed earlier, research often examines caregiving in the context of romantic relationships. For example, Feeney and Collins (2003) found that caregiving in adult romantic relationships stems from multiple distinct motivations including benefiting the self, the relationship, or the partner as well as a general enjoyment of helping others. Not surprisingly, studies have found that caregiving has been found to have positive benefits in terms of relationship quality (Feeney & Collins, 2001). In early adolescence, nevertheless, friends are more important than romantic partners as sources of reassurance, comfort and reliability (Markiewicz, et al., 2006). That is, at this stage friends are sought more often than romantic partners as a secure base from which to explore, or a safe haven in times of distress. Therefore, the current study focused on caregiving behaviour in friendships rather than romantic partners.

While studies on caregiving behaviours with peers are few, researchers have examined links between prosocial behaviour and friendship quality. For example, in a study of adolescents, Markiewicz, Doyle, and Brendgen (2001) found that prosocial behaviours were significantly associated with friendship quality. Moreover, Barry and Wentzel (2006) found that friendship quality predicted later prosocial goals and behaviour. Thus previous research points to associations between quality of friendship and prosocial behaviour. However, none of the above studies tested the reverse directionality of this association.

In order to address these goals, data were collected from 164 young adolescents across a three year period. Adolescents responded to questionnaires on generative concern, adjustment variables, prosocial behaviours, parenting style, attachment anxiety and avoidance, and caregiving behaviours with their peers. A subsample of adolescents also narrated a turning point story, which was coded for themes of redemption. Finally, a subsample of mothers also completed a measure of generative concern.

In the first study, validity and reliability of the LGS was established by investigating correlates similar to studies with adult samples. In particular, we examined whether adolescent generative concern was associated with depressive symptoms and self esteem, and whether females scored higher than males. Also, because themes of redemption have been linked to generative concern, associations between redemptive themes in the Turning Point Stories and the LGS were also investigated. Hierarchical linear modelling techniques were used to investigate generative concern across time and associations with aspects of authoritative parenting style and attachment.

In the second study, structural equation modelling was used to investigate how caregiving behaviours with peers contributed to generative concern over time. Two models of association were tested. The first model posited that early caregiving behaviour predicted later generative concern. The second model posited a bi-directional association, whereby early generative concern also predicted later caregiving behaviour. Because associations found with early

generative concern could be due simply to prosocial motivations, prosocial behaviour was controlled in both studies.

Abstract

Generativity from early to middle adolescence: Associations with adjustment,
parenting style and attachment style

Generativity, defined as concern for future generations, has only recently been explored in adolescence and emerging adulthood (Frensch et al., 2007; Lawford et al., 2005). The purpose of the present study was to investigate the possibility that generativity develops in adolescence across time, as well as associations with adjustment, parenting style, maternal generative concern, and attachment style. Adolescents (initially aged 13-14) rated their generative concern yearly for three years and completed measures of depressive symptoms, self-esteem, perceptions of parenting warmth, behavioural control and psychological control, as well as attachment anxiety and avoidance. Adolescents also told a personal "Turning Point" story that was coded for redemptive themes, a narrative index of generativity (McAdams & Bowman, 2001). A subsample of mothers also reported on their generative concern. Similar to studies with adult and older adolescent samples, generative concern was related to redemptive themes, and self-esteem, and negatively to depressive symptoms. Moreover, adolescent generative concern was associated with maternal generative concern and with adolescent reports of warm parenting. Hierarchical linear modeling was used to investigate changes in generative concern over time. Lower attachment anxiety co-occurred with higher generative concern overall, and this association was somewhat stronger for adolescents lower in avoidant attachment. Moreover, change in generative concern over time was associated with avoidant attachment

somewhat differently for males and females. This study highlights the importance of generativity in adolescence and identifies several socialization correlates.

Generativity from Early to Middle Adolescence: Associations with Adjustment Parenting and Attachment Style

Generativity, defined as care and concern for future generations, is one of the most complex of Erikson's (1959; 1969) psychosocial stages (Kotre, 1984; McAdams & de St. Aubin, 1992). Generativity is thought to be a primary focus throughout most of adulthood (MacDermid, Franz, & de Reus, 1998) and within many different roles including family, career, religion, and civic duty. The purpose of the current paper was to explore the construct of generativity from a developmental perspective, specifically in adolescence when it might be in its beginning stages. Specifically, the study examines whether generative concern is a reliable measure in adolescence and has the same correlates in adolescence as in adulthood. The study also investigated whether generative concern increases over the adolescent period, and the role parents, especially mothers, and attachment style play.

McAdams and de St. Aubin (1992) proposed a model of seven interacting features of generativity (see also McAdams, Hart, & Maruna, 1998). The present paper focuses on two of these features: *generative concern* and *generative narration*. Generative concern, one of the first and most measured features, refers to an individual's felt sense of caring about the next generation, as well as a legacy of self. It is measured using the Loyola Generativity Scale (LGS; McAdams & de St. Aubin, 1992). Generative concern, along with five other components of generativity are combined in the development of a generative narrative, which is embedded in what narrative researchers call the life story

schema (Habermas & Bluck, 2000). McAdams identifies a generative adult as one whose life narrative is organised around a “commitment script” that includes elements of early blessings, individuals who helped or inspired, and stories with redemption themes (McAdams, Diamond, de St. Aubin, & Mansfield, 1997). Redemption occurs when a story begins negatively and ends positively, and is associated with generative concern (McAdams & Bowman, 2001).

Generativity has been explored from multiple psychological approaches, including personality and developmental perspectives. Overall, findings from these studies concur that in adulthood, generativity is positively related to both psychological and social well-being (e.g., An & Cooney, 2006; Grossman & Bates, 2002; Keyes & Ryff, 1998). Moreover, there is some evidence that in younger non-parent samples, women tend to express more generativity than men (McAdams, de St. Aubin, & Logan, 1993; Pratt, Danso, Arnold, Norris, & Filyer, 2001; Pratt, Norris, Arnold, & Filyer, 1999), although when men become fathers these gender differences disappear (McAdams & de St. Aubin, 1992; Snarey, 1993).

Generativity in Adolescence

Generativity in adolescence has been the subject of theoretical debate (McAdams, 2001). Some researchers assert that adolescents do not experience the societal pressure to be generative and that they do not consider the idea of creating or nurturing a legacy that will survive them and benefit future generations (McAdams & de St. Aubin, 1992; McAdams et al., 1993). On the other hand, some researchers claim that generativity may be acquired

simultaneously with identity and intimacy (Kotre, 1984; Stewart & Vandewater, 1998), rather than subsequently as outlined in Erikson's model. It is noteworthy that Erikson viewed each stage as intertwined, with each one occurring in some form across the life course. In fact, he discusses witnessing children demonstrating caring and protective behaviour towards each other in circumstances where adult care was lacking, a phenomenon he termed "precocious generativity" (Erikson & Erikson, 1981), although this could also be interpreted as a form of prosocial behaviour.

Despite theoretical discussion, there is little empirical research on when and how generativity develops. With respect to cognitive developmental precursors, abstract and morally sophisticated modes of reasoning, which are necessary to developing a sense of caring for generations to come, appear only by early to middle adolescence. Also, early adolescents begin to develop a more sophisticated ability to take the perspective of others, and consider others' point of view. Adolescence has long been thought of as the period for developing a sense of identity and purpose (Erikson, 1969; Marcia, 1983). According to McAdams (1993), generative concern is a major focus of an adult's identity development. If generativity and identity are this closely linked in adulthood, generativity might also be a concern in adolescence, when identity begins to develop.

The few empirical papers on this topic suggest that aspects of generativity are found in adolescence. Ochse and Plug (1986) distributed a questionnaire concerning the first seven psychosocial stages (including generativity) to over

1000 men and women in South Africa ranging from 15 to 60 years old. The authors found that generativity peaked in midlife, and that the stages of identity, intimacy, and generativity did not occur as sequentially as the other stages. That is, resolution of identity or intimacy was not required for generativity to be prominent. Also, generativity was most highly positively correlated with identity, the stage most prominent in adolescence. McAdams, de St. Aubin, and Logan (1993) did not find age differences between young and middle adulthood on measures of generative concern. However, other studies have found developmental components to generativity. For example, Stewart and Vandewater (1998) found a higher frequency of generative desires, as measured by discussions of future goals, in young adulthood than in midlife.

More recently, Lawford, Pratt, Hunsberger, and Pancer (2005) found that adolescents' reports of both warm parenting and community involvement at age 17 predicted greater levels of generative concern (measured using the LGS) at ages 19 and 23. Moreover, generative concern at ages 19 and 23 was related to concurrent overall adjustment and well-being, as measured by depression, social support and self esteem. In a subsample of the same study, redemptive themes in Turning Point stories at all three ages were associated with generative concern at age 19. Redemptive themes also increased over time. Unfortunately, generative concern data were not available at age 17, and there was no change in generative concern from age 19 to age 23. While these results provide support for the importance of generativity in late adolescence, we cannot know if generative concern was present earlier than age 19, or if it increased over the earlier years.

Frensch, Pratt, and Norris (2007) conducted a study of Turning Point and proud narratives in adolescence from ages 16 to 20, where they found evidence of generative themes including caring and general generativity as early as age 16, and an association between generative themes at age 16 and age 20. In an additional study, Peterson and Stewart (1993) found associations of age 16 generative themes with adolescent reports of authoritative parenting at age 20. These studies point to the presence of generativity as early as age 16, although the relatively small sample sizes warrant some replication of the findings.

Studies of late adolescents, most commonly undergraduate students, have found generativity to be related to greater life satisfaction, greater political involvement and retrospectively, greater involvement in high school overall (Peterson, Smirles, & Wentworth, 1997). Notably, political involvement, volunteering and work with children are often considered generative when they are attributed to adults (McAdams & de St Aubin, 1992). In fact, Pancer and Pratt (1999) emphasized the role that volunteering in adolescence plays as a context “to foster the development of a ‘socially responsible’ identity” that may carry on into adult life. It is difficult however, to determine whether such prosocial behaviour is in fact concerned with future generations, or simply helpful and/or altruistic. Therefore, it is important to control for general prosociality when studying early generativity.

Thus, there is some evidence suggesting that generativity is present in middle to late adolescence. However, no research to date has investigated generativity in an early adolescent sample. Moreover, there is very little

longitudinal evidence investigating whether generative concern develops over time during this period. Although it seems that generative themes develop in later adolescence/early adulthood, generative concern did not in one extant study. Nevertheless, generative concern usually precedes generative themes and might show developmental change earlier in adolescence.

Therefore, the first purpose of this study was to evaluate the reliability and validity of generativity in an early adolescent sample. The LGS is the most commonly used tool for measuring generativity. It is specifically designed to measure generative concern, an early component in McAdams' model and therefore seemed an appropriate starting point. A fundamental purpose of this study was to test for change in early generativity over time. Cross-sectional studies suggest mixed findings regarding differences across generations from young to mid-adulthood with regard to the LGS. For example, McAdams and de St. Aubin, (1992) found older adults reported higher generative concern than younger adults, whereas Stewart and Vandewater (1998) found that generative desires peaked in young adulthood. Therefore, it was cautiously hypothesized that adolescent scores on the LGS would increase over time. Given that previous studies using older adolescent and non-parent adult samples have indicated gender differences where women tend to score higher than men, and associations with measures of adjustment, including self-esteem and depressive symptoms (e.g., Lawford et al., 2005; McAdams & de St. Aubin, 1992), we expected to replicate these findings in the adolescent sample. Further, past research has demonstrated a positive association between redemption themes in life narratives and generative

concern (McAdams et al., 1997). Considering that the life story schema only begins to take shape in adolescence (Habermas & Bluck, 2000), and that redemptive themes increase over time (Lawford, 2002), few redemptive themes were expected, but their frequency was expected to be associated with generative concern.

If generativity is present in early adolescence, then identifying what contributes to that generativity is an important question. In the next section, parenting style and attachment style are discussed as potential correlates of early generative concern.

Generativity and Parenting Style

Authoritative parenting, a style that combines both parental warmth and behavioural control, has been established as a contributor to the development of social responsibility in children (e.g., Baumrind, 1966, 1967, 1991). Moreover, generative concern and authoritative parenting strategies have been linked in studies of adults (Peterson, et al., 1997; Pratt et al., 2001). Two studies that have explored pre-adult generativity have found authoritative or warm parenting to be an important correlate (Frensch et al., 2007; Lawford et al., 2005). However, while both studies were longitudinal, the authors did not examine changes in generative concern over time, or whether warm parenting predicts such increases. Moreover, other parenting factors might also play a role, for example, a parent's generative concern. A parent high in generative concern would be more likely to be involved in the community, and to discuss at home issues relating to improvement of the community, as well as to impart the importance of making

positive contributions. Thus, one would expect a positive association between parent and adolescent generative concern.

Generativity and Attachment

Within the context of civic engagement, Flanagan (2003) proposes that trust is the key to incorporating a sense of civic responsibility in youth. According to McAdams' model, generativity stems from a positive outlook on the world, which has been labeled "a belief in the species" (Vandewater & McAdams, 1989). Before one can develop trust at a general level, presumably trust in close others such as family and friends should be developed. Indeed, trust is one of Erikson's early stages of psychosocial development. Therefore the internal schemas, or models of our close relationships, might influence the motivation for generativity by contributing to a general trust or belief in society. In other words, belief in one's society or community might stem first from a belief in one's self and in close others. Attachment relationships, considered by some to be the most important relationships across the lifespan, encompass issues of trust and include internal working models (beliefs) about self and close others (Bowlby, 1980). Thus, attachment security might be an important factor affecting early generativity.

Bowlby explicitly stated that the importance of the attachment relationship between parent and child is not limited to infancy or even childhood, and remains essential for healthy development through adolescence and early adulthood. In the second volume of his trilogy outlining attachment he claimed "an unthinking confidence in the unfailing accessibility and support of attachment figures is the

bedrock on which stable and self-reliant personalities are built.” (Bowlby, 1980, p. 322). According to attachment theory, when caregivers/attachment figures instill confidence they will act as a “safe haven” for a child in threatening or fearful times, and the child can use the attachment figure as a “secure base” from which they are free to explore the world. The more felt security about the availability of the caregiver, the more freely an individual can explore.

In later years, individuals seek comfort and support from different sources. Attachment relationships expand beyond parent-child to include close others, such as romantic partners and best friends, and these friendships and romantic ties begin to play a larger role in terms of fulfilling attachment functions, such as proximity seeking, safe haven and secure base (Hazan & Zeifman, 1999; Markiewicz et al., 2007). Attachment style in adolescence is thought to become a function of the individual, not the relationship (Allen & Land, 1999).

Brennan, Clark and Shaver developed the Experiences in Close Relationships (ECR) scale, a self-report measure of attachment style using items from multiple attachment measures. They found two orthogonal subscales of attachment. The first was anxiety about abandonment and the second was avoidance of closeness. These two scales are somewhat parallel to other models of attachment, including the Preoccupied and Dismissing categories outlined by Main, Kaplan, and Cassidy (1985), as well as the Models of Self and Other scales derived by Bartholomew and Horowitz. (1991). While the ECR was originally designed to measure romantic attachment, the authors state that the questionnaire can be adapted to measure a general attachment style.

To date, there are no studies investigating the association between generativity and attachment style. One study found that a secure adult attachment style was positively related to the spontaneous generation of values of a benevolent nature such as concern for the welfare of others (Mikulincer et al., 2003). Theoretically, the psychological freedom to explore one's environment would allow an individual to develop a better understanding and connection to it. The ability to explore freely might also entail an individual being more motivated to have an impact on their surroundings. Anxiety about abandonment inhibits this freedom to explore and connect to others. Thus, attachment anxiety might act as a risk factor for generative concern. Similarly, avoidance of closeness would not be expected to foster generative concern, given that it involves actively disengaging from others.

Hypotheses

In sum, this study addressed three research questions. The first goal was to assess whether generative concern, specifically as measured by an adaptation of the LGS, was a reliable and valid construct in early to mid-adolescence. In adult samples, the LGS demonstrates acceptable to high reliability, gender differences and positive associations with measures of well-being. Reliability of the LGS, and gender differences were expected to be comparable to previous studies, as were associations with depressive symptoms and self-esteem, controlling for prosociality. Further, redemption themes (stories with a negative beginning and positive outcome) in Turning Point stories (derived from the McAdams Life Story

Interview) were expected to be associated with generative concern, as is found in older adolescent and adult samples.

The second research question explored two potential paths by which parents might influence generative concern in adolescents. Previous findings suggest that warm parenting would not only be associated with adolescent generative concern (Frensch et al., 2007; Lawford et al., 2005), but also might predict increases in generativity over time. Further, mothers' reports of their own generative concern were expected to be associated with their adolescent's generative concern.

Lastly, this study explored the associations of general attachment anxiety and avoidance with generativity across time. Given that attachment develops in the first year of life (Bowlby, 1976) attachment style was considered to precede generative concern. Because attachment styles shape an individual's beliefs about self and other, we expected adolescents' reports of anxious and avoidant attachment to be inversely associated with generative concern. We also examined whether attachment would impact changes in generative concern over adolescence. Because previous studies have found that gender can sometimes moderate associations with attachment (Doyle et al., 2003), gender was tested as a moderator, although there were no specific hypotheses in this regard.

Method

The present data was collected as part of a larger longitudinal study investigating the role of parent and peer relationships in adolescent development. Data were collected during the second, third and fourth years of the larger study

(henceforth called Time 1, Time 2 and Time 3 respectively). Additionally, this study included Turning Point story interviews collected between Time 1 and Time 2 from a subsample of 76 participants, as well as self-report data at Time 3 from 75 mothers of an overlapping subsample of participants.

Participants

Full sample. The 138 (79 female) who provided data for the three years of data collection were a subset of 203 adolescents who first participated in the project when they were 13 years old ($SD = 1.15$) and enrolled in grades 7 ($n = 84$) and 8 ($n = 114$) of a large, public, English-language urban high school in Montreal, Quebec. Time 1 of the current study occurred one year later when participants were in grades 8 ($n = 56$) and 9 ($n = 82$). In the initial data collection year (prior to this study), the consent rate was 46.7%, with 40.6% no response and 12.7% refusals.

Participants did not differ significantly from dropouts between Times 1 and 3 on demographic variables or Time 1 generative concern. Overall, most participants (78%) lived with two parents, of which 85% were in intact marriages and 15% were in reconstituted marriages. Of participants who lived with one parent (22%), most (90%) reported living with their mother. Socioeconomic status (SES), derived from information on the occupation, job activities and employment of the father, and mother if employed, reported by the adolescents on a demographic questionnaire, was primarily middle-class (Hollingshead, 1975); mean SES was 34.44 ($SD = 9.54$), characteristic of teachers, social workers, personnel clerks and sales occupations. Participants who endorsed only one ethnic

background (64%) primarily indicated Other European (40%) or British/Irish Canadian (31%). A few endorsed French Canadian (6%), Asian (5%), and West Indian (4%). Of participants who endorsed two ethnic (22%) or three ethnic backgrounds, 88% identified as a mix of English Canadian and French Canadian and/or other European. The ethnic and socioeconomic breakdown of the sample was representative of the local population.

At Time 1, 164 participants (81% of original sample; 90 females) agreed to complete the questionnaire portion of the study. A total of 19 (10% of original sample) declined participation, and the remaining 20 individuals (10%) had left the school.

At Time 2, 177 individuals (85% of the original sample) continued participation, while only 4% individuals declined. About 11% of participants, who were consistently absent or were no longer in the school, were sent questionnaires through the mail; 30% of those participants returned completed questionnaires.

At Time 3, 164 (81% of the original sample) individuals participated in the regular testing sessions, while 5% individuals declined. Of the remaining 19% who were mailed questionnaires, 22% returned completed questionnaires, bringing the total sample to 172 participants (93 females).

There was no difference between the school sample and the sample who mailed questionnaires on any background variable, or on generative concern (t 's < 1.0). For individuals who had missing data for T1 ($n = 10-15$), data collected from

the previous year was substituted in order to maximize power. There were no significant differences in means between raw data and data with replaced means.

Turning point subsample. Participants in this subsample ($n = 79$; 41 female; mean age = 15, $SD = .66$) were recruited for an interview from the sample of 164 adolescents who took part at Time 1. Out of 164 students contacted, 61 (37%) refused to participate and 103 (63%) originally agreed to participate. Of those 103 participants, 21 were not tested due to failure to attend the scheduled interview, and one was not tested due to experimenter error. Therefore, in total 81 students (49% of those contacted) were interviewed. Additionally, one interview was lost due to equipment failure and one interviewee requested early termination of the interview. Of the adolescents who provided Turning Point stories, 48% had mothers who participated in the study. Adolescents who participated in the interview portion of the study were slightly older, and reported slightly lower LGS scores at Time 3 ($M = 1.64$, $SD = .42$) than participants who did not take part in the interview ($M = 1.81$, $SD = .44$), $t(166) = 2.25$, $p < .05$. There were no significant differences on family composition, ethnicity, or socioeconomic status.

Mother sample. Mothers of 75 adolescents (41 females) completed a set of questionnaires. Most (69%) report being two parent families. Most of those mothers (75%) reported being married to the adolescents' father, 12% remarried, 4% divorced or separated, and 4% single. After adolescent data were collected at Time 3, questionnaires were mailed to the 173 mothers whose adolescents had participated at least twice over the course of the study, along with appropriate consent and information materials. Mothers who returned a completed

questionnaire (43% response rate) received \$20 in the mail. The sample of adolescents whose mothers participated did not differ significantly from those who did not participate with regards to gender (of adolescent), SES, age, adolescent generativity, attachment style (anxiety or avoidance) or parenting warmth or autonomy granting. Also, a higher proportion of mothers of adolescents who reported living with a step-parent completed a questionnaire (13%) than expected (8%), $\chi^2(1) = 6.2, p < .05$.

Procedure

Adolescent self-report measures. The procedure for collecting the self-report data was the same across all three years. Students who had participated in the first year of the larger project were contacted in French class and given an explanatory letter and consent form. Additionally, students under the age of 14 were required to obtain parental consent prior to participation. All students who returned a completed consent form, regardless of type of response, were entered in a draw for movie passes or music gift certificates. Students who agreed to participate completed a packet of questionnaires in small groups (approximately 10-15) in a quiet room at the school supervised by research staff. Testing took place over two 45-minute sessions during class time arranged at the teacher's convenience. Those students who agreed to participate were entered in an additional grand prize draw for a discman (See Appendix A for letter to student and consent form).

Turning point sample. Interviews were conducted in Spring of Time 1 and Fall of Time 2. Participants were first mailed letters to inform them that they

would be phoned at home to request their participation in the interview that would be held after school. If the participant agreed, a time was set up for the interview to take place at the school in a private room after school hours (see Appendix B for consent form). In total there were six interviewers (five graduate students and one senior undergraduate). Following the interview, participants were paid \$10 for their participation. The turning point story was administered at the end of a longer interview regarding parent-child relationships. Interviews were audio taped and transcribed for coding.

Measures

General information. A questionnaire was constructed to obtain information on the adolescent's age, sex, mother tongue, and ethnic/cultural background, the parents' marital status, occupation, job activities, and employment; and the people in the adolescent's household (see Appendix D).

Generative concern. The Loyola Generativity Scale (LGS; McAdams & de St Aubin, 1992) was used to measure generative concern for both the adolescents and the mother. This 20-item, 4-point, 0 (never applies to me) – 3 (very often applies to me) Likert scale questionnaire is the most widely used measure of generativity. In the first two data collections, four items discussing death (e.g., "I feel as though my contributions will exist after I die,") were removed from the questionnaire for ethical reasons due to the young age of the sample (see Appendix E). At the final time, when participants were 16 years old, all original 20 items were included in the questionnaire (see Appendix F). Across all three years, the 16-item LGS demonstrated acceptable to good internal

consistency (alphas = .83, .78, .83). At Time 3 the alpha for the full 20-item measure was .86. These values are consistent with reliabilities in previous studies using mid-adult samples (McAdams & de St. Aubin, 1992). Correlations of the LGS across time were moderate, and somewhat higher across adjacent than non-adjacent years; Time 1 and Time 2, Time 1 and Time 3, Time 2 and Time 3 (shortened version) reliabilities were .58, .40, and .60 respectively (p 's < .01). Correlation between the 16 and 20-item measure at Time 3 was .98. In analyses where generativity over time was examined, the 16-item version of the LGS was used at Time 3 in order to maintain consistency across years. Mothers also completed the 20-item version of the LGS ($\alpha = .87$).

Depressive symptoms. At all three times, a 12-item version of the 24-item Child Depression Inventory was used to measure depressive symptoms ($\alpha = .81$; see Appendix G). The original measure has been validated both in the original study as well as subsequent research (e.g., Hodges, 1990). In the present research, it was abbreviated for time-saving purposes on the basis of the highest item-total correlations in previous research (Doyle, Markiewicz, Brendgen, & Kamkar, 2003). Items were measured on a 3-point scale. Adolescent participants were asked to endorse one of three sentences varying in frequency or intensity of symptoms (e.g., "I am sad once in a while; I am sad many times; I am sad all the time.") The cross-time correlations were .49, .56 and .22 for Time 1 and Time 2, Time 2 and Time 3, and Time 1 and Time 3 respectively.

Self-Esteem (SDQII). A 5-item subscale of the Self Description Questionnaire measuring general self esteem (Marsh, 1980) was administered to

adolescents at all three times as a measure of self esteem ($\alpha = .85$; see Appendix H). Items were rated on a 6-point Likert scale (e.g., "Overall, I have a lot to be proud of"). The cross-time correlations were .37, .31 and .54 for Time 1 and Time 2, Time 2 and Time 3 and Time 1 and Time 3 respectively. The GSE scale correlates well with similar measures, such as measures of general self-worth (Harter, 1982).

Turning Point stories. The Turning Point Story was derived from a section of the Life Story Interview, designed by McAdams and colleagues (see Appendix N). The Turning Point Story has often been found to contain the most instances of redemption themes of all the stories elicited in the full Life Story Interview (Lawford, 2002; McAdams et al., 1997). Participants were asked to think of a turning point in their life, where they changed the way they thought or behaved. Participants were probed about the specifics of the event, as well as about their feelings about it and the implications of the incident. Turning point story transcripts were coded for redemption based on McAdams and Bowman (2001) and McAdams et al. (1997) by the first author, and by a trained assistant, who independently coded 20% of the stories. If a story began with at least a moderate negative tone and ended positively, then a point was given for redemption. Further, a story could earn an additional point if the redemption theme involved enhanced agency (e.g., interviewee explicitly states that event built self confidence, efficacy or personal resolve), enhanced communion (e.g., interviewee explicitly states enhanced relationships), or ultimate concerns (involves confrontation with or significant involvement with fundamental existential issues

or ultimate concerns, such as death or spiritual dimensions of life). Thus redemption scores ranged from 0-2. Inter-rater agreement on identification of a redemption theme was 98% ($\kappa = .80$).

Parenting styles. At Time 1, dimensions of parenting were assessed with a 16-item adaptation (Miners, 2001) of the Parenting Style Inventory (PSI-II, Darling & Toyokawa, 1997; See Appendix I). The original 15 PSI items (5 per scale, responsiveness, autonomy granting, demandingness) were designed specifically to assess maternal parenting style. Minor modifications were made to increase the internal reliability of the measure overall, and to take advantage of positive features of multiple parenting questionnaires. Questions were worded to pertain to parent(s) in contrast to mother only¹, four items were removed, and five new items were introduced. Internal consistencies for parental autonomy granting, behavioural control and warmth were .66, .74 and .78, respectively. Test-retest correlations were also computed using scores from the initial data collection prior to Time 1, and were significant for all three subscales, r 's = .39, .43, .61, p 's <.01 for autonomy granting, behavioural control and warmth respectively.

Attachment style. An adapted version of the Experiences in Close Relationships questionnaire (ECR; Brennan, Clark, & Shaver, 1998) was administered at Time 1 of the study (see Appendix J). Originally a 36-item self-report measure of attachment to romantic partner, the ECR was shortened to 24 items and items mentioning romantic partners were changed to refer to others in order to measure general attachment style. The measures were shortened by

retaining items with the highest item-total correlations. The adapted measure included two 12-item subscales, anxiety (e.g., “I worry a lot about my relationship with others”) and avoidance (e.g., “I get uncomfortable when others want to be very close”). Items were each rated on a 7-point Likert scale. Fraley, Waller, and Brennan (2000) found that the original ECR had superior psychometric properties compared to three other attachment measures. The alphas for anxiety and avoidance subscales in this sample were .87 and .80 respectively, comparable to the original scale. Test-retest correlations with the scale administered one year after the end of the current study (Time 4) show significant associations for attachment anxiety (.43) and attachment avoidance (.36). As expected, the avoidance scale was also negatively correlated with measures of secure base use of best friend and mother two years later, $r(142) = -.28, -.17, p < .05$ respectively, and with a measure of positive relationship quality with best friend, $r(142) = -.30, p < .01$

Prosociality. This 18-item questionnaire, designed and validated by Eisenberg and Valiente based on an original scale by Rushton, Chrisjohn, and Fekken , was given to adolescents at Time 1 to assess prosocial behaviour (see Appendix K). Participants were asked how often they had engaged in 18 altruistic activities on a 3-point Likert scale (e.g. “I have given money to a charity”; $\alpha = .80$).

¹ Adolescents with single parents received a “parent” version

Results

Validity of the LGS

Descriptive statistics for both independent and dependent variables are presented in Table 2.1. For all three years, the LGS measures were normally distributed. Means on the LGS ranged from 1.67-1.75 on a 0-3 scale, which is somewhat lower but comparable to other adult studies (including parents) where the mean is about 2 (e.g., McAdams & de St. Aubin, 1992; Pratt et al., 2001). In the current sample, only 4% of individuals scored below 1, whereas about 26% of the sample scored between 2 and 3. Intercorrelations are presented in Table 2.2. LGS scores were not significantly associated with SES, ethnicity or family composition (highest correlation, $r = .05$), and therefore background characteristics were not considered further as control variables.

Concurrent validity of the LGS was established by testing whether generative concern was associated with adjustment and redemptive themes, as has been found in other adolescent and adult samples. Bivariate correlations of generative concern with depressive symptoms and self esteem measures, controlling for prosocial behaviour, revealed significant associations in the predicted direction at all three time points (see Table 2.3). For both self-esteem and depressive symptoms, the lowest association was at Time 1, where there were only modest associations (r 's = .18 and -.15, $ps < .05$). Stronger associations were found at Times 2 and 3 (r 's range from -.26 to .41).

Redemption scores were coded from the Turning Point Stories told by 76 participants between Time 1 and Time 2. Redemptive themes were found for 17

of the participants (22%). Because of the low rate, redemptive themes were thus considered as a dichotomous variable (i.e., present or absent). Overall, there was a trend for more females to have redemption themes (30%) than males (13%), $\chi^2(1) = 3.26, p < .08$. Three simultaneous hierarchical linear regressions were performed, with generative concern at the three time points as the dependent variables and gender and redemptive themes as the independent variables. For all three regressions, females reported higher levels of generative concern than males (β s = .41, .29, .27, $ps < .05$ for Times 1-3 respectively). Also, in the regressions predicting to generative concern at Times 1 and 2, redemptive themes also significantly predicted generative concern (β s = .20, .26, $ps < .05$, sr^2 s = .04, .04), $R^2 = .24, .25$, respectively), but not Time 3 ($\beta = .01$, ns).

Changes in LGS over Time

Hierarchical Linear Modeling, an approach similar to hierarchical multiple regression (Bryk & Raudenbush, 1992), was used to analyse the LGS over time. The LGS was the outcome. First, the unconditional model was tested involving the LGS alone in the equation without any level 1 or level 2 predictors.

Unconditional model. In the unconditional model (without predictors), the chi-square value of the variance component of the coefficient indicated significant between subject variation, $\chi^2(139) = 644.96, p < .001$. The intraclass correlation indicated that 49% of the variance in adolescent generative concern was between-person and that 51% was within person.

Level 1 model. Next, the level 1 predictor of time was examined as a random variable. Time was entered at level 1 and was not a significant predictor,

$t(140) = .54, n.s.$ That is, there was no evidence that generativity changed linearly with time. The variance component for the regression slope of Time was significant, however, indicating that individual generativity slopes varied significantly, $\chi^2(135) = 299.72, p < .001$. The final level 1 unconditional growth model explained 28% of within-person variance.

Level 2 model. Finally, level 2 predictors were entered in the equation to predict the intercept and time slope of the LGS. Level 2 predictors were entered in a step-wise fashion and interactions were explored. For continuous variables, interactions were computed using centered, z-standardized variables. Predictors were entered individually (with sex, age and prosociality controlled at intercept) and only significant predictors were included in the final model (as recommended by Singer & Willett, 2003).

Variables at level 2 initially included sex, age, and prosociality as control variables; parenting style (warmth, autonomy granting, behavioural control), and attachment anxiety and avoidance. Parenting style data was taken from T1 data collection because it was hypothesized that early positive parenting would lead to greater generativity over time. Attachment and parenting style were analysed in separately to maximize power. Only Time 1 data were available for prosociality and therefore it was also entered as a Level 2 variable.

Both sex and prosociality significantly predicted the intercept but not the slopes of generativity $t(140) = 4.44, 5.23$, respectively p 's $< .001$. Overall, females ($M = 1.83, SD = .39$) scored higher than males ($M = 1.56, SD = .40$) and higher prosocial scores were related to higher generative concern scores. Age was

non-significant for both the intercept and the slope. Therefore, in further analyses only sex and prosociality were entered into intercept equations. Interactions between sex and control variables were explored and were non-significant. Overall the final Level 2 model explained an additional 10% of the variance at the intercept.

Level 2 model parenting style. Neither autonomy-granting nor behavioural control components of parenting style were significant at the intercept or slope level, and therefore, were subsequently dropped from further analyses. The parenting warmth variable was significant only at the intercept level, $t(131) = 3.79, p < .01$, not the slopes, indicating that adolescents who perceive their parents as warmer reported higher generative concern overall. In the final model, only parenting warmth was entered at the level of the intercept. The final model explained an additional 12.5% of the between-person variance in the intercept (see Table 2.4 for final model).

Mothers' generative concern. Adolescents' LGS was also compared to the LGS scores of their mothers for the subsample whose mothers participated ($n = 74$). First a mixed ANOVA was performed to determine whether mothers scored higher on the 20-item LGS than their children (at Time 3). A sex x generativity interaction was found, whereby mothers ($M = 1.83, SD = .44$) scored higher than their sons ($M = 1.48, SD = .30$), $F(1,31) = 25.62, p < .001$, but not higher than their daughters ($M = 1.82, SD = .50$). Partial correlations controlling for gender yielded significant associations between mother and Time 3 adolescent

generativity, $r(69) = .40, p < .001$ and a trend for Time 1 adolescent generativity, $r(66) = .22, p < .06$.

Level 2 model attachment variables.

The final hypothesis predicted that attachment anxiety and avoidance would be negatively associated with generative concern, as well as predict decreases in generative concern over time. Attachment anxiety and avoidance as measured by the ECR were entered into another model at level 2, both at the intercept and slope. On an exploratory basis, interactions with sex for both anxiety and avoidance were entered into one analysis, and anxiety x avoidance interactions were entered in separate analyses at both the intercept and slope, in order to maximize power.

Attachment anxiety significantly predicted the LGS intercept ($\beta = -.08, p < .05$), where lower anxiety was related to higher generativity. There was also an anxiety by avoidance interaction at the intercept level, where the negative association between anxiety and generative concern was somewhat stronger at low levels of avoidance. Lower levels of both anxiety and avoidance predicted the highest levels of generative concern, and higher levels of both anxiety and avoidance predicted the lowest levels of generative concern (see Figure 2.1). Despite the appearance of Figure 2.1, differences in LGS with avoidance overall were not significant. For the time slope, there was a sex by avoidance interaction where for higher levels of avoidance females decreased more in generative concern over time than did males, and for lower levels of avoidance males scores increased more in generative concern over time than did females (see Figure 2.2).

Again, despite the appearance of Figure 2.2, level of avoidance differences in the slope of LGS over time were not significant alone but only in interaction with sex. The final model explained an additional 7.5% of the between-person variance. (see Table 2.5 for final model).

Discussion

Recently, Putnam (2000) called for an increase in civic responsibility. An important step towards this goal is to study the motivation for making positive contributions to society. In this context, the primary purpose of this study was to investigate the presence of generativity and its relation to parenting and general attachment style from early to middle adolescence. The results of this study suggest that generativity can be reliably and validly measured even in early adolescence; however the results also reflect the complexity of the construct, and point to aspects of attachment security as important factors.

LGS: Validity and Changes over Time

Based on previous studies of mid-life samples, it was hypothesized that females would score higher than males on the LGS, and that the LGS would be related to adjustment. Results provided support for these hypotheses: females scored higher than males, and generativity was significantly related to depressive symptoms and self-esteem.

The gender differences in generativity found in this study with young adolescents are comparable to other studies of mid-life non-parent adults (McAdams & de St. Aubin, 1992). Reasons for this gender difference are unclear, however. Possibly girls are socialized at an earlier age to be more generative.

Some research suggests that males tend to prioritize generativity only when they become fathers, at which point gender differences in generative concern disappear (Kotre, 1990; Snarey, 1993). Further research following young adults longitudinally as they undertake parenthood might shed more light on the subject.

As expected, the LGS was related to adjustment measures of self-esteem and depressive symptoms. There are multiple explanations for this association. Positive feelings about the self and overall well-being may be a necessary precursor to focusing on concern for future generations. Alternatively, concern for future generations may contribute to positive self concept. Moreover, in order for individuals to want to contribute to future generations, it has been suggested that they need to have faith in the future that they are contributing to (McAdams & de St. Aubin, 1992). Thus, the relation between adjustment measures and generative concern could be due to a mediating factor, for example, an earlier feature of generativity, such as "belief in the species".

Redemptive themes in life stories are commonly linked to generativity for midlife adults (Bowman & McAdams, 2001; McAdams et al., 1997). In adolescence, as predicted, individuals who told turning point stories with redemption themes (part of the life story), did score higher on generative concern, particularly at Times 1 and 2. This finding provides further evidence of the validity of generativity as a construct relevant to adolescents. Studies have found a link between generativity and optimism (Jackson, Pratt, Pancer & Hunsberger, 2005), a link hypothesized by McAdams as due in part to an optimistic reasoning

in generative individuals. It is possible that redemption, as coded here, reflects an optimistic outlook on life.

It should be noted, however, that only a small number of participants (22%) told a redemption story. This low rate is not too surprising given that redemption themes are part of the commitment script, which is hypothesized to be the final stage of the generativity model (McAdams & de St. Aubin, 1992). Future researchers might consider a larger sample size, in order to analyze adolescent redemptive themes in further detail, for example to differentiate types of redemptive themes. In general, and by virtue of age, these young participants have had fewer life experiences to draw from as well as less time to reflect on those experiences than older individuals. Thus, the life events described here probably differ from those discussed in older samples (e.g., McAdams, 1993). Nonetheless, the fact that redemptive turning points are related to generativity in both adolescence and adulthood suggests that the participant's interpretation of the events is an important component. Even in early adolescence, some participants discussed events that represented a defining moment in their evolving life story. Even at this young age, these stories might be an important determinant of how generativity is incorporated into their overall identity. One excerpt from a story told by a fifteen year-old participant indicates not only a redemptive scene, but also some thought towards future generations.

(It was) during the summer my boyfriend left to go to the country for two months, he was only supposed to be there for two weeks and I was so depressed about that. So, I went and I stayed at my brother's house the whole summer with

him. My mother, she wanted me to come back so bad, but I just couldn't, because I missed my boyfriend a lot. And after, I learned that I made a fool of myself, just like worrying about a guy that much and I just smartened up. I started doing better in school, I realized that (in), 2 years I've got to move out and get a good job and (I) smartened up and started thinking about the future. I want kids for sure and if I don't stay in school then they're just gonna have a crappy life...

In this example, the adolescent discussed learning from a difficult relationship and expressed concern about how her current behaviour may impact her children in the future. While this type of thinking was not common among the transcripts, it does indicate an adolescents' ability to consider generative motives.

Another purpose of this study was to examine levels of generative concern over time. No developmental change was found. Similar to our findings, other studies have failed to find overall increases in generative concern over time (e.g., Lawford et al., 2005). Those studies used less powerful statistical techniques for detecting change (Singer & Willett, 2003), however, and did not look at variables such as attachment style as potential moderators of change in generative concern. Previous studies, therefore, had difficulty drawing firm conclusions on this issue. Using sophisticated statistical techniques, we were able to provide evidence that generative concern has emerged by early adolescence, but found no evidence of an increase overall from early to middle adolescence. There are numerous plausible explanations for this finding. First, it is possible that three years is not long enough to observe change in generative concern over time. Second, it is possible that generative concern does not increase over time, rather, it matures.

That is, while individuals may endorse items on the measure in the same way, due to a developed ability to take the perspective of others, their insights into the issues might increase in complexity, as they consider issues of moral identity. As such, future research that examines generative concern over time might consider using additional measures of LGS items in the study, such as “how often do you think about this?” or “how important is this to you?”

Components of Parenting Style and Generative Concern

The second purpose of this paper was to examine how components of authoritative parenting might contribute to generativity in youth. First, the role of behavioural control, autonomy granting and warmth were examined as predictors of generative concern. As expected, adolescents who reported warm parenting also reported more overall generative concern. This finding is similar to results of previous studies of older adolescents and young adults where reports of parental warmth, and not behavioural control, were associated with generativity (Frensch et al., 2007; Lawford et al., 2005). Studies with midlife adults have also found that generative parents tended to adopt more authoritative (i.e., high warmth, high behavioural control) strategies (Peterson et al., 1997). Perhaps warm parents model generative behaviour for adolescents by demonstrating warmth and concern for the younger generation. Alternatively, adolescents whose needs for nurturance are met might themselves be more able and motivated to provide warmth and concern for others.

Generative concern in a subsample of adolescents' mothers was also measured. Mothers and adolescent daughters' scores on the LGS did not differ, perhaps not surprising, since generative concern did not increase over time.

As hypothesized, mothers' generativity was significantly associated with adolescent generativity at Time 3 and tended to be similarly associated at Time 1, controlling for gender. It is not surprising to find a relation between mother and child generativity. Possibly a larger sample and the inclusion of fathers in the study might have yielded even more significant associations. However, the processes underlying these associations are still unclear. Most likely, generativity transmits intergenerationally through multiple paths. For example, generative parents might discuss issues surrounding legacy and caring for future generations more often, and they also tend to be warmer. Pratt et al. (1999) found that generative parents were more likely to discuss moral lessons from their own past with their adolescent children. Also, Peterson and Klohnen (1995) found that greater commitment to parenting was associated with generativity in mothers. Parents might also model generativity through their career or work in the community. Peterson (2006) found that parents' generative concern was associated with the well-being and political involvement of their young adult offspring. Future research is needed to replicate the present finding of intergenerational associations for generativity and to explore possible mediators such as modeling generative behaviours or discussing issues related to generative concern.

Attachment Anxiety and Avoidance and Generative Concern

Finally, we examined the role of general attachment anxiety and avoidance in adolescent generativity. To date, no studies have examined the role of attachment in generativity, although it has been identified as a potentially important predictor (McAdams, 2001). As hypothesized, individuals with a less anxious attachment style reported significantly more generativity as measured by the LGS. In the context of attachment theory, Ainsworth (1979) noted that individuals who feel more anxious about the availability of attachment figures are less likely to engage with and explore their environment. Generativity is somewhat altruistic in the sense that it is not directly related to advancing one's personal agenda, but rather is striving for better on behalf of future generations as a legacy of the self. In this respect, generativity is linked to exploration in that it refers to looking beyond oneself.

Avoidant attachment also moderated the association of attachment anxiety with generative concern. That is, for individuals with lower attachment avoidance, attachment anxiety was related more strongly negatively to generativity scores than for those higher in avoidance, such that individuals lower on both anxiety and avoidance reported particularly high levels of generative concern. Avoidance of closeness reflects individuals' discomfort with a connection with close others. Avoiding and discomfort with closeness with important others limits adolescents' opportunity to engage with others on an intimate level, which might impact their feelings of belonging. These adolescents would be less likely to incorporate a commitment to their community in their identity development. Concurrent low

anxiety and avoidance is parallel to Ainsworth's secure attachment category.

Secure individuals are free to explore knowing that they can look to an attachment figure for support when needed. Thus, these individuals might be particularly more able to explore generative ideas than their less secure peers.

Attachment avoidance was also identified as a significant correlate of changes in generative concern over time, moderated by gender. Specifically, for higher levels of avoidance, females decreased more in generative concern over time than males and for lower levels of avoidance, males increased more in generative concern over time than did females.

Both anxious and avoidant attachment strategies seem to be potential stumbling blocks for the emergence and maintenance of early generativity. Anxiety about one's close relationships may prevent individuals from believing that they have something to contribute. Such anxiety might also consume many cognitive and emotional resources by maintaining a need to focus on the self, thus diminishing thoughts about the importance of contributing to society in a positive way.

Conclusions

This study has certain limitations that should be addressed in future investigations. First, although the study provides evidence that generativity is present even in early adolescence, future research might consider investigating distinctive characteristics of the construct in this age group. For example, it is possible that the communion (caring for future generations) aspects of generativity are more prevalent in younger samples than the agentic issues of

leaving a legacy (symbolic immortality). A qualitative approach regarding generativity might clarify this issue further.

Overall this study provides evidence of generative concern in early to middle adolescence, as well as the importance of warm parenting and attachment in the emergence of early generativity. More research is needed, however, to understand how early generativity develops and if it differs qualitatively from generativity in midlife, when it becomes most salient. Future research should also examine how generativity might be expressed in adolescent behaviour, through peer caregiving, environmental concern, or learning about their own culture and traditions in order to carry them on. In general, considering developmental periods prior to adulthood in the study of generativity can offer broader insight into how to foster and maintain generativity across the lifespan.

Table 2.1.

Means and Standard Deviations for all Variables

	<i>M</i>	<i>SD</i>	Range	<i>N</i>	Time
Generative Concern T1	1.73	.44	0-3	138	1
Generative Concern T2	1.67	.39	0-3	138	2
Generative Concern T3	1.75	.47	0-3	138	3
ECR Anxiety	3.07	1.15	1-6	138	1
ECR Avoidance	2.83	.93	1-6	138	1
Prosocial	3.03	.66	1-5	138	1
Depressive Symptoms T1	.36	.32	0-2	138	1
Depressive Symptoms T2	.44	.23	0-2	138	2
Depressive Symptoms T3	.46	.28	0-2	138	3
Self-Esteem T1	4.84	.84	1-6	138	1
Self-Esteem T2	4.85	.82	1-6	138	2
Self Esteem T3	4.86	.90	1-6	138	3
Parenting- Control	3.55	.77	1-5	138	1
Parenting- Warmth	4.00	.72	1-5	138	1
Parenting- Autonomy Granting	3.78	.75	1-5	138	1
Redemptive Themes	.26	.55	0-2	76	2/3
Mother's Generative Concern	1.83	.43	0-3	74	3

Table 2.2.

Pearson Correlations between Variables used in HLM Analyses

Variable	2	3	4	5	6	7	8	9
1. LGS T1	.58***	.40***	-.02	-.26**	.43***	.13	.25**	.01
2. LGS T2	-	.61***	-.05	-.23**	.40***	.12	.22	.01
3. LGS T3		-	-.07	-.21**	.30***	.08	.10	-.11
4. ECR anx			-	.28**	.16*	.02	-.21**	-.10
5. ECR avd				-	-.17	-.20**	-.36**	-.17*
6. Prosocial					-	.27**	.11	.05
7. Parent Control						-	-.05	-.18*
8. Parent Warmth							-	.67***
9. Parent Autonomy Granting								-

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

Table 2.3.

Partial Correlations for Generative Concern with Depressive Symptoms and Self-Esteem Controlling for Prosocial Behaviour

	CDI T1	CDI T2	CDI T3	SE T1	SE T2	SE T3
LGS T1	-.15 ^t	-.12	-.05	.18*	.26**	.13
LGS T2	-.22*	-.26**	-.30*	.19*	.41**	.32**
LGS T3	-.06	-.08	-.31**	.11	.22*	.29**

Note: ^t p < .10, *p < .05, **p < .01; df = 135. SE = Self Esteem, CDI = Depressive Symptoms, LGS = Generative Concern

Table 2.4.
Final Model of Parenting Variables (Fixed Effects) predicting to Adolescent Generative Concern (LGS)

<i>Fixed Effects</i>	<i>Coefficient</i>	<i>Standard Error</i>	<i>t Ratio</i>	<i>df</i>	<i>p Value</i>	<i>Variance explained</i>
<i>Intercept</i>						
Intercept	1.22	.11	10.99	131	.00	n.a
Sex	-.19	.05	-4.30	131	.00	4.3%
Prosocial	.18	.03	5.38	131	.00	6.2%
Parenting Warmth	.11	.04	3.79	131	.00	7.8%
<i>Time slope 1</i>						
Intercept	-.00	.05	-.29	133	n.s.	n.a

Estimation of variance components after predictors in final control model were entered

	<i>Variance</i>	<i>Standard Deviation</i>	<i>X²</i>	<i>df</i>	<i>p Value</i>
Intercept	.06	.24	345.22	131	.00
Time slope 1	.16	.16	294.80	133	.00
Error	.06	.25			

Table 2.5.
*Final Model of Attachment Style (ECR) predicting Adolescent Generative
 Concern (LGS)*

<i>Fixed Effects</i>	<i>Coefficient</i>	<i>Standard Error</i>	<i>t Ratio</i>	<i>df</i>	<i>p Value</i>	<i>Variance explained</i>
Intercept						
Intercept	1.40	.21	6.71	133	.001	
Sex	.21	.07	3.25	133	.001	
Prosocial	.21	.04	5.02	133	.001	
ECR anxiety	-.08	.04	2.27	133	.02	2.3%
ECR avoidance	.01	.05	.15	133	n.s.	n.s.
Anxiety X Avoid	.06	.03	2.01	133	.03	3.2%
Time slope 1						
Sex	.02	.04	.53	134	n.s.	n.s.
Avoidance	-.04	.04	-1.33	134	n.s.	n.s.
Avoidance X sex	.09	.04	2.14	134	.03	4.3%

Estimation of variance components after predictors in final control model were entered

	<i>Variance</i>	<i>Standard Deviation</i>	<i>X²</i>	<i>df</i>	<i>p Value</i>
Intercept	.08	.28	335.29	133	.00
Time slope 1	.03	.18	266.77	134	.00
Error	.06	.25			

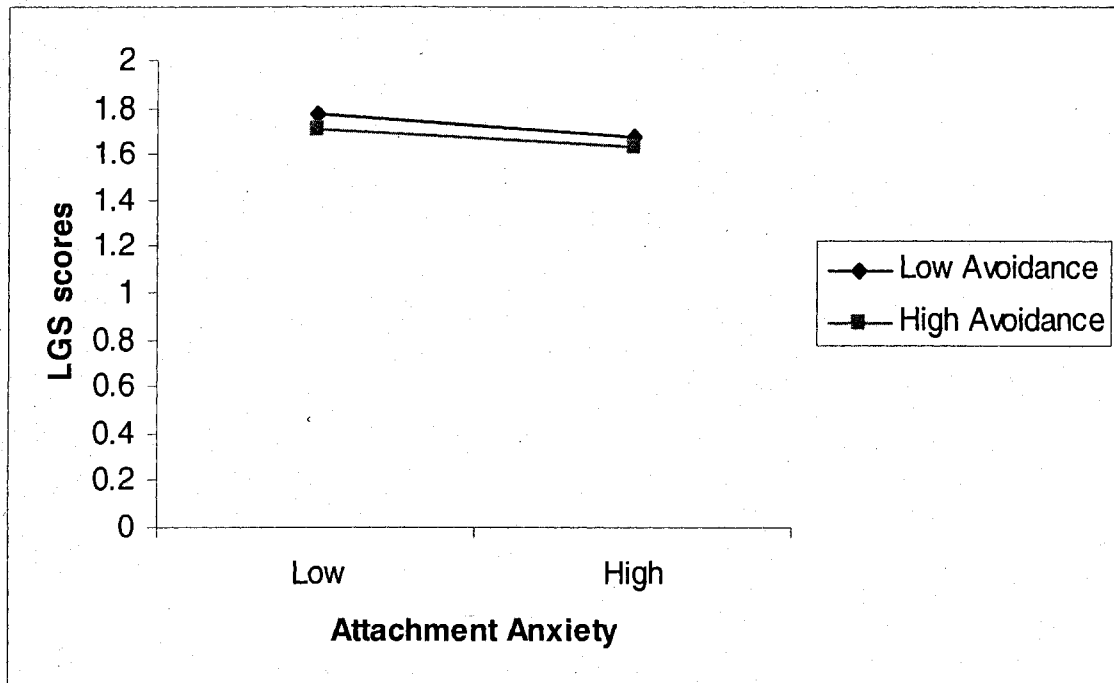
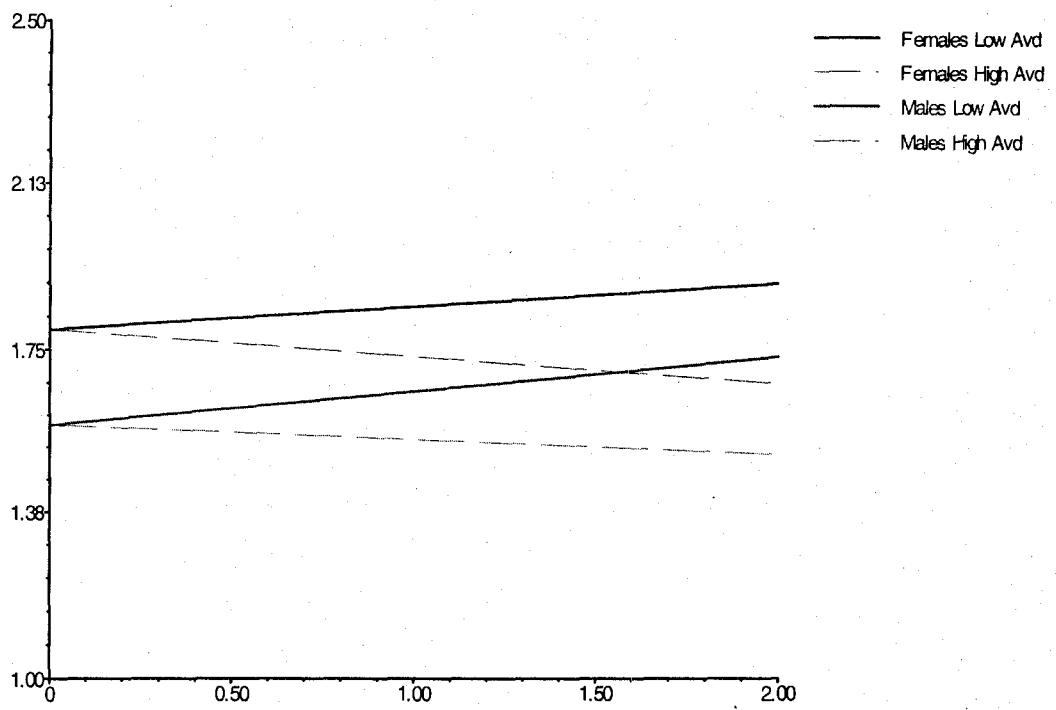


Figure 2.1. Attachment Anxiety X Avoidant Interaction at the Intercept Predicting Generative Concern



Abstract

The association between early generative concern and caregiving with friends
from early to middle adolescence

This longitudinal study explored the associations between caregiving behaviours and early generative concern in young and middle adolescence. According to Erikson's (1969) psychosocial model of development, generativity, defined as concern for future generations, becomes a priority in midlife and is preceded by a stage in which intimacy is the central issue. Recent research has found evidence that generativity begins in adolescence (Frensch, Pratt & Norris, 2006). Given the importance of close friendships in adolescence, it was hypothesized that caregiving behaviours in friendships would predict later generative concern in middle adolescence. Approximately 140 adolescents (age 14 at Time 1) completed questionnaires regarding generative concern and caregiving behaviours yearly for three years. Structural equation modeling revealed that caregiving behaviours predicted generative concern one year later but generative concern did not predict later caregiving. These results imply that peer relations are important in the development of early generative concern. The importance of peer relations in understanding generative concern is discussed.

Although typically considered the central developmental task in adulthood, generativity has recently been examined in adolescent samples (Frensch, Pratt, & Norris, 2007; Lawford, Pratt, Hunsberger, & Pancer, 2005). Often considered a personality construct, generativity has relevance with respect to leaving a positive legacy, or making a lasting and positive impact for future generations (Erikson, 1959/1969). For this reason, identifying and fostering the nascent roots of generativity in adolescence might promote the full expression of generativity in midlife.

In Erikson's psychosocial model, generativity is preceded by intimacy, which includes the need to care for and feel close to an individual. Indeed, close mutually supportive friendships have been identified as important correlates of adult generativity (Hart, McAdams, Hirsch, & Bauer, 2001; Westermeyer, 2004), but these associations have yet to be explored earlier in adolescence. Thus, the purpose of the current study was to examine the association between caregiving behaviours and early generative concern longitudinally in adolescence.

Generative concern, the most commonly studied aspect of generativity, refers to the motivation for, or goal of making a positive contribution towards younger generations or a community/society (Erikson, 1959/1969; McAdams & de St. Aubin, 1992). Previous research has found that generative concern in midlife is related to greater investment in politics, religion, parenting, volunteer work and more engagement in the community (Hart et al., 2001; Lawford et al., 2005; McAdams et al., 1997; Peterson, 2002). Associations have also been found with respect to well-being in both adolescence and midlife adults (Lawford et al.,

2005; McAdams et al., 1997). Thus, generative concern has moral implications both at the individual and societal level.

Although generally associated with caring for younger generations, generativity has also been associated with strong peer relations (Hart et al., 2001; Westermeyer, 2004). A recent study found that generative adults also report feeling less burdened and more prepared to accept the caregiving role of their elderly parents (Peterson, 2002). In the same study, generative individuals also reported receiving more support, and being more satisfied with the quality of care they themselves received. Thus, generative individuals appear to be embedded in a “network of reciprocal caregiving.” In keeping with this view, another study found anxiety with respect to attachment relationships was associated with lower generative concern (Lawford, Doyle, & Markiewicz, under review). These findings are consistent with Erikson’s theory that close intimate relationships are an important component for optimal development of generativity.

Erikson identified caring as a critical virtue of generativity, coupled with a need to leave a legacy. He also discussed the importance of friendships in youth as a venue for expressing generative care, as they move away from their parents. Erikson also contends that psychosocial stages are not isolated within certain age groups. Similarly, Sullivan (1953) proposed that preadolescent close friendships are the first intimate relationships whereby a motivation to contribute to the well-being of another person develops. Thus in the investigation of early precursors of generativity, adolescent intimacy with peers as measured by caregiving behaviours is an important area to explore.

Little is known about caregiving behaviours in adolescence. Parental caregiving is derived both from empathy (drive to learn and understand the child's needs) and from sense of responsibility to meet the child's needs (Bell & Richard, 2000), which is similar to generativity (McAdams, 2000). This definition could be applied to caregiving beyond parenting, both in the context of generativity (i.e., caring for younger generations, caring for a community) or in a close reciprocal relationship such as friendship. Given that intimacy is an important precursor of generativity (Erikson, 1969), and that caregiving behaviors are an expression of intimacy, one might logically expect an association between caregiving behaviours with close friends and generative concern.

The importance of peer relations for positive, healthy development, particularly in adolescence, has been well established (Berndt, 1996; Burk & Laursen, 2005; Hartup & Stevens, 1999). Friendships offer adolescents opportunities to explore intimacy and supportiveness in a relationship (Furman & Burmester, 1992). Researchers have noted, moreover, that the associations between friendships and moral development have not been given sufficient empirical attention despite morality's noted importance (Bukowski & Sippola, 1996; Barry & Wentzel, 2006; Wentzel & Caldwell, 1997). Friendships are one of the first contexts that allow for exploration of interpersonal responsibility and mutual concern with peers (Youniss, 1981). In fact, friendship represents one of the first relationships in which an individual both gives and receives care. High-quality friendships include characteristics such as caring, helping and trust (e.g., Berndt, 2002; Bukowski & Sippola, 1996). Caring and helping are also noted in

personality research as important characteristics of generativity (Erikson, 1980; McAdams, et al., 1997). Thus, caregiving within friendships in adolescence might contribute to the development of generativity.

Most research on caregiving examines romantic relationships or parent-child relationships rather than friendships. Feeney and Collins (2003) found that caregiving in adult romantic relationships stem from multiple distinct motivations, including benefiting the self, the relationship, or the partner, as well as a general enjoyment of helping others. Not surprisingly, studies have found that caregiving has positive benefits for the quality of the romantic relationship (Feeney & Collins, 2001). In early adolescence, friends are more important than romantic partners as sources of reassurance, comfort and reliability (Markiewicz, Lawford, Doyle, & Haggart, 2006). That is, at this stage friends are sought more often than romantic partners as a secure base from which to explore, or a safe haven in times of distress. Moreover, friends influence adolescent moral development (Berndt, 2002; Bukowski, & Sippola, 1996). In fact, adolescent friendships represent the first intimate relationship outside of the parent-child and sibling bond (Dunn, 2004). Therefore, the current study examined caregiving behaviour in friendships rather than romantic partners.

While the contribution of caregiving to adolescent generativity has not yet been empirically addressed, associations between adolescent friendship quality and prosocial motivations and behaviour have been studied more extensively. Positive features of friendship quality include aspects of caregiving (e.g., providing help and support; Berndt, 1996), while generativity is similar to a

prosocial motivation (i.e., making a positive and lasting contribution to society). Therefore, a brief overview of the literature on friendship quality and prosocial behaviour provides a useful framework for understanding the relations between early caregiving behaviours and generative concern.

Markiewicz, Doyle, and Brendgen (2001) found that prosocial behaviours were significantly associated with friendship quality in an adolescent sample. Moreover, Barry and Wentzel (2006) found that friendship quality predicted later prosocial goals and behaviour. Thus previous research points to associations between quality of friendship and prosocial behaviour. However, neither of the above studies tested the reverse directionality of this association. Following Erikson's model of intimacy as preceding generativity, one might expect caring for friends to lead to greater generativity. Alternatively, one might expect that concern for community and future generations might motivate youth to engage in more caregiving behaviours with friends. Thus, a bi-directional association between generative concern and caregiving behaviour is also conceivable, whereby both caregiving and generativity influence each other. Therefore, the current study examines associations between generative concern and caregiving in friendship and the directionality of those associations across time.

Many researchers have also identified gender differences in adolescent prosocial behaviours. Eisenberg and Fabes (1998) found that girls engage in prosocial behaviours to a greater extent than boys. Barry and Wentzel (2006) reported similar findings; compared to their male counterparts, adolescent females were more likely to have prosocial goals and tended to perceive their same-sex

friends as behaving in prosocial ways. Nonetheless, in the association between prosocial behaviour and friendship, patterns for boys and girls have been found to be similar, with some noted exceptions (Wentzel & Erdley, 1993). Particularly, unlike boys, girls who reported that offering social support as well as showing respect for one's self and others were important friend-making strategies tended to be rewarded with high regard from their peers.

The Present Study

The current study examined the association of caregiving behaviours with early generative concern in a short-term, longitudinal study. Our hypothesis was that caregiving would contribute positively to generativity, consistent with Erikson's model of intimacy preceding generativity. We examined two different models of longitudinal patterns of association. First, we tested a model where early caregiving behaviour predicted later generative concern. Second, we tested a bidirectional model (where both predict each other). We also tested gender as a potential moderator of the association between generative concern and caregiving. Moreover, when examining generative concern in adolescence, it is possible that any significant associations merely represent prosocial motivations rather than specifically generative motivations where concern for future generations is core. Therefore, prosocial behaviour was included as a control variable. Additionally, in order to control for defensive responding, social desirability was also entered as a control variable.

Method

Sample

Data used in this study is part of a larger longitudinal study on relationships and well-being across adolescence (see also Lawford et al., submitted manuscript). Participants for each of the three waves of data collection were a subset of 203 adolescents who first participated in the project when they were 13 years old ($SD = 1.15$) and enrolled in grades 7 ($n = 89$) and 8 ($n = 114$) of a large, public, English-language high school in Montreal, Quebec. Time 1 of the current study occurred one year later when participants were about 14 years old and in grades 8 ($n = 58$) and 9 ($n = 84$).

Demographic and general information presented here regarding participants describes the 142 participants (81 females) who provided complete data for all three years. Across all three times, data were collected from over 80% of the original sample. Reasons for not participating included declining participation (approximately 7%), repeated absences or no longer in school (approximately 10%). The information for participants at all three times did not differ significantly from dropouts.

Most participants (78%) reported living with two parents, of which 85% were in intact marriages and 15% in reconstituted marriages. Of participants who lived with one parent (22%), most (90%) lived with their mother. Socioeconomic status (SES), derived from information on the occupation, job activities and employment of the father, and mother if working, reported by the adolescents on a demographic questionnaire, was primarily middle-class. Mean SES was 34.44

($SD = 9.54$), characteristic of teachers, social workers, personnel clerks and sales occupations. Most participants endorsed only one ethnic background (64%), those participants primarily identified as Other European (40%) or Euro-Canadian (31%). A few endorsed French-Canadian (6%), Asian (5%), and West Indian (4%). Of participants who endorsed two or more ethnic backgrounds (33%), most (88%) identified as a mix of English and/or French-Canadian and/or other European.

Procedure

The procedure was the same across all three years. Students who had participated in the first year of the larger project were contacted in French class where an explanatory letter and consent form to be signed by a parent were distributed. Participants completed a packet of questionnaires in small groups (approximately 10-15) in a quiet room at the school supervised by research staff. Testing took place during class over two 45-minute sessions separated by approximately eight to ten weeks. During the first testing session of each testing year, participants completed the general information, caregiving and friend nomination measures, as well as other measures not relevant to this study. During the second testing session, 8-10 weeks later, participants completed the generativity questionnaire, and measures rating their nominated friend, again along with other questionnaires.

Measures

General information. A questionnaire was constructed to obtain information on the adolescent's age, sex, mother tongue, and ethnic/cultural

background; the parents' marital status, occupation, job activities, and employment; and the people with whom the adolescent currently lived.

Generative concern. The Loyola Generativity Scale (LGS; McAdams & de St Aubin, 1992) was used to measure generative concern. This 20-item, 4-point Likert-scale questionnaire ranging from 0 (never applies to me) to 3 (very often applies to me) is the most widely used measure of generativity. In the first two data collections, four items discussing death (e.g., "I feel as though my contributions will exist after I die,") were removed from the questionnaire for ethical reasons regarding discussing death due to the young age of the sample. At the final time, when participants were 16 years old, all original 20 items were included in the questionnaire. Reliability for the LGS was computed for all three years. For Time 3, reliabilities for both the 16-item and 20-item versions were calculated. Across all three years, the LGS demonstrated acceptable to good internal consistency (alphas = .83, .78, .83). At Time 3 the alpha for the full measure was .86. Correlation between the 16 and 20-item measure at Time 3 was .98. These alphas are consistent with reliabilities in previous studies using mid-adult samples (McAdams & de St. Aubin, 1992).

Caregiving behaviours. This abbreviated 12-item measure for responsive caregiving was adapted from Feeney and Collins in order to assess caregiving from an attachment theoretical perspective (see Appendix L). The measure was abbreviated for time-saving purposes and administered at all three time points. Participants are asked to indicate on a 6-point Likert-scale how often they engaged in the outlined caregiving behaviour. An example of an item is "I am

good at recognizing a friend's needs and feelings." Items in the abbreviated scale measured sensitive caregiving, instrumental caregiving, emotional caregiving and neglectful caregiving (reversed). Alphas for this scale were .88 at all three times.

Peer reports of caregiving were also collected at Time 1 and Time 2 to establish validity of the measure. In a second testing session 8-10 weeks later, participants' caregiving behaviours were rated by a previously nominated friend, who was also a participant in the study, such that each participant was rated by and rated another participant once. Participants' self-reported and friend-reported caregiving averaged across T1 and T2 were significantly correlated, $r(142) = .45$, $p < .01$.

Prosocial behaviour. This 18-item questionnaire, derived by Eisenberg and Valiente from an original scale by Rushton and colleagues, was given to adolescents at Time 1 to control for prosocial behaviour. Participants were asked how often they had engaged in 18 altruistic activities on a three-point Likert scale (e.g. "I have given money to a charity."; $\alpha = .80$).

Friend reports for Time 1 prosocial behaviour were obtained as discussed above for caregiving. Participants' self-reports of prosocial behaviours were significantly correlated with their friend-reported prosocial behaviours, $r(142) = .17$, $p < .05$.

Social desirability. A 15-item version of the Marlowe-Crowne Social Desirability Scale was given to adolescent participants at all three times in order to control for defensive responding in self-report measures. Participants were asked to indicate True or False for each of the 15 items, (e.g., "No matter who I'm

talking to, I'm always a good listener.") Alphas for this scale for Times 1, 2 and 3 were .71, .69 and .65 respectively.

Results

Path analyses conducted with EQS (Bentler, 1995) examined cross-lagged associations between generative concern and caregiving behaviours from Times 1-3, including prosocial behaviour (T1) and social desirability (T1 to T3) as covariates. Chi-square difference statistics, and path residuals guided decisions concerning the retention of specific paths, and model fit indices determined the selection of the best fitting model. The Comparative Fit Index (CFI; Bentler, 1990), a normed index with a maximum of 1 was used, where values around .9 or higher are acceptable, and .95 or higher indicates a good fit. Additionally, the Root Mean Square Error of Approximation (RMSEA, Browne & Cudeck, 1993), a residual-based fit index, was also used, where values of .05 or less are acceptable. A non-significant chi-square indicated a good fit. Chi-square differences were calculated for models with only one path added or removed. A significant chi-square difference indicated an improvement in the model (i.e., the added path was necessary) where a non-significant chi-square difference indicated no improvement in the model fit (i.e., the added path was not necessary).

Preliminary Analyses

Descriptive statistics and correlations for all variables can be found in Table 3.1. Positive autocorrelations emerged for both generative concern and caregiving behaviours, indicating stability in both measures over time.

Associations between generative concern and caregiving were generally significant.

Generative concern was higher in females than males, and there was no overall systematic change across time (see Lawford et al., under review). A 2 (Gender) X 3 (Time) Mixed ANOVA was performed to identify differences in caregiving behaviour as a function of gender and time. Caregiving showed no significant change across time, $F(2, 288) = .39, ns$. However, there was a main effect of sex where females ($M = 5.06, SD = .56$) reported higher caregiving behaviours than males ($M = 4.24, SD = .59$), $F(1,144) = 71.61, p < .001$. Prosocial behaviours at Time 1 and social desirability at all three times were significantly associated with both generative concern and caregiving behaviours and therefore, were entered into the model.

In order to test the hypothesis that gender moderates the association between generative concern and caregiving behaviours, correlations were computed separately for males and females. Correlational contrasts, conducted with Cohen's (1978) partialled products technique, revealed only one moderately significant gender difference in the magnitude of association out of nine tests. Concurrent Time 3 associations between generative concern and caregiving were somewhat different between males ($r = .58$) and females ($r = .31$), $p = .05$. Given that only this one marginal difference in magnitude appeared for an association particularly relevant to the hypotheses, gender was not explored further as a moderator of the associations between caregiving and generativity.

Longitudinal Associations of Generative Concern and Caregiving.

This study tested three possible models regarding the longitudinal associations between generative concern and caregiving behaviour in adolescence. The first model tested the hypothesis that early caregiving behaviour contributes to increases in generative concern one year later.

First, a model fitting the hypothesis that caregiving predicted increases in generative concern one year later, controlling for earlier generative concern was tested. In preliminary models, an examination of the residuals indicated the necessity of a path from prosocial behaviour at Time 1 to caregiving behaviour at Time 2. Social desirability at Time 3 did not produce significant paths with any other variable and, therefore, was dropped from the model. Also, the concurrent pathway for the association between generative concern and caregiving at Time 2 was non-significant and was, therefore, also dropped from the final model. Figure 3.1 describes this best fitting model of the association between generative concern and caregiving from age 14-16, $CFI = 1.00$, $\chi^2 (df = 19) = 18.58$, $p = .48$, $RMSEA = .00$ (Confidence Interval for $RMSEA = .00 - .072$). These indices denote a good fitting model, with no significant residual associations. Overall, the model demonstrates significant associations of both Time 1 caregiving with Time 2 generative concern (.35); and of Time 2 caregiving behaviours with Time 3 generative concern T3 (.56).

The second analysis tested the bi-directional model, where caregiving and generative concern each contribute to increases in the other over time. This model showed similar overall fit indices to the first model presented $CFI = 1.0$, $\chi^2 (df =$

21) = 23.27, $p = .55$, RMSEA = .00 (90% Confidence Interval for RMSEA = .00 - .11). However, both paths from generativity to caregiving one year later (from Time 1 to Time 2 and from Time 2 to Time 3) were non-significant ($p > .10$) and did not contribute significantly to model fit. When compared to the hypothesized model, the additional paths did not significantly improve model goodness of fit, χ^2 difference ($df = 2$) = 4.69, *ns*. Therefore, the model including unidirectional associations from caregiving to generative concern was deemed the best model.

Discussion

The purpose of this study was to investigate the role of caregiving behaviours with close friends in the development of generativity. As outlined in Erikson's model, caregiving behaviours with close friends did in fact predict later generative concern, both from age 14 to 15, and also from age 15 to 16. On the other hand, early generative concern did not predict later caregiving behaviour, clearly supporting a unidirectional association. The identified associations were significant even while controlling for prosocial behaviours and defensive responding, indicating that adolescent generative concern was not merely tapping prosocial concerns. While the importance of parents in the development of adolescent generative concern has been previously demonstrated (Frensch et al., 2007; Lawford et al., 2005; Lawford et al., under review), these findings indicate that close friends also play a role.

Empathy offers another possible explanation for the association between generative concern and caregiving. Attending to the needs of others may lead to an empathic concern for their well-being (Batson, 1991). As adolescents develop

abstract thinking capabilities and become increasingly aware of their surroundings on a societal level, they may apply this empathic concern to welfare of their community.

Not surprisingly, females reported more caregiving behaviours than males. However, gender did not moderate the associations between caregiving and generative concern. It is reasonable to conclude that caregiving behaviours are an important precursor for concern for future generations, regardless of gender. Notably, there was a significant difference in associations between caregiving and generative concern at Time 3 whereby males demonstrated a stronger association than females. Perhaps studying older adolescents would reveal the moderating impact of gender typically documented in other studies (e.g., McAdams & de St. Aubin, 1992). Nonetheless, this finding highlights the importance of close friendships for both male and female adolescents.

In Erikson's (1969) discussions of intimacy, his focus was on long-term romantic relationships, and not on close friendships. In early adolescence, romantic relationships do not involve the level of commitment and caring reflected in most adult romantic relationships. Friendships are in fact one of the first relationships where reciprocal caregiving typically occurs (Dunn, 2004; Sullivan, 1953). If as Erikson stated, all stages are in some form of development throughout the lifespan, intimacy, expressed through caregiving behaviours, might develop in early adolescence through friendships as opposed to romantic relationships, yielding a significant association between friendship intimacy and generative concern. As such, the results of this study support the theory that

Erikson's stages can be studied at developmental periods supplementary to those typically discussed.

These findings provide evidence for the determinants of early generativity. Moreover, they highlight the importance of studying generativity in adolescence, as well as the importance of studying caregiving behaviours in close friendships, in greater detail. Although a majority of the literature on caregiving focuses on romantic relationships, this study demonstrates that caregiving in friendships is associated with healthy development. Specifically, further research might consider how caregiving behaviours within close friendships contribute to moral motivations more generally across time.

It is important to note certain limitations of the study. First, although the study is longitudinal in nature and explicitly includes directional associations, it is still correlational in design and it is possible that a third variable may account for the observed associations over time. Moreover, the study relies primarily on self-report data; however, peer-report associations do strengthen the likely validity of these measures. Finally, future research should consider multiple measurement perspectives in replicating these findings. For example, it would be interesting to study whether caregiving behaviours also predict generative behaviours similarly to generative concern. Due to ethical considerations, the full LGS scale was not used in two of the three time periods. Thus, certain aspects of generative concern might not have been tapped, especially a legacy following death. It is not expected one's death would be the focus of adolescent generative concern, and therefore this might be one important differentiation from the more developed

generative concern found in adulthood. This however, has yet to be explored and should be a future consideration.

This research unveils numerous possibilities for future research. For example, while relationships with parents and close friends have been identified as important contributors to early generativity, other relationships merit exploring. McAdams and colleagues (1997) found that generative adults reported a greater number of role models or positive influences; it would be interesting to study whether generative adolescents report a greater number of adult role models. Given that generative concern in adolescence has been established, clearly larger longitudinal studies are needed to understand how this early form of generativity develops across adulthood. It is important to study whether generative concern remains stable from adolescence to adulthood, as well as whether high generative concern in adolescence predicts greater generative behaviour and/or commitment in adulthood. Moreover, research investigating how to foster early generativity could be useful.

Adolescence is a time when individuals are exploring who they want to be as adults. Encouraging them to incorporate generative ideals into their identity might be an effective time to consolidate them. In turn, fostering generative individuals will serve to improve their community. As mentioned earlier, generativity has implications not only for the well-being of individuals, but for society as a whole. McAdams et al. (1997) proposed, and Grossbaum and Bates (2002) found support for the idea that generativity gives individuals purpose, as well as allows adults to make meaning of their contributions. This study

contributes to our understanding of the factors contributing to the development of generative concern, which might inform future research on how to promote such concern.

Table 3.1.

*Generative Concern, Caregiving Behaviours, Prosocial Behaviours and Social**Desirability: Inter and Auto Correlations and Descriptive Statistics*

	1	2	3	4	5	6	7	8	9	10
1. LGS 1	-	.57**	.40**	.44**	.48**	.40**	.43**	.12	.17*	.01
2. LGS 2		-	.60**	.37**	.42**	.51**	.40**	.07	.21*	.22**
3. LGS 3			-	.27**	.32**	.50**	.30**	.04	.04	.12
4. Care1				-	.71**	.56**	.54**	.13	.04	.01
5. Care 2					-	.70**	.49**	.18*	.18*	.15
6. Care 3						-	.45**	.07	.14	.18*
7. Prosocial 1							-	-.06	-.02	-.05
8. Soc Des 1								-	.59**	.57**
9 Soc Des 2									-	.63**
10 Soc Des 3										-
<i>M</i>	1.73	1.66	1.75	4.72	4.67	4.70	3.03	.52	.48	.46
<i>SD</i>	.43	.39	.46	.81	.83	.81	.65	.21	.22	.22

Note: based on $N = 142$; * $p < .05$, ** $p < .01$.

Figure 3.1. Associations between Generative Concern and Caregiving Behaviours over Time (N=142).

Note:

CFI = 1.00, RMSEA = .00 (CI = .00 - .072), χ^2 (19) = 18.58, $p = .48$

DISCUSSION

Although generativity has been widely studied across mid-life samples, very little work has been done examining the presence of generativity in adolescence. Moreover, while it has been theorized that positive close relationships promote generativity (McAdams et al., 1997; McAdams, 2001), again not much empirical evidence is available. The purpose of the current study was to examine the presence of early generative concern from early to middle adolescence. We also explored the roles that attachment style and parenting (Study 1) and caregiving with friends (Study 2) play in predicting early generative concern. Adolescents completed a series of measures, including the LGS, yearly across three years. In the first study, it was hypothesized that the LGS would be reliable and valid across early adolescence, and that scores would increase over time. Moreover, it was hypothesized that generative concern would be associated with aspects of parenting style, specifically warmth, behavioural control and autonomy granting, as well as negatively associated with avoidant and anxious attachment styles. In the second study, we tested whether early caregiving behaviours with close friends predicted later generative concern, or whether the association was bi-directional.

Review of Findings

Overall, findings from Study 1 provided strong evidence for the presence of generative concern in early to mid adolescence. The LGS showed adequate internal consistency, and was similar to adult samples in terms of gender differences as well as in associations with adjustment. Specifically, results show

that females scored higher than males, which has been found in non-parent adult samples (McAdams & de St. Aubin, 1992; Snarey, 1993), and generative concern was associated with self-esteem and (negatively with) depressive symptoms, also found in late adolescent and adult samples (Lawford et al., 2005). Finally, similar to adult samples, redemption themes found in turning point stories were positively associated with generative concern.

There was, however, no evidence that generative concern increased across adolescence. This is somewhat puzzling. The LGS is the most commonly used measure of generativity, specifically designed to measure generative concern, an earlier component of generativity as outlined by McAdams and de St. Aubin (1992; see also McAdams et al., 1998). On the other hand, these results are consistent with cross-sectional studies examining generational differences on the LGS from early to late adulthood (McAdams & de St. Aubin, 1992; Stewart & Van de Water, 1998) as well as longitudinal studies from late adolescence to emerging adulthood (Lawford et al., 2005). The lack of age differences in the present study suggest, however, that in fact generative concern is equivalent across age periods. Similarly, this study also found that while adolescent's generative concern was related to their mother's generative concern, adolescents and mothers did not differ significantly from each other. Given this, other measures should be developed or explored in order to investigate the developmental properties of generativity. Perhaps generativity does not increase over time but matures. That is, while adolescents endorse the importance of each item on the LGS in approximately the same way across years, their understanding

of what it is to “contribute to next generation” might deepen in a way not captured by the current Likert scale, due to life experiences or continued thinking about identity issues. In this case, a repeated measures narrative approach might capture the development of generativity more accurately.

It is interesting that both anxious and avoidant attachment as well as a warm parenting style were associated with generative concern. Parenting warmth has been linked to early generativity in past studies (Frensch et al., 2007; Lawford et al., 2005), but this is the first study to examine associations between attachment style and generative concern. Anxious attachment was associated with generative concern, including avoidant attachment as a moderator, whereby for adolescents lower in avoidant attachment, anxious attachment was more strongly negatively associated with generative concern, such that adolescents with low levels of both anxiety and avoidance reported the highest levels of generative concern. Additionally, attachment avoidance was associated with changes in generative concern over time somewhat differently for males and females. Attachment security includes freedom to explore different ideas and environments, given the knowledge that close others will provide support if needed. In terms of generativity, this might translate to a secure individual feeling freer to explore their role and/or commitment to community, society, or future generations. Thus, as adolescents explore these ideas, an ability to show concern for generative issues might be more likely.

The first research study considered the role of parents and of attachment style in early generative concern. The second study examined the role of

caregiving behaviour with friends in early generative concern from early to middle adolescence. Across the lifespan, attachment relationships become more reciprocal with respect to care giving and receiving (Bowlby, 1980). In adolescence, individuals develop friendships that include certain attachment characteristics, such as secure base and safe haven (Fraley & Davis, 1998). Adolescents learn to provide care for friends in times of stress or need. This skill is applicable to concern for future generations. Thus, caregiving behaviour with friends was examined as a predictor of generative concern.

Findings from Study 2 indicated that early caregiving significantly predicted generative concern, one year later. However, early generative concern did not significantly predict later caregiving behaviours, providing support for a unidirectional model of influence. These findings highlight not only the importance of caregiving in predicting generative concern, but also the importance of peer relationships. Friendships are often overlooked in considering promoting generativity, as the focus tends more towards intergenerational relationships such as parent-child. Current findings however, indicate that friendships are also important relationships in promoting generativity across time.

General Conclusions

Overall, evidence from this research project demonstrates that generative concern is present as young as early adolescence, and in general it does not appear to increase over time. Early generative concern is impacted by socialization, such as warm parenting style, and by individual differences such as anxious and

avoidant attachment. Moreover, caregiving behaviours with close others also has a positive association with early generative concern over time.

The current research focused overall on the importance of close relationships on generative concern. Overall, positive relationships with both parents and peers were associated with generative concern. Retrospective memories of early blessings, and positive role models, have been identified as common themes in the life stories of generative adults (McAdams et al., 1997). Moreover, a positive outlook on others (belief in the species) has been theoretically identified as a key precursor to generative concern (McAdams & de St. Aubin, 1992; McAdams et al., 1998). The first study supports this past research, finding that close relationships are important for generative concern even in early adolescence.

Interestingly, warm parenting style did not predict increases over time in generative concern, while caregiving behaviours with close friends did. This difference in findings could be due to differing contributions of parents and friends to generative concern across the lifespan. Friendships begin to take on more importance for adolescence (Berndt, 2002), thus they might have a greater impact regarding positive change with respect to generative concern. Alternatively, measures of warm parenting refer to how parents behave towards the adolescent, while caregiving behaviours refer to how the adolescent behaves towards close friends. Thus, how an adolescent chooses to behave might be more influential regarding change in generative concern than how others behave

towards them. More research is needed to better understand which particular factors predicted change in generative concern.

Strengths and Limitations

The current research project includes a number of unique features and strengths. First, it is the first known study to measure generative concern in a sample of early to middle adolescents. Moreover, the longitudinal design allowed for more sophisticated statistical techniques for investigating change and predictors of change in generative concern over time (Singer & Willett, 2002). This is also the first research to empirically investigate the association between generative concern and the attachment and caregiving systems, associations that have only been suggested theoretically (McAdams, 2001). Finally, the first study demonstrated that positive relationships with both parents and close friends are associated with generative concern.

These studies also contain certain limitations that should be addressed in future research. First, the studies rely mainly on self-report data. Although some friend-report data provide validity to the findings, future research should explore other forms and sources of measurement. Secondly, only generative concern was considered as a measure of generativity, and early measures were shortened for ethical reasons. In future, research on adolescent generativity should include other measures such as generative behaviours, or generative goals/commitments over time. Finally, the current study included a short-term longitudinal design, including three years of measurement. Our findings indicate that generative concern is present in adolescence. However, they do not provide any data

regarding how early generative concern impacts later generative concern in adulthood. Therefore, longitudinal designs across a longer time span are warranted to further investigate this.

Future Directions

The current work opens the door to a wider developmental perspective on generativity; and as such, a number of questions remain unanswered. While this work establishes the presence of generative concern in early to middle adolescence, qualitative differences between generativity in adolescence in comparison to adulthood remain unclear. As generativity is a salient feature of adult development, insights regarding the importance of concern for future generations are probably different than in adolescence when these ideas are germinating. This could be addressed with a longitudinal qualitative study investigating the meaning of generative concern, including issues of caring for future generations, or leaving a positive legacy, from adolescence to adulthood.

Sociologists and anthropologists recognize the need to promote generativity in a society in order to maintain a peaceful and productive way of life (Putnam, 2001). It has been said that “the greatest threat to our... future comes from no external enemy, but from the enemy within” (Edelman, 1992; p. 19 cited in MacDermid, Franz, & De Reus, 1998). This “enemy from within” could be interpreted, at least in part, as a lack of generativity (MacDermid et al., 1998). Thus, to foster generativity in a society would be to encourage strivings in individuals to take active roles in parenting, citizenship, community involvement and general, creative productivity.

In conclusion, the results of this research encourage a broader developmental perspective of generative concern, demonstrating its presence in adolescence. Parents and peers were also identified as playing an important role in early generative concern. Hopefully, these findings will spur further research investigating ways of promoting and maintaining early generativity.

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Appendix A

Letter and Consent to Student – Questionnaire Study

Centre for Research in Human Development
Department of Psychology
tel: (514) 848-7560 fax: (514) 848-2815

JHSii
October, 2002

Dear Student,

Last winter, as you may remember, you participated in the Concordia Relationships and Well-being Project, telling us about your relationships, feelings and behaviour. **We are now writing to ask you to help us in the second phase of our study.**

This year we are asking you to complete questionnaires again during class time at school, at times convenient for your teacher. The total time will be about two class periods throughout the year. The questionnaires are a lot like last year, and ask about your relationships with parents and friends, how your family gets along, and how you feel and act (e.g., mood, helping others, making decisions, breaking rules, drug use, and sex). . Of course we keep all of your answers confidential

We really appreciate that you helped us last year. **Your help again this year is very important** because we need to understand how changes in relationships affect students your age over time. **Besides, those students who choose to participate this year will be entered in THE GRAND-PRIZE draw for a SONY DISCMAN !!!**

Please complete the enclosed consent form, have one of your parents sign it, and return it to your French teacher as soon as possible, *even if you say no*. Although we hope that you do, it is your choice whether or not to participate. **All students returning the form (whether answering "yes" or "no") will have their names entered in a draw for Cineplex Odeon movie passes and HMV gift certificates!!**

If you have any questions feel free to call one of us at the numbers below.
Thanks a lot!

Clairmeige Motzoi, B.A. Anna-Beth Doyle, Ph.D.
M.A. Candidate Professor of Psychology
(848-7560) (848-7538)

Dorothy Markiewicz, Ph.D.
Professor of Psychology and
Applied Human
Sciences
(848-2268)

Centre for Research in Human Development
Department of Psychology
tel: (514) 848-7560 fax: (514) 848-2815

October 2002 (JHSii)

Consent Form For Students To Participate in Research

Student's
Name: _____

Student's Date of
Birth: _____ Age: _____

School: LCCHS Grade: _____ French Teacher's
name/class: _____

Check where applicable:

_____ YES, my parent(s) and I agree to **my participation** in the Relationships and Well-being study conducted by Dr. Anna Beth Doyle, and Dr. Dorothy Markiewicz.
(Student and parent please sign below).

_____ Before my parent(s) or I agree to my participation, please call to discuss the project.
Name _____ and phone number _____.

_____ NO, my parent(s) or I do not agree to my participation.

IF YOU AGREE TO THE STUDENT'S PARTICIPATION, please complete the following:

We have been informed that the purpose of the study is to understand students' relationships with family and peers, adjustment and well-being. Participation will involve approximately 1 ½ hours of the student's class time during the year, completing questionnaires about friendships and family relationships, self-perceptions and emotional and behavioural adjustment. We understand that **all information will be confidential** to the research team and identified only by number, although if life-threatening circumstances are reported, the research team will legally have to break confidentiality. We understand that general results may be published. We also understand that the student may withdraw consent and may discontinue participation at any time.

Student's Signature:

Parent's

Signature: _____ **Date** _____

Parent(s)

Name(s) _____

Address _____

City & Postal Code _____ Phone

Number _____

**PLEASE RETURN THIS FORM TO YOUR FRENCH TEACHER AS
SOON AS POSSIBLE.**

Appendix B

Letter and Consent to Student – Interview Study

Centre for Research in Human Development
Department of Psychology Concordia University
 tel: (514) 848-2424 ext. 7560 fax: (514) 848-2815

JHSii- Interview
 September, 2003

Hello again!

We hope that you enjoyed your summer! As you may remember, last year we asked some of you to talk to us one-on-one about your experiences growing up. If you did not participate last year, here is a second chance!

Like last year, we would like to speak with you, in a *one-on-one interview*, about your experiences growing up and your thoughts and feelings about your early life. The interview takes approximately 1 hour, and will be conducted after school, in a private room at your school. Of course all of your answers are completely confidential.

Your help again this year is very important to us in order for us to learn about your thoughts and feelings about your childhood experiences *in your own words*, not just on questionnaires. **Every student who participates in this interview will receive \$10.00.** We really appreciate all your help.

We may call you in the next few weeks or so to ask you if you would participate in this special phase of our study, and to answer any questions you might have. If you decide to participate, we will set up a time with you to meet after school for the interview.

If you have any questions, feel free to call one of us at the numbers below.
 Thanks a lot!

Heather Lawford, M.A.

Research Co-ordinator

(848-2424 ext. 7560)

Anna-Beth Doyle, Ph.D.

Professor of Psychology

(848-2424 ext. 7538)

Dorothy Markiewicz,
 Ph.D.

Professor of
 Psychology and
 Applied Human
 Sciences

(848-2424 ext.

2268)

CONCORDIA UNIVERSITY INFORMED CONSENT STATEMENT

You are invited to participate in a family background interview for the Concordia Relationships and Well-Being Project. The purpose of this project is to study adolescents' thoughts and feelings about their experiences growing up.

INFORMATION

This part of the study involves about 80 adolescents who have been involved with the Concordia project over the past few years. If you agree to take part in this phase of the study, you will participate in an hour long interview, which involves discussing events from your early childhood, your relationship with your parents/caregivers, and your thoughts and feelings about how these experiences might have affected your current personality.

THE INTERVIEW

In participating in this study, you will be making a significant contribution to research on how early family life contributes to peer and romantic relationships in adolescence. In addition, most individuals who have participated in the past found telling about their life experiences in this way to be interesting, positive, and sometimes enlightening.

The interview asks participants about both positive and negative events. It is possible that some memories or thoughts might come up that cause discomfort. Please note that you have the right to skip any questions or stop the interview at anytime and still get paid. If you have any questions or concerns about the interview, you may contact a member of the research team (Heather Lawford/Dr. Dorothy Markiewicz/Dr. Anna-Beth Doyle).

CONFIDENTIALITY

All information provided during this interview will be held in the strictest of confidence, unless life threatening circumstances are reported. Only your ID number will appear on your interview. Any identifying information (tapes and transcripts) will be kept in a locked cabinet within a locked room separate from the data collected. Interview data will be coded and analysed from typed transcripts, and any identifying information (e.g., names or places) on the audiotapes will be removed from the transcripts. Only individuals directly involved with the audio-tape (i.e., interviewers/transcribers) will have access to your audio-tape. All research assistants involved in this project have been trained in ethical research practices, including confidentiality.

PARTICIPATION

Your participation in this study is voluntary; you may decline to participate without penalty. If you decide to participate, you may withdraw from the study at any time without penalty. You have the right to omit any question(s) with which you are uncomfortable.

COMPENSATION

For participating in this study, you will receive \$10.00. If you withdraw from the study prior to its completion or if the interview is stopped for any reason, you will still receive this payment

CONSENT TO PARTICIPATE

I have read and understand the above information. I agree to participate in this study.

Participant's
signature _____

Interviewer's signature

Date: _____

Researchers' Contact Information

Heather Lawford hlawford@yahoo.com	phone: (514) 848-7560	email:
Dr. Dorothy Markiewicz markie@vax2.concordia.ca	phone: (514) 848-2268	email:
Dr. Anna-Beth Doyle abdoyle@vax2.concordia.ca	phone: (514) 848-7538	email:

Consent to quote from transcript

Sometimes when reporting our results to other psychology professionals, we find it helpful to use quotes from interview transcripts. Often, participants say things that make our point very clear. In other words, sometimes you say it better than we do! Although we use quotes, we always change any identifying information like names, places etc.

If you agree to allow parts of your interview transcript to be quoted, with the understanding that absolutely no identifying information will be reported, please check the "YES" statement.

If you prefer that no part of your interview transcript be quoted, please check the "NO" statement.

_____ YES- I agree to allow a portion of my interview to be reported directly, solely for research purposes. I understand that absolutely no obviously identifying information will ever be reported.

_____ NO -I would like my contribution to this research to appear only in mass data analysis. That is, I do not want any portion of my interview to appear in research reports.

I have read and understand the above information.

Participant's
signature _____

Interviewer's signature

Date: _____

Appendix C

Phone Request for Participation and Reminder Letter – Mother Data

Initial Blurb

Hello, may I speak to _____ (Mother's name) please?

If yes/ or asked who is calling: Hi, this is _____ from the Relationships and Well-Being Project at Concordia University. I'm calling to follow-up on a questionnaire package we sent.

- ❖ If a family member (or mom) indicates that Mom is not interested, just say "Ok well, thank you for your time. Have a good day!" and do not call back.

If not home: When would be a good time to get hold of her? (*Take this down*) Okay, I will call her back, thank-you very much. Bye.

- ❖ If a family member asks your name read #1 below.
- ❖ If there is no answer, do not leave message on the first call, but call again at a different time of day/evening. Leave message (use #1 below) in addition to our phone number if no answer on the second attempt.

Once you get a hold of the Mother (or other primary caregiver)

1. Hello, _____ (Mother's name), this is _____ from the Relationships and Well-being Project at Concordia University. In May we sent you some questionnaires to complete as part of our work at LaSalle Community Comprehensive High School. We haven't heard from you yet so I'm just calling to see if you received this package and if you have any questions about it (wait for questions).

*(**See possible info below to answer questions**)*

2. Can we expect to hear from you? (*If agree*) Ok, great! Please return the completed questionnaires to us in the pre-paid envelope included with the package as soon as possible.
3. Do you have any more questions? (*Answer any questions*)
4. We hope to hear from you soon and thank you for your time.

If they have the package:

Possible info (don't launch into this unless asked):

We're interested in understanding how relationships contribute to the way adolescents' cope with the challenges that they face from day to day. It is important to know the parents' views, so we're asking mothers (or if unavailable, other primary caregiver) to fill out these questionnaires.

Of course, (insert child's name here)'s father or stepfather is welcome to work with you, if you prefer.

All information that you provide to us is confidential to our team.

The questions will take about 30 minutes of your time to complete and we are happy to send you a \$10.00 honorarium as a token of our appreciation for your help.

If they haven't received the package (or don't remember it):

Would you be interested in participating? *(Use possible info for any questions)*

May I please check your address so I can make sure the re-sent package gets to you? (Take down address).

Read from #2 "Once you get a hold of the Mother" from here on

If they are not interested: Ok well, thank you for your time. Have a good day!

Centre for Research in Human Development
Department of Psychology
Tel: (514) 848-2424 Ext. 7560 fax: (514) 848-2815

May, 2005

Dear Mother or other primary caregiver,

Last month we sent you a set of questionnaires to complete as part of our Relationships and Well-Being Project at LaSalle Community Comprehensive High School. We haven't heard from you yet and are writing to ask you to **return your completed questionnaires as soon as possible**.

If you have any questions, or have misplaced your package and would like another sent to you, please call Genevieve or Patricia at 848-2424 ext. 7560. If you have already returned the questionnaire package, please disregard this notice.

Each parent returning a *completed* package will receive a \$10.00 honorarium as a token of our appreciation for your help. We are looking forward to hearing from you, as the contribution of parents like yourselves enables us to learn about family relationships and their importance for adjustment in adolescents. We hope to hear from you soon and thank you for your time.

Sincerely,

Geneviève Torrico
Ph.D.

Graduate Student
and

848-2424, ext. 7560

Sciences

848-2424, ext. 2268

Anna Beth Doyle, Ph.D.

Professor of Psychology

848-2424, ext. 7538

Dorothy Markiewicz,

Professor, Psychology

Applied Human

Appendix D

General Information Questionnaire

GENERAL INFORMATION

Please do not mark in this area

				3
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This information will help us describe the participants in our study.

1. Age:

Date of Birth: / /

2. Sex: Female Male

3. Grade: 8 9 10 11

4. My mom is currently (one box):

- Married to my dad (or living common-law with)
 Divorced/Separated Widowed
 Single Other (specify) _____
 Remarried _____

5. My dad is currently (one box):

- Married to my mom (or living common-law with)
 Divorced/Separated Widowed
 Single Other (specify) _____
 Remarried _____

6. If your parents are divorced/separated, how old were you when they got divorced/separated?

7. Who lives in your home with you?

all that apply (If you live in more than one home, tell us about the home you live in most)

- Mom Sisters/Stepsisters
 Dad Brothers/Stepbrothers
 Stepmom Other (Specify) _____
 Stepdad _____

8. If you live in a second household, who lives in your second home with you? (all that apply)

- Mom Sisters/Stepsisters
 Dad Brothers/Stepbrothers
 Stepmom Other (Specify) _____
 Stepdad _____

9. If you live in a second household, how many days a week do you spend in your second home (on average)?

1 2 3 4 5 6 7

10. Check all that apply. If you have:

Sister(s) are they Younger? Older?
 Stepsister(s) are they Younger? Older?

Brother(s) are they Younger? Older?
 Stepbrother(s) are they Younger? Older?

11. If you live with stepbrother(s)/stepsister(s), for how many years have you lived together?

12. For questions 4 to 10, have any of these people/living situations changed since last year?
 Yes No

13. Performance in academic subjects.

(a box for each subject that you take)

a. English

Failing Below Average Average Above Average

b. History or Geography

Failing Below Average Average Above Average

c. Mathematics

Failing Below Average Average Above Average

d. Science or Biology

Failing Below Average Average Above Average

Appendix E

Loyola Generativity Scale (16-items)

LGS

Please do not mark in this area

				3
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Read each statement. Make an in the box that best describes how often the statement applies to YOU.

	Never	Sometimes	Often	Very often
1. I try to help others by sharing what I've learned in my life.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
2. I do not feel that other people need me.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
3. I think I would like the type of work that a teacher does.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
4. I feel as though I have made a difference in people's lives.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
5. I do not want to do volunteer work.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
6. I have made and created things that mean something to other people.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
7. I try to be creative in most things that I do.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
8. I believe that society cannot be responsible for providing food and shelter for all homeless people.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
9. Others would say that I have done something special for society.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
10. If I were unable to have children of my own, I would like to adopt children.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
11. I try to teach others important things that I know how to do.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
12. In general, my actions do not have a positive effect on other people.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
13. I feel as though I have done nothing worthwhile for others.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
14. Other people say that I am a very productive person.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
15. I have a responsibility to improve my neighborhood.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
16. People come to me for advice.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
	Never	Sometimes	Often	Very often

Appendix F

Loyola Generativity Scale (20 items)

LGS

Please do not mark in this area



Draft

				4
--	--	--	--	---

Read each statement. Make an in the box that best describes how often the statement applies to YOU.

	Never	Sometimes	Often	Very often
1. I try to help others by sharing what I've learned in my life.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
2. I do not feel that other people need me.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
3. I think I would like the work of a teacher.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
4. I feel as though I have made a difference in people's lives.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
5. I do not want to do volunteer work.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
6. I have made and created things that mean something to other people.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
7. I try to be creative in most things that I do.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
8. I think that I will be remembered for a long time after I die.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
9. I believe that society cannot be responsible for providing food and shelter for all homeless people.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
10. Others would say that I have done something special for society.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
11. If I were unable to have children of my own, I would like to adopt children.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
12. I try to teach others important things that I know how to do.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
13. I feel that I have done nothing that will survive after I die.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
14. In general, my actions do not have a positive effect on other people.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
15. I feel as though I have done nothing worthwhile for others.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
16. I have made commitments to many different kinds of people, groups, and activities in my life.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
17. Other people say that I am a very productive person.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
18. I have a responsibility to improve my neighborhood.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
19. People come to me for advice.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3
20. I feel as though my contributions will exist after I die.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3

Never Sometimes Often Very often

JHS-ivP



Draft

Appendix G
Child Depression Inventory

FEELINGS AND IDEAS (CDI)

122

Please do not mark in this area

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People sometimes have different feelings and ideas. This form lists feelings and ideas in groups. From each group, pick **one** sentence that describes you best for the past two weeks. There are no right or wrong answers.

From each group, put an next to the sentence that **best** describes your feelings and ideas in the past two weeks.

-
1. I am sad once in a while.
 I am sad many times.
 I am sad all the time.
-
2. Nothing will ever work out for me.
 I am not sure if things will work out for me.
 Things will work out for me O.K.
-
3. I do most things O.K.
 I do many things wrong.
 I do everything wrong.
-
4. I think about bad things happening to me once in a while.
 I worry that bad things will happen to me.
 I am sure that terrible things will happen to me.
-
5. I hate myself.
 I do not like myself.
 I like myself.
-
6. All bad things are my fault.
 Many bad things are my fault.
 Bad things are not usually my fault.
-

Please do not mark in this area

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7. Things bother me all the time.
 Things bother me many times.
 Things bother me once in a while.
-
8. I cannot make up my mind about things.
 It is hard to make up my mind about things.
 I make up my mind about things easily.
-
9. I look O.K.
 There are some bad things about my looks.
 I look ugly.
-
10. I never have fun at school.
 I have fun at school only once in a while.
 I have fun at school many times.
-
11. I can never be as good as other kids.
 I can be as good as other kids if I want to.
 I am just as good as other kids.
-
12. Nobody really loves me.
 I am not sure if anybody loves me.
 I am sure that somebody loves me.
-

Appendix H

Self-Description Questionnaire (Self-Esteem)

SELF-DESCRIPTION QUESTIONNAIRE (SDQ-II)

Please do not mark in this area

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Please read each sentence and choose the answer that is best for you. There are six possible answers for each question: "True", "False", and four answers in between. Make an in the box under the answer you choose.

	False	Mostly False	More False than True	More True than False	Mostly True	True
1. Overall, I have a lot to be proud of.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
2. Most things I do well.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
3. Nothing I ever do seems to turn out right.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
4. Overall, most things I do turn out well.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
5. Overall, I'm a failure.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6

False Mostly False More False than True More True than False Mostly True True

Appendix I
Parenting Styles Questionnaire

WHAT IS YOUR FAMILY LIKE?

Please do not mark in this area

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For each sentence, decide how much you agree or disagree with it. Mark an in the box that is true for you.

If you live in more than one home, tell us about the parents in the home you live in the most.

	Strongly disagree	Disagree	I'm in between	Agree	Strongly agree
1. My parents really expect me to follow family rules.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
2. If I don't behave myself, my parents will punish me.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
3. My parents soon forget a rule they have made.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
4. I can count on my parents to help me out if I have a problem.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
5. My parents give me a lot of freedom.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
6. When I do something wrong, my parents do not punish me.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
7. My parents nag me about little things.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
8. When I have a problem or don't feel well, my parents are willing to help me figure things out.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
9. My parents hit or threaten to hit me.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
10. My parents are happy when I do something well.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
11. My parents only keep rules when it suits them.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
12. My parents let me do whatever I want.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
13. My parents get angry and yell at me.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
14. My parents praise me when I am successful or have done well.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Strongly disagree	Disagree	I'm in between	Agree	Strongly agree
-------------------	----------	----------------	-------	----------------

WHAT IS YOUR FAMILY LIKE?

Please do not mark in this area

				3
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Strongly disagree	Disagree	I'm in between	Agree	Strongly agree
-------------------	----------	----------------	-------	----------------

- 15. My parents believe I have a right to my own point of view. 1 2 3 4 5
- 16. My parents and I have fun talking and doing things together. 1 2 3 4 5
- 17. My parents threaten punishment more often than they use it. 1 2 3 4 5
- 18. My parents do special things for me. 1 2 3 4 5
- 19. My parents let me think for myself. 1 2 3 4 5
- 20. My parents enforce a rule or do not enforce a rule depending on their mood. 1 2 3 4 5
- 21. My parents are happy with me most of the time. 1 2 3 4 5
- 22. We don't have many rules at home and the rules we have aren't enforced. 1 2 3 4 5
- 23. My parents encourage me to make decisions for myself carefully. 1 2 3 4 5

Strongly disagree	Disagree	I'm in between	Agree	Strongly agree
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Appendix J

Experiences in Close Relationships (Attachment Style)

EXPERIENCES IN CLOSE RELATIONSHIPS



Please do not mark in this area

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The following statements concern how you feel in your closest relationships (e.g., parents, best friends, romantic partners, etc). We are interested in how you **generally** experience your **closest relationships**, not just in one type of relationship, or at one point in time. Respond to each statement by indicating how much you agree or disagree with it. Mark an in the box that corresponds to your choice. Use the following scale:

1	2	3	4	5	6	7
Disagree Strongly			Neutral/ Mixed			Agree Strongly

1. I worry about being abandoned.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I am very comfortable being close to others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I worry a lot about my relationships with others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I worry that people won't care about me as much as I care about them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I get uncomfortable when others want to be very close.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. I worry a lot about losing people I am close to.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. I don't feel comfortable opening up to others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I often wish that other peoples' feelings for me were as strong as my feelings for them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I want to get close to others, but I keep pulling back.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. I am nervous when others get too close to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. I worry about being alone.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I am comfortable sharing my private thoughts and feelings with others I am close to.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. I try to avoid getting too close to people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Disagree Strongly			Neutral/ Mixed			Agree Strongly
1	2	3	4	5	6	7





Please do not mark in this area

							2
--	--	--	--	--	--	--	---

	1	2	3	4	5	6	7
	Disagree Strongly		Neutral/Mixed			Agree Strongly	
14. I need a lot of reassurance that I am loved by others.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. I find it relatively easy to get close to other people.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. If I can't get people I am close with to pay attention to me, I get upset or angry.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. I find that people don't want to get as close as I would like.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. I usually talk about my problems and concerns with people I am close to.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. When I don't have any close relationships, I feel a bit anxious and insecure.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. I don't mind asking people I am close to for comfort, advice, or help.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. It helps to turn to people I am close to in times of need.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. When people I am close to disapprove of me, I feel really bad about myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. I turn to people I am close to for many things, including comfort and reassurance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. I feel angry when people I am close to spend time away from me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Appendix K
Prosocial Scale

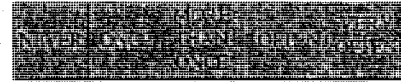
ACTION SCALE (PRO)



Please do not mark in this area

				2
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How frequently have you done the following? For each statement, make an in the box that most closely describes how you feel and act. Use the following scale:



- | | | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. I have given directions to a stranger. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. I have made change (e.g., for a dollar) for a stranger. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. I have given money to a charity. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. I have given money to a stranger who needed it (or asked me for it). | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. I have donated goods or clothes to a charity. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. I have delayed an elevator and held the door open for a stranger. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. I have allowed someone to go ahead of me in a lineup (at a Xerox machine, in the supermarket, at a store). | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. I have offered to help a handicapped or elderly stranger across the street. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. I have offered my seat on a bus or train to a stranger who was standing. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. I have loaned valuable possessions (jewelry, bike, expensive clothes) to a friend. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. I have helped a friend with boring or difficult chores such as yardwork or cleaning up a room without being paid. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. I have comforted someone who was very upset. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |



Appendix L
Caregiving Patterns

CAREGIVING PATTERNS (CP)

Please do not mark in this area

					3
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Please take a moment to think about the way YOU usually act when a close friend is upset or is experiencing a problem. Read each of the following items and mark in the box that most closely describes how you feel and act.

Never	Almost Never	Somet- times	Often	Very Often	Always
-------	-----------------	-----------------	-------	---------------	--------

- | | | | | | | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. I am bossy when trying to help my friend. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. I don't realize when my friend is upset or worried about something. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. I'm good at recognizing my friend's needs and feelings. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. I can tell when my friend needs comforting, even when s/he doesn't ask for it. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. I tell my friend what to do when s/he is trying to make a decision. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. When I help my friend with something, I like to do things "my way". | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7. I don't get involved in my friend's problems. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8. When my friend wants to tell me about a problem he/she is having, I make excuses not to talk about it. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9. When my friend has a problem, I try to help him/her to come up with something to do about it. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. When my friend tells me about a problem, I change the topic or say it's not important. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 11. When my friend has a problem that only he/she can solve, I try to do other things to help (e.g., bring food, etc.). | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 12. When my friend is feeling bad about something, I say things to let him/her know I care about him/her. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 13. When my friend needs help with something, I spend a lot of time helping him/her. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 14. When my friend is having a problem, I try to show him/her that I understand how he/she is feeling. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 15. When my friend is feeling stressed about something, I encourage him/her to tell me how he/she is feeling. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Appendix M

Marlowe-Crowne Social Desirability Scale



MC-SD

Please do not mark in this area

				2
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For the following questions, please 'T' for True and 'F' for False.

	True	False
1. It is sometimes hard for me to go on with my work if I am not encouraged.	<input type="checkbox"/> T	<input type="checkbox"/> F
2. I sometimes feel resentful when I don't get my way.	<input type="checkbox"/> T	<input type="checkbox"/> F
3. On a few occasions, I have given up doing something because I thought too little of my ability.	<input type="checkbox"/> T	<input type="checkbox"/> F
4. I like to gossip at times.	<input type="checkbox"/> T	<input type="checkbox"/> F
5. There have been times when I felt like rebelling against people in authority even though I knew they were right.	<input type="checkbox"/> T	<input type="checkbox"/> F
6. No matter who I'm talking to, I'm always a good listener.	<input type="checkbox"/> T	<input type="checkbox"/> F
7. There have been occasions when I took advantage of someone.	<input type="checkbox"/> T	<input type="checkbox"/> F
8. I'm always willing to admit it when I make a mistake.	<input type="checkbox"/> T	<input type="checkbox"/> F
9. I sometimes try to get even, rather than forgive and forget.	<input type="checkbox"/> T	<input type="checkbox"/> F
10. I am always courteous, even to people who are disagreeable.	<input type="checkbox"/> T	<input type="checkbox"/> F
11. At times I have really insisted on having things my own way.	<input type="checkbox"/> T	<input type="checkbox"/> F
12. I have never been annoyed when people expressed ideas very different from my own.	<input type="checkbox"/> T	<input type="checkbox"/> F
13. There have been times when I was quite jealous of the good fortune of others.	<input type="checkbox"/> T	<input type="checkbox"/> F
14. I am sometimes irritated by people who ask favours of me.	<input type="checkbox"/> T	<input type="checkbox"/> F
15. I have never deliberately said something that hurt someone's feelings.	<input type="checkbox"/> T	<input type="checkbox"/> F

Appendix N

Turning Point Story Interview Protocol

Turning Point Story (taken from McAdams' Life Story Interview)

Note to interviewers: this is not part of the AAI so it is coded for content not discourse. Please get as much specific information as possible

Okay, good. We're almost done, I just have one more question for you. I want you to think about your whole life now, from as far back as you can remember up to now. Often when people look back on their life they can think of certain turning points in their life. This is a particular point in time where a person goes through a big change, for example in the way they think about things. We can experience turning points in lots of different ways: in relationships with other people, in school or hobbies, etc. I am really interested in a turning point in your understanding of yourself (*if they don't understand: a time when you learned something about yourself or you changed your ideas about yourself*) Take some time to think about an event in your life that was a turning point in your understanding of yourself that you would like to share with me.

Note: this isn't easy, so give them a minute to think- if they can't come up with anything, ask them to think of an event that comes as close as possible to a turning point.

Important information:

- ◆ What happened (what led up to it)
- ◆ when it happened (how old)
- ◆ where they were
- ◆ who was involved
- ◆ what they were thinking and feeling***
- ◆ did this have an impact on who they were as a person***
- ◆ what does the event say about who they are as a person.***