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Michael John Hall

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The Effects of Divorce and Conflict
On Academic Achievement

A Thesis

Presented to the
Department of Psychology
and the
Faculty of the Graduate College
University of Nebraska

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
University of Nebraska at Omaha

by

Michael John Hall

July, 1996

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THESIS ACCEPTANCE

Acceptance for the faculty of the Graduate College,
University of Nebraska, in partial fulfillment of the
requirements for the degree Master of Arts, University
of Nebraska at Omaha.

Thesis Committee

| Name | Department/School |
|---------------------------|---------------------------------|
| <u>Mary Ann Beerman</u> | <u>Sociology / Anthropology</u> |
| <u>C. Raymond Millmet</u> | <u>Psychology</u> |
| <u>Joseph P. Ludov</u> | <u>Psychology</u> |
| <u>Deana F. Liddy</u> | <u>Psychology</u> |

Chairperson Deana F. Liddy

Date July 16, 1976

Abstract

The influential aspects of a parental divorce on children may not solely depend upon the divorce but may include other variables such as exposure to high levels of parental and familial conflict. How these experiences are manifested within a child is an important question to be answered. In the past it was believed that the experiences related to parental divorce decreased the child's ability to compete scholastically with peers that came from non-divorced families. What this study examined was whether there is a difference between hindering learning and hindering performance. To detect differences between the two, it is proposed that decreases in the child's grade point average (GPA) reflect performance, a lack of knowledge application. In order to determine whether or not a lack of learning has occurred, one must look at the child's performance on a standardized achievement test (i.e. the Iowa Tests of Educational Development/ITED). This study examined the effects of divorce and conflict on GPA and ITED scores in an attempt to show where and when changes in the child's learning take place. It was found that presence of parental divorce or perceived familial conflict has a detrimental effect on a student's academic achievement as measured by GPA. Additionally, it was predicted and found that family

constellation and gender congruence mediate the performance as measured by GPA. Students that expressed high levels of perceived conflict and had a parental remarriage of a same-sex custodial parent showed significantly lower academic achievement.

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Chapter I

Statement of the Problem

Fifty percent of all new marriages end in divorce (Adams, Miller, & Reavis, 1989). This fact poses special problems for society. The effect of divorce on a child's academic achievement and behavior has been studied extensively. Mednick, Baker, Reznick, and Hocevar (1990) cited 17 separate articles dealing with the effects of divorce on various measures of academic achievement. These sources support the theory that children coming from intact, nuclear families tend to achieve academically at a higher level than do those children whose parents have divorced.

Just because a child is not receiving all A's and B's in school does not necessarily mean the child is not learning. The reliability of studies showing a decrement in academic performance for children with divorced parents is not in question. Whether or not the findings are truly indicative of how much a child learns is, however, another matter. There are factors in the life of a child of divorced parents, such as spending time with the noncustodial parent on weekends, ongoing parental conflict, and adjustment to a new environment (new apartment, school, etc.), that children from intact families may not have to

experience. Performance is the key word. There may not be sufficient time, energy, will, or drive to complete homework, write papers, or intensively study for exams in a timely way. This does not necessarily indicate a lack of learning, but rather a lack of classroom performance of knowledge application in the manner required by the teacher. Therefore, we need to begin by asking what academic achievement is and how it should be measured. We need also to question whether or not lower achievement is a result of the divorce itself or is instead a manifestation of how the child attempts to cope and deal with emerging, novel situations such as family conflict or environmental adjustments. The critical part of any research is to know what your results mean as well as what the ramifications are of those results.

General Effect of Divorce on Academic Achievement

The effect of parental divorce on student academic achievement has been studied by many researchers (Kunz & Kunz, 1995 and Call, Beer, & Beer, 1994). Mednick, Baker, Reznick, and Hocevar (1990) found that eleventh and twelfth grade children whose parents divorced were significantly lower on both math and reading proficiency than children from intact families. Math and reading proficiency was

measured by teacher's evaluations on a five point scale. They also discovered that it did not appear to matter how old the child was at the time of divorce as "pre-school", "latency" and "adolescents" all tended to show a decrement in the dependent variable. They warn, however, that there was a significant interaction between math and reading proficiency and the educational level of the mother. Further study in this area is needed.

Shreeve, Goetter, Norby, Bunn, Stueckle, de Michele, & Midgley (1985) states that for children between grade seven and grade twelve, GPA's in two-parent homes are significantly higher than GPA's in one-parent homes. Shreeve did not, however, differentiate between homes where students were living with step-parents. These students were grouped with students who had never experienced a parental divorce. The potential confound between non-divorced homes and homes with a step-parent should be kept in mind when interpreting Shreeve's results.

Beer (1989) found that fifth and sixth grade children with divorced parents had significantly lower grades as well as lower scores on both a self-concept test and a self-esteem test. These children also scored higher than children from intact families on the Children's Depression

Inventory.

Academic achievement by junior and senior high school aged students, as measured by standardized exams in seven different subject areas, was shown by Cherian (1989 and 1994) to be negatively impacted by parental divorce. Significant differences in performance between children with divorced and non-divorced parents were observed overall as well as when broken into groups based on socioeconomic status (SES). However, there did not seem to be a major impact based on SES.

Forehand, Middleton, and Long (1987) argue that children do not have to be academically hindered by a parental divorce. It is their theory that as long as the child maintains a good relationship with at least one parent, and that parent takes an active interest in the adolescent's schoolwork, there is no reason why divorce has to adversely affect grades and achievement. It is the positive interaction dealing with the school work that becomes the key variable.

Achievement Tests-CAT and ITBS

Beer (1989), as mentioned earlier, looked at the effects of divorce on grade point average, self-esteem, and self-concept on fifth and sixth grade children. In addition

to this, he also looked at the children's scores on the ITBS (Iowa Tests of Basic Skills) and how they interacted with marital status of the parents and the gender of the child. The ITBS did not show a significant effect based on the marital status of the parents. Additionally, no interaction between gender and parental marital status was found. A significant negative correlation between the results of the ITBS and the student's depression score, and a significantly positive correlation between the ITBS and the student's self-esteem scores was present and there was a significant correlation between grade point average and ITBS scores that was positive in nature, as would be expected. Finally, the correlation between ITBS scores and self-concept were positive and significant. This study is cross-sectional in nature and did not attempt to draw conclusions on how divorce will affect grades and performance on achievement tests over time. These results have yet to be replicated, and the sample sizes were small ($n = 21$). Several troublesome aspects of the methodology, such as the sample size and the lack of differentiation between students with step-parents versus students in single parent homes, could easily be resolved with future research.

An alternative to the ITBS is the CAT (California

Achievement Tests). Shreeve et. al. (1985) studied the effects of divorce on grade point average and CAT scores on seventh through twelfth grade students. They found, as stated earlier, that grades were negatively affected by the presence of a divorce and positively affected by the number of parental figures currently in the home. They also found that the CAT results were not significantly different in one-parent versus two-parent homes. Again, these parental figures may or may not be the child's actual parents. They include children living with a step-parent in the two-parent home category. The possibility of a confound due to the way the authors operationally defined the construct 'two-parent home' must be kept in mind when reviewing their results. The CAT scores did seem to follow the trend set by GPA but did not achieve significance. This may be showing an actual effect or it may simply be an artifact of the relatively small size of the single-parent sample ($n = 37$) and a confound between divorce and number of parents currently in the home.

Adams, Miller, and Reavis (1989) looked at divorce and its effect on academic achievement, behavior, and school attendance in seventh graders. They found that divorce did not result in a statistically significant difference in

student's CAT scores or their attendance rate at school. However, there was a significant difference in the student's instructor-rated school behavior on the behavior scale created by the teachers. Children with divorced parents did show an increase in negative behaviors over children from intact homes. One should interpret this finding with care as it could be due to an expectancy bias on the part of the teachers. Adams, Miller, and Reavis (1989) note that while there was not a statistically significant finding with the CAT, there were "large" differences in the CAT means between the divorced family children and the never divorced family children. Once again, the sample sizes are too small to make definitive judgements (the cell size was 30 in both the divorced and never divorced groups). Replication with larger sample sizes is needed in order to come to some more conclusive statements.

Is There an Overall Difference Between the Sexes?

It has consistently been found that parental divorce has an adverse impact on a child's grade point average (GPA). Neighbors, Forehand, and Armistead (1992) found that both boys and girls in adolescence showed a decrement in academic performance following a parental divorce compared to the individual's scores prior to the divorce. However,

the impact was significantly larger in boys than in girls. The effect on boys was much more sudden as well. Grades of the girls in their study tended to decrease gradually as opposed to the dramatic, downward shift observed in boys. Neighbors et al. suggest that the level of pre-divorce conflict may account for the sex difference. The girls' overall response to parental divorce seems to be consistent with the boys' response when viewed over many years; the girls just appear to be slower in manifesting the emotional and behavioral changes. Similar results have been shown in Shreeve, Goetter, Norby, Bunn, Stueckle, de Michele, and Midgley (1985).

The results of a study done on high school students by Brubeck and Beer (1992) provide additional support for the theory of differential academic performance based on the gender of the child. Girls with divorced parents consistently received GPA's that were statistically larger than the GPA's of boys with divorced parents. Girls not only were able to establish a significant GPA difference, but they were able to maintain that difference across grades in high school.

Zaslow (1988) presents a meta-analysis of 27 reports looking at potential differences in how boys versus girls

deal with and react to a parental divorce in respect to home and school behavior and academic performance. In 12 studies boys displayed more negative reactions than girls, while in four other studies qualified support was present for this finding. The support by the studies in the meta-analysis showing a differential effect was manifested in negative behavioral changes, a decline in quality of school work, the appearance of emotional disruptions that were not present prior to the divorce, as well as numerous other responses. In five articles girls were in a more deleterious situation after parental divorce, while six articles found no sex difference. Zaslow (1988) believes that because there is apparently evidence that boys do not, in fact, uniformly show more post-divorce problems than girls, there needs to be a revision of this common belief. She suggests that specific circumstances within the individual divorce will dictate how it will affect the couple's sons and daughters. For example, Zaslow found that when fathers had custody of their children, the girls in the family tended to be the ones that expressed more negative effects related to the divorce.

Stolba and Amato (1993) found that adolescents with divorced parents tended to be better behaved and adjusted if

there was an adult of the same sex present in the household. This finding was not present in younger, prepubertal children, and the association seemed to be unique to the adolescent experience. Research by Peterson and Zill (1986) resulted in similar findings. Among their conclusions was the idea that exposure to a same sex parental figure in the home will decrease the level of general behavior problems and increase the child's ability to deal with their emerging sexual identity. Their results were based on reports of behavior from school as well as a subscale that addressed maladaptive behavioral problems.

Santrock (1972) utilized the Otis Quick Scoring IQ test as well as the Stanford Achievement Test as dependent variables when comparing boys and girls of divorced parents. Again, evidence of situational forces emerged as the major factor in differences between boys and girls. The effect of father-absence exerted a greater effect for boys than for girls. Boys never scored significantly higher than girls on either IQ or achievement in any age group containing children with absent fathers. Santrock concludes this finding is further evidence in support of the importance of a same-sex parental presence.

Effect of Reconstituted Families on Children of Divorce

In several studies it has been shown that after a parental divorce occurs, the addition of a step-parent can be a significant milestone in the coping process of a child. Stolba and Amato (1993) found that the addition of another parental figure can, in certain circumstances, play a major role in regaining stability within the family. If the current family setting is a single mother home, addition of a step-father can have a very diverse effect on boys and girls. Typically, the addition of a new adult male/step-father, while threatening at first, is a beneficial situation for boys. It provides them with a same-sex adult figure with which they can interact. The positive effect of a new step-father on girls was not found.

The amount of time performing tasks or participating in joint activities with a same-sex parental figure is the best predictor of how that child will perform scholastically (Cochran, Larner, Riley, Gunnarsson, & Henderson, 1990). According to Cochran et al, this evidence argues for a relation existing between the presence of a same-sex parent or parental figure and academic achievement during adolescence.

Santröck, Warshak, Lindbergh, and Meadows (1982) observed that boys in elementary school that reside in homes

with a step-father tended to show lower levels of anxiety and higher levels of acceptable social behavior than those without a step-father. Conversely, girls of the same age tended to be more anxious when a step-father was present in the household than when no step-father was present. More specific results dealing with school performance were obtained by Chapman (1977) when looking at differences in children after parental divorce by comparing their Scholastic Aptitude Test (SAT) scores. Chapman found that boys with step-fathers performed better on the SAT than did boys with divorced parents who had no male parental figure present. The lack of a father figure seemed to have an equally deleterious impact on verbal and quantitative performance.

Santrock (1972) looked at the effects of remarriage in a previously father-absent situation for both boys and girls. A differential effect was found on IQ and achievement tests when comparing the sexes. Boys who gained a step-father tended to show a significant increase in performance on the measures. These boys approached a level equivalent to that of boys living with their natural fathers in intact families. However, girls did not show similar results. The addition of a step-father did not increase

girls' scores. They remain at a level similar to where they were prior to the remarriage. Santrock (1972) believes that boys show an increase because there is now a same-sex parental model to whom they can relate and have a relationship with on a day to day basis. Following a divorce, according to Santrock, girls tend to develop close relationships with their mothers. The presence of a step-father may be perceived as a threat to this newly evolved intimacy they have with their mother. Hetherington, Cox, and Cox (1985) found results consistent with those elaborated by Santrock (1972). The findings of the two studies were virtually identical. However, achievement and IQ test scores are not the only way to measure whether or not reconstituted families have an impact on children's achievement. Boyd and Parish (1985) found no statistically significant difference between the GPA's of children with step-parents and the GPA's of children in intact families.

Effect of Marital Conflict

Mechanic and Hansell (1989) compared high-conflict intact families with low-conflict divorced families. The authors found that conflict appeared to be a stronger predictor of adolescent well-being than did actual divorce. Children from high-conflict intact families showed more

depressed mood, anxiety, physical symptoms, and decreases in self-esteem than did students from homes that were lower in conflict, regardless of whether there was a divorce in the family. The opposite was also found, that is, children from a divorced low-conflict family showed significantly higher levels of well-being than those living in intact families characterized by high levels of conflict. This research is consistent with the meta-analysis done by Amato (1993). The negative effects of divorce (lack of overall well-being and a decrease in academic achievement) on children were found to be amplified as the level of family conflict experienced increased. Tannenbaum, Neighbors, and Forehand (1992) found similar results showing a decrement in the grades of students where high levels of parental conflict are present.

Brown, Portes, and Christensen (1989) essentially agree with Mechanic and Hansell (1989) and Amato (1993) and state that typically, children who come from households with a high degree of conflict are at a higher risk of developmental problems. The increase of developmental troubles is especially present in situations where the parents try to establish loyalties in their children. This is a logical finding as there is no readily discernable benefit to the child in attempting to pit them against a

parent. Using children as surrogate weapons would seem to be very destructive to both the child and to the relationship between child and parent while simultaneously increasing tension and conflict in an already troubled time. Brown, Portes, and Christensen (1989) believe that developmental risk can be greatly reduced if the parents can come together and agree on consistent childrearing practices as well as attempting to alleviate any feelings of guilt the child may have concerning the divorce. Brown et al. (1989) contend that the parents must come to the realization that they will always be parents and must attempt to maintain some modicum of a relationship with one another. If successful, this forged alliance will help to increase the likelihood that their children will be able to continue functioning at their current emotional and scholastic level.

Wallerstein (1991) points out that while a couple may be able to resolve their interpersonal crisis and maintain the current family structure, problems can still occur. Past and current conflict experienced by the child could result in a decrement of psychological well-being. This condition is especially true if that conflict was or is centered on the child (i.e. custody/visitation struggles or battling for the child's attention and love). Fighting for

a child is much different than using a child to fight. The outcome, however, can be equally harmful to the psychological health of the child.

Neighbors et al. (1992) suggest that pre-divorce conflict may be much more disturbing to boys than to girls in the short run. This may help to explain why there are many studies that suggest boys are more susceptible than girls to post-divorce maladjustment. The boys may be misbehaving or doing poorly in school in order to get attention from their parents. If they succeed in getting their attention, chances are that the parents will stop fighting with each other, at least for a short period, while they deal with the situation presented by the child.

The meta-analysis by Amato and Keith (1991) discussed the impact of conflict on academic achievement. Divorce and conflict, long thought to be interchangeable, were found to be two separate and distinct phenomenon. The effect that conflict has on children seems to be the determining factor as to how they will adjust. High levels of conflict without a divorce is just as detrimental, if not more so, on a child than is a divorce with low levels of conflict. Amato and Keith (1991) discuss a study by Long, Forehand, Fauber, and Brody (1987) that found academic achievement to be tied

solely to the level of conflict. The presence of divorce played no direct role on the childrens' academic performance. McCombs and Forehand (1989) report similar findings. When dealing with academic achievement (i.e. GPA), their results suggest that "the most effective buffers may be the absence of conflict observed by the adolescent between his/her divorced parents".

Summary of Literature

The effect of a child's gender on their post-divorce life deserves continued attention. Originally, it was believed that boys simply had a more difficult time dealing with the changes presented to them. However, it appears from the literature that the critical factor is not solely the gender of the child, but instead is an interaction of the gender with other environmental forces. Three situations seem to be of primary importance. First, whether or not the custodial parent is of the same gender as the child has been shown to play a major role in predicting how academic achievement will be affected. Second, the addition of a step-parent to the family plays an important role in differentiating the effect on children within a family. With maternal custody, girls seem to be adversely affected by remarriage, whereas boys seem to benefit from the

addition of a step-father. The converse is observed with paternal custody. Finally, the presence of familial conflict seems to impact more negatively upon boys than girls. There is evidence that conflict may in fact be the largest problem that children have to overcome when dealing with a parental divorce. Conflict seems to potentially be the most important factor tied to the academic achievement of children.

Chapter II

Hypotheses

Hypothesis Design Issues

There are two dependent variables that are potentially available to be utilized in the following hypotheses. These variables are the student's grade point average (GPA) as well as the student's composite score on the Iowa Tests of Educational Development (ITED). While common and familiar, the GPA is a measure of school or academic performance, whereas the ITED is a measure of knowledge acquisition. It is often believed that these two measures will approximate the same outcome. This is a dangerous assumption to make as knowledge and performance are two disparate constructs.

When referring to 'intact' families, the constellations this term includes are any family structure that has been stable since the birth of the child. This term would include children that live with their never divorced parents or children that live with a single parent that has always been a single parent. Perceived conflict levels will be measured utilizing parts of the questionnaire attached as Appendix A. Children with a high level of perceived conflict will be defined as those that fall into the top one-third of the conflict level distribution, whereas

children with a low level of perceived conflict will be defined as those that fall into the bottom one-third of the conflict level distribution. The term congruity will refer to families wherein the parents are divorced and the participant lives with a same-sex custodial parent (boys living with their fathers or girls living with their mothers). Similarly, noncongruity situations are those where the participant lives with the parent of the opposite sex (girls living with their fathers or boys living with their mothers).

Hypotheses One and Two

Hypothesis number one predicts that children with divorced parents will have significantly lower GPA's than children from intact homes. Hypothesis number two predicts that children from homes with a high level of perceived conflict will have significantly lower GPA's than students in the low or moderate conflict levels.

Hypotheses Three through Six

There are three major factors of interest in the following four hypotheses. These factors are level of student's perceived familial conflict, presence or absence of gender congruity between child and custodial parent, and whether or not the custodial parent has remarried.

Unfortunately, there are very few fathers in our society today that have custody of their children following a divorce. Therefore, when we are looking at gender congruity, what we commonly see in the literature is essentially two groups. One cluster is the congruity group, or girls living with their mothers, while the other cluster is the noncongruity group, or boys living with their mothers. This situation is a weakness within the literature that needs to be addressed. Hypothesis number three predicts that the congruity group will have a significantly lower GPA if their custodial parent remarries than if that parent remained single. Conversely, hypothesis number four predicts that the noncongruity group will have a significantly higher GPA if their custodial parent remarries. Again, what is important to these hypotheses is not the difference in the gender of the child but the presence or absence of gender congruity.

To this point the hypotheses have predicted that differences will be found only on the GPA of the children. As was stated in the review of the literature, scores on achievement tests appear to be more robust and resistant to external forces. This pattern may be due to the difference in what is being measured. Again, the GPA of a child is

actually a measure of the individual's classroom performance, not necessarily what the child has learned, whereas achievement tests are seeking to measure what areas of knowledge the child has mastered. There are numerous situations where the GPA of a student may suffer due to extraneous variables unrelated to the actual knowledge acquisition level of the child. Many children with divorced parents experience the weekly shuffling between mother and father. This continual displacement could limit available time to complete homework, projects, term papers, and journal entries. In addition to the potential mentioned for incomplete work, many grades are based, at some level, on the overall appearance or neatness of materials submitted to the teacher. If time for the child is restricted, presentation style may be sacrificed for the sake of completion.

If negative differences are found on both GPA and achievement tests, then a stronger case can be made for a real effect on how the child is able to attend to and process new information. This effect will be tested in the following three hypotheses.

Hypotheses number five and six combine factors from the previous hypotheses. Hypothesis five predicts that

individuals in the congruity group that have a remarried custodial parent who have also experienced a high level of familial conflict will have significantly lower GPA's as well as significantly lower ITED composite scores as compared to the rest of the congruity group. Hypothesis number six predicts that individuals in the noncongruity group that live with a nonremarried custodial parent who have also experienced a high level of familial conflict will show significantly lower GPA's as well as significantly lower ITED composite scores as compared to the rest of the noncongruity group. As the literature suggests that the congruence effect is typically an adolescent phenomena, the study will be implemented in a high school setting.

Hypothesis Seven

Hypothesis seven will use a longitudinal method (utilizing archival data) to see how children's academic performance changes over time from pre-divorce to post-divorce. It is proposed that there will be a significant decrease in GPA for the group from their previous scores after the divorce takes place. No statistically significant change is anticipated in the student's ITED composite score.

Chapter III

Method

Subjects

Participants for the study were drawn from a local high school. The Council Bluffs Community School District provided access to their high school system. Council Bluffs was approached due to the fact that students in the state of Iowa are administered the Iowa Tests of Educational Development (ITED) every other year in high school while first through eighth grade students are administered the Iowa Tests of Basic Skills every year. This test situation permits a longitudinal as well as cross-sectional look at the participants. The faculty and staff of the senior high school involved was very interested and cooperative in the implementation of this study.

The participants were drawn from the high school population. Because the participants were minors, parental consent had to be obtained prior to the initiation of the study. Approximately 80% of the high school population (N = 1100) was approached in their respective English classes about participating in the study. Prior to participation the students had to take home a parental consent form (Appendix B) and return it with their parent or guardian's

signature to either the principal's office or to their English teacher. This process proved to be very challenging. Despite repeated attempts to increase the return rate of the consent forms, the final sample size was 130 students. Unfortunately, the distribution of students was not as equal on demographic variables as had been hoped. There were 94 females and 36 male participants. The sample was heavily Caucasian with 122 self declared white students while only 8 students stated they were a member of a racial or ethnic minority. Obtaining equal representation from all grades was initially the ultimate goal. The final distribution of the participants based on grade was not as equivalent as had been hoped. The sample had 69 freshman participants, 36 sophomore participants, 19 juniors, and 6 senior class participants. Part of this skew occurred because more of the younger students were enrolled in English at the time of the study. Additionally, the high school participating in the study utilizes block scheduling which permits greater flexibility for junior and senior students. There may be large blocks of time where students are participating in off campus programs. This, by no means, completely accounts for the differential distribution obtained but it did play some role.

All relevant students were used when working with hypotheses one through six. When dealing with the longitudinal design, however, students needed to be present in the school system for at least three years for repeated measures to be obtained. The established archival history in the participant's school facilitated the collection of data. It is highly unlikely that every student would have been in the system for the same length of time, therefore it is to be expected that an unequal number of ITED results and grade reports are available for each student. See Table I for descriptive data on the participants.

Materials

Upon return of the parental consent form and signature of a student assent form (Appendix C), the participants answered a survey constructed by the author to ascertain whether their parents are now or have ever been separated or divorced and the details surrounding this event. They also were asked demographic questions pertaining to their race, sex, birth order, family size, the sex of their custodial parent (if applicable), the current marital status of each of their parents, SES, and level of perceived parental and familial conflict. Children of divorce rated perceived familial conflict both before and after the divorce.

Table I

Student Demographics

| <u>Category</u> | <u>All Participants</u> | <u>Parents Divorced</u> | <u>Parents Non-divorced</u> |
|--|-------------------------|------------------------------|-----------------------------|
| Male/Female | 36/94 | 16/43 | 20/51 |
| White/Non-white | 122/8 | 53/6 | 69/2 |
| Perceived Economic Status (1 = most everyone is richer than us, 7 = most everyone is poorer than us) | 4.18 | 4.15 | 4.21 |
| Avg. yrs since div. | n.a. | 10.02 ($\sigma = 4.63$) | n.a. |
| Avg. age at div. | n.a. | 5.92 ($\sigma = 4.43$) | n.a. |
| Avg. conflict score (1 = low conflict, 7 = high conflict) | 3.80 | 3.56 | 3.88 |
| GPA | 3.05 | 2.95 | 3.14 |
| ITED | 68.45 | 63.17 | 72.88 |

There were four questions on the survey that dealt with an evaluation of the students' perceived level of familial conflict. Those individuals who had experienced a parental divorce were asked to respond to all four of the conflict questions, whereas students with non-divorced parents only responded to two questions. It was subsequently determined that to limit the possibility of a confound, only the two conflict questions to which all participants responded (numbers 30 and 31 on the questionnaire) would be included in the conflict variable for analysis. These are "Please circle the frequency of quarrels that occur in the family with which you currently live." and "Please circle the approximate length of most quarrels that occur or have occurred in your family.". All of the other questions were objective inquiries about the demographic background and family constellation of the participant.

The results of the survey were matched up by a identification number to the students records in order to find their cumulative grade point average (GPA) and their ITED results over their academic career. GPA ranged from 0.00 (straight F's) to 4.0 (straight A's). Access to this information was accomplished with the assistance of the faculty and staff at the high school.

Measure

As mentioned above, there were originally four perceived familial conflict items that were listed as items 28, 29, 30, and 31 on the questionnaire (see Appendix A). Item 28 is a measure of conflict frequency prior to parental divorce. Item 29 is a measure of conflict frequency in the year following the parental divorce. The frequency of conflict in the individual's family at the present time is measured by item 30, while the average length of familial conflicts is measured by item 31 on the questionnaire. An intercorrelation matrix was generated and it showed that item 28 was not significantly correlated with items 30 and 31 while it was correlated at the $p < .05$ level of alpha with item 29 (see Table II). This would be expected as conflict due to a divorce may linger for a year after the divorce then begin to taper away. All conflict items that referred to perceived conflict after divorce were significantly correlated at $p < .01$ level of alpha. These findings would seem to indicate that the elimination of the first two items from the analysis, in order to avoid the potential confound between divorced and non-divorced kids, should not present any major concerns. Therefore, data analyses looking at conflict use only the measures referring

Table II

Correlation Matrix of Four Original Conflict Items

| | Item 28 | Item 29 | Item 30 | Item 31 |
|---------|---------|---------|---------|---------|
| Item 28 | 1.0000 | .2939* | .2401 | .1533 |
| Item 29 | .2939* | 1.0000 | .3752** | .4917** |
| Item 30 | .2401 | .3752** | 1.0000 | .3899** |
| Item 31 | .1533 | .4917** | .3899** | 1.0000 |

* = Significant less than .05 (2-tailed)

** = Significant less than .01 (2 tailed)

to contemporary family conflict ratings.

Chapter IV

Results

Hypotheses One and Two

The data obtained were analyzed using analysis of variance methods and the student's t-test. Three matrixes were constructed to examine the first six hypotheses. The first matrix was a marital status by conflict matrix (2 x 3) looking at whether or not the participants' parents had ever been divorced and into which of three levels of perceived familial conflict the participants classified themselves. The conflict variable was obtained by averaging the participants' responses to questions number 30 and 31 on the questionnaire. The distribution of responses was then separated into high, medium, and low conflict based on dividing the overall distribution into thirds. Due to ties, the division of participants into equal sized categories was not possible. There were 41 members of the high group, 46 members of the middle group, and 40 members of the low group. (see Table III) Hypotheses number one and two were capable of being analyzed using this matrix.

Hypothesis one predicted that the participants with parents who had experienced a divorce would have lower GPA's than those participants with parents who had not experienced

Table III

Mean GPA's for Marital Status by Conflict Matrix

| Marital Status | Conflict Level | | | Row Means |
|----------------|----------------|-----------|-----------|-----------|
| | Low | Medium | High | |
| Non-divorced | 3.29 (19) | 3.32 (25) | 2.84 (25) | 3.14 (69) |
| Divorced | 3.04 (21) | 3.21 (21) | 2.52 (16) | 2.96 (58) |
| Column Means | 3.16 (40) | 3.27 (46) | 2.72 (41) | |

Note. Values enclosed in parentheses represent cell size.

a divorce. There were 58 students who came from a family where a divorce occurred, whereas there were 69 participants whose parents had not separated or divorced (see Table III). Three other participants either did not respond to this question or were lacking necessary information elsewhere (i.e. no dependent variable information was accessible) and had to be discarded from the analysis. Utilizing the matrix discussed above, there was a significant main effect of marital status, $F(1, 121) = 2.988$, $p = .043$, on the students GPA values (see Table IV). Participants from divorced homes exhibited a mean GPA of 2.96 while participants with non-divorced parents showed a mean GPA of 3.14 on a four-point scale (see Table III). The results are consistent with hypothesis one.

Hypothesis two predicted that GPA would be negatively impacted by the perception of the student that they were in a home environment with high levels of conflict. Again, analysis of the matrix revealed a significant main effect. GPA means in the different conflict levels were significantly different, $F(2, 121) = 7.793$, $p < .001$, with those individuals in the high conflict group showing the lowest scores on the GPA measure. (see Tables III & IV) Further analysis utilizing the Duncan multiple comparison

Table IV

Analysis of Variance for Marital Status by Conflict (GPA)

| Source | <u>df</u> | MS | F | <u>p</u> |
|-------------------|-----------|-------|-------|----------|
| Marital Status | 1 | 1.495 | 2.988 | .0430* |
| Conflict | 2 | 3.900 | 7.793 | .0010 |
| Status x Conflict | 2 | .188 | .236 | .7900 |
| Error | 121 | .500 | | |

* = one tailed p value. All other p values are two tailed.

technique showed that there was a statistically significant difference, $p < .05$, between the high conflict group and both the low and middle conflict groups, consistent with hypothesis two.

An omega square analysis was performed on the effect size marital status as well as on the effect size of conflict. It was found that marital status has an effect size of $\omega^2 = .0141$, while conflict has an effect size of $\omega^2 = .0964$. According to the current analysis, perceived familial conflict has a much stronger impact on students' GPA than does the marital status of the participants' parents. Additionally, similar correlations were found between GPA and conflict when looking at all participants, $r = -.24$, just the participants with divorced parents, $r = -.25$, and just the participants with non-divorced parents, $r = -.26$ (all $p \leq .05$).

Hypotheses Three Through Six

The following four hypotheses focus only on the participants who have parents that have divorced or separated in the past ($n = 58$). Hypotheses three and five utilized what will be referred to as the congruity matrix ($n = 35$). This matrix is a 2 x 3 structure looking at the custodial parent's current marital status (single or

remarried) by perceived familial conflict level. The congruity aspect is the fact that only students that live with a same sex custodial parent are included. Hypotheses four and six will use the noncongruity matrix ($n = 18$). The noncongruity matrix is identical to the congruity matrix (marital status by conflict level) but the students included are individuals living with an opposite sex custodial parent. The congruity matrix and noncongruity matrix are mutually exclusive of one another.

It is predicted by hypothesis three that individuals in the congruity matrix whose custodial parent has remarried will have lower GPA's than those individuals in the congruity matrix whose custodial parent has remained single. After the selection procedure was implemented it was discovered that all members of the congruity group were female. This means that there were no males in the population sample with divorced parents who currently lived with their fathers. This lack of gender diversity is not unexpected although, as addressed earlier, it is a situation that the investigators had hoped to avoid. There were 35 participants that qualified for membership in this category. Distribution among the six cells was acceptable (see Table V). It was found that there was no statistical support for

Table V

Mean GPA's for Congruity Matrix

| Marital Status | Conflict Level | | | Row Means |
|----------------|----------------|-----------|-----------|-----------|
| | Low | Medium | High | |
| Single | 3.47 (3) | 2.87 (8) | 2.63 (6) | 2.89 (17) |
| Remarried | 3.27 (6) | 3.46 (8) | 2.10 (4) | 3.10 (18) |
| Column Means | 3.34 (9) | 3.16 (16) | 2.42 (10) | |

Note. Values enclosed in parentheses represent cell size.

hypothesis three, $F(1, 29) = .179$, $p = .3375$ (see Table VI).

Hypothesis four utilized the noncongruity matrix. After selection took place, there were 18 participants in this category. Four of the participants were females and 14 of the participants were males so unlike the congruity matrix this structure has representation from both sexes. Hypothesis four predicted lower GPA performance by individuals in the noncongruity group if their custodial parent remained single rather than remarried. Unfortunately, with only 18 members of a six celled matrix it is virtually impossible to obtain any reliable results. Only one of the six cells had 5 members while two cells contained only 1 member (see Table VII) No significant results were obtained for hypothesis four, $F(1, 12) = 1.363$, $p = .1330$ (see Table VIII).

For the final two hypotheses it was predicted that high levels of perceived conflict would be strong enough to impact both the student's GPA and their composite score on the ITED. To investigate this we must return to the congruity matrix for hypothesis five. It is predicted that both the dependent variables will be negatively impacted

Table VI

Analysis of Variance for Congruity Matrix (GPA)

| Source | <u>df</u> | MS | F | <u>p</u> |
|-------------------|-----------|-------|-------|----------|
| Marital Status | 1 | .062 | .179 | .3375* |
| Conflict | 2 | 2.264 | 6.499 | .0050 |
| Status x Conflict | 2 | 1.054 | 3.025 | .0640 |
| Error | 29 | .348 | | |

* = one tailed p value. All other p values are two tailed.

Table VII

Mean GPA's for Noncongruity Matrix

| Marital Status | Conflict Level | | | Row Means |
|----------------|----------------|----------|----------|-----------|
| | Low | Medium | High | |
| Single | 3.52 (3) | 3.21 (4) | 2.77 (4) | 3.14 (11) |
| Remarried | 2.28 (5) | 4.00 (1) | 2.46 (1) | 2.55 (7) |
| Column means | 2.75 (8) | 3.37 (5) | 2.71 (5) | |

Note. Values enclosed in parentheses represent cell size.

Table VIII

Analysis of Variance for Noncongruity Matrix (GPA)

| Source | <u>df</u> | MS | F | <u>p</u> |
|-------------------|-----------|-------|-------|----------|
| Marital Status | 1 | 1.081 | 1.363 | .1330* |
| Conflict | 2 | 2.264 | 6.499 | .5150 |
| Status x Conflict | 2 | 1.182 | 1.490 | .2640 |
| Error | 12 | .793 | | |

* = one tailed p value. All other p values are two tailed.

when there is a combination of remarriage of the custodial parent and the presence of high conflict. It was found that GPA did not show a statistically significant interaction between custodial marital status and level of conflict, $F(2, 29) = 3.025$, $p = .064$ (see Table VI). A closer look at the matrix is allowed as there was an a priori prediction of the interaction effect. Comparison of the remarried/high conflict cell against the other five cells is done with the t-test utilizing pooled variance. The t-test comparison was found to be statistically significant, $t(33) = 2.97$, $p = .003$ (see Table IX). As stated in the hypotheses, a further analysis of the congruity matrix was undertaken utilizing the student's ITED scores as the dependent measure. Table X reveals the cell size and mean for each of the six cells in the congruity matrix for ITED. The ITED dependent variable did not show a significant interaction effect, $F(2, 29) = 1.411$, $p = .26$, although a trend towards significance was present (see table XI).

As there was an a priori prediction, a pooled variance t-test was performed, comparing the mean of the remarried/high conflict cell with the pooled means from the rest of the matrix. The t-test analysis failed to detect an effect, $t(33) = 1.16$, $p = .126$, but a similar trend in means

Table IX

GPA T-test Comparison of Hypothesis Five

| | n | Mean | SD | Std Err |
|-----------------------------|----|--------|------|---------|
| Remarried/High Conflict | 4 | 2.1021 | .661 | .331 |
| Non-Remarried/High Conflict | 31 | 3.1106 | .638 | .115 |

Pooled Variance Estimate

| t-value | df | 1-tail probability |
|---------|----|--------------------|
| 2.97 | 33 | .0030 |

Table X

Mean ITED's for Congruity Matrix

| Marital Status | Conflict Level | | | Row Means |
|----------------|----------------|------------|------------|------------|
| | Low | Medium | High | |
| Single | 69.33 (3) | 61.50 (8) | 62.17 (6) | 63.12 (17) |
| Remarried | 57.00 (6) | 76.38 (8) | 51.50 (4) | 64.39 (18) |
| Column means | 61.11 (9) | 68.94 (16) | 57.90 (10) | |

Note. Values enclosed in parentheses represent cell size.

Table XI

Analysis of Variance for Congruity Matrix (ITED)

| Source | <u>df</u> | MS | F | <u>p</u> |
|-------------------|-----------|---------|-------|----------|
| Marital Status | 1 | 10.149 | .020 | .4445* |
| Conflict | 2 | 415.733 | .808 | .4560 |
| Status x Conflict | 2 | 726.101 | 1.411 | .2600 |
| Error | 29 | 514.496 | | |

* = one tailed p value. All other p values are two tailed.

showing poorer performance for the target group was observed (see Table XII).

The analysis of hypothesis six directly parallels that of hypothesis five. The noncongruity matrix will be utilized to evaluate the proposal that members of the noncongruity group that have nonremarried custodial parents and a high level of perceived familial conflict will show lower GPA's and ITED composite scores. There was not a significant interaction between conflict level and marital status for the GPA dependent variable, $F(2, 12) = 1.49$, $p = .264$. (see Table VIII) The permitted pooled variance t-test comparing the high conflict/single parent cell against the other five showed no support for the hypothesis, $t(16) = .34$, $p = .369$ (see table XIII). When the ITED scores for the noncongruity matrix were analyzed, there was one less participant than in the GPA non-congruity matrix (see Table XIV). One participant did not have any ITED information available as she was relatively new to the school system. The ITED composite score analysis revealed no significant interaction between conflict and marital status, $F(2, 11) = 2.225$, $p = .154$ (see Table XV) However, the existing trend detected was a trend in the direction opposite to that predicted. The a priori t-test did not

Table XII

ITED T-test Comparison of Hypothesis Five

| | n | Mean | SD | Std Err |
|-----------------------------|----|--------|-------|---------|
| Remarried/High Conflict | 4 | 51.500 | 31.68 | 15.84 |
| Non-Remarried/High Conflict | 31 | 65.355 | 21.23 | 3.81 |

Pooled Variance Estimate

| t-value | df | 1-tail probability |
|---------|----|--------------------|
| 1.16 | 33 | .1260 |

Table XIII

GPA T-test Comparison of Hypothesis Six

| | n | Mean | SD | Std Err |
|--------------------------|----|--------|-------|---------|
| Single/High Conflict | 4 | 2.7681 | .346 | .173 |
| Non-Single/High Conflict | 14 | 2.9506 | 1.037 | .277 |

Pooled Variance Estimate

| t-value | df | 1-tail probability |
|---------|----|--------------------|
| .340 | 16 | .3690 |

Table XIV

Mean ITED's for Noncongruity Matrix

| Marital Status | Conflict Level | | | Row Means |
|----------------|----------------|-----------|-----------|------------|
| | Low | Medium | High | |
| Single | 78.00 (3) | 65.00 (4) | 85.67 (3) | 70.10 (10) |
| Remarried | 46.80 (5) | 93.00 (1) | 28.00 (1) | 50.71 (7) |
| Column means | 58.50 (8) | 70.60 (5) | 71.25 (4) | |

Note. Values enclosed in parentheses represent cell size.

Table XV

Analysis of Variance for Noncongruity Matrix (ITED)

| Source | <u>df</u> | MS | F | <u>p</u> |
|-------------------|-----------|----------|-------|----------|
| Marital Status | 1 | 1838.372 | 2.633 | .0665* |
| Conflict | 2 | 20.375 | .029 | .9710 |
| Status x Conflict | 2 | 1554.056 | 2.225 | .1540 |
| Error | 11 | 698.315 | | |

* = one tailed p value. All other p values are two tailed.

achieve significance, $t(15) = -1.41$, $p = .09$. Although the t-test revealed a trend that approached significance it was, again, in the direction opposite to that predicted (see Table XVI).

Hypothesis Seven

The final hypothesis was to be an archival, longitudinal analysis of the participants to see what, if any, differences would manifest over time and to compare pre- and post-divorce scores on the dependent variables. This step had to be eliminated from the study for a number of reasons. Of the 57 participants whose parents have been divorced or separated, only 25 had the divorce take place after they were five years old and thus, pre-divorce ITED scores would not be available. Additionally, only 10 of those students were in sixth grade or older when their parents divorced. This limited sample would not present interpretable findings.

Another factor hindering the longitudinal analysis was the fact that many of the students, especially those with divorced parents, moved into the school district at some point after they began their formal education. The records were not sufficiently complete to allow a consistent collection of data. With all of the factors mentioned above

Table XVI

ITED T-test Comparison of Hypothesis Six

| | n | Mean | SD | Std Err |
|--------------------------|----|--------|-------|---------|
| Single/High Conflict | 3 | 85.667 | 12.22 | 7.055 |
| Non-Single/High Conflict | 14 | 60.643 | 29.66 | 7.926 |

Pooled Variance Estimate

| t-value | df | 1-tail probability |
|---------|----|--------------------|
| -1.41 | 15 | .090 |

taken into consideration, only a handful of participants had sufficient transcript information available to make them eligible for a longitudinal analysis.

Chapter V

Discussion

Hypotheses

The decrease in GPA among students with divorced parents and students from families with high levels of perceived familial conflict was detected as predicted by hypotheses one and two respectively. In addition to supporting the hypotheses, these results also replicate prior findings in the area.

No differences were found on student's GPA based on remarriage status of the custodial parent. Both hypotheses three and four failed to show a significant difference. This would seem to indicate that the current marital status of a custodial parent has little to do with the student's academic achievement as measured by GPA. However, one must keep in mind that the statistical analysis for hypothesis four was compromised by the fact that there were only 18 individuals that qualified for membership in the six-celled noncongruity matrix. It would be hazardous and ill-advised to attempt to draw any conclusions from this matrix with its current cell sizes.

The interaction between level of perceived familial conflict and current marital status of custodial parent was

marginally significant for those participants in the congruity matrix. Individuals with high levels of perceived conflict whose same-sex custodial parents have remarried possessed lower GPA's than other individuals in the matrix. The ITED scores were analyzed on this hypothesis as well. While significance was not obtained, there was a trend in place that, if sustained, would likely have become significant had the sample size been larger.

Analysis of the hypothesis predicting lower GPA's and ITED scores for individuals living with a nonremarried opposite sex custodial parent was not possible. As mentioned above regarding hypothesis four, the extreme limitations of the noncongruity matrix make these results virtually uninterpretable.

The lack of longitudinal data, as well as the extended interval for most participants between divorce and testing, raises the concern that divorce is simply a proxy for conflict or that a factor such as socio-economic status (SES) may be playing a role in the differences found on GPA. In an attempt to address the issue of a proxy being present, a point biserial correlation between divorce/ non-divorce status and perceived conflict score was calculated. No significant difference was found, $r = -.098$. Additionally,

age of participant at time of parental divorce was correlated with the individual's GPA score to look for any time based phenomena. The relationship between age at divorce and GPA was not significant, $r = -.0741$. On the issue of SES, there were similar responses on a measure of perceived economic status for participants in the divorced and non-divorced groups, 4.15 and 4.21 respectively. (see Table I)

Methodological Concerns

There are several issues that must be taken into consideration when interpreting these results. The sample size obtained was not as large as had originally been planned. The response rate, based on number of participants versus number of parental consent forms distributed, was approximately 15%. This is significantly lower than typically expected in survey research. The fact that permission forms were handed out to the students and not mailed to the parents probably played a role in the small return rate. Additionally, the sensitive topics of divorce and conflict within the family coupled with the fact that an 'outsider' would have access to the student's academic cumulative folder, in all likelihood, added to the problem.

Future research might attempt to address this concern

by mailing the consent forms directly to the parents with a pre-stamped reply envelope. A face to face meeting with the parents might also facilitate the response rate, but would be difficult to achieve with a large sample size. The extent to which confidentiality with family information and academic records would be practiced was emphasized both with the students and parents. However, concerns in this area might possibly be further allayed in the future with additional explanation as to why accessing this information is so important.

Also present is a potential for generalizability concerns based on the skewed distribution of several of the demographic variables. There were twice as many females as males in the sample and there was not equal representation across the different grade levels. The fact that the sample was taken from a city with a predominately Caucasian population will also hinder the generalizability beyond the Midwest. The lack of racial and ethnic diversity is a concern that could be resolved by drawing a sample from a high school with a more diverse student population or by implementing a stratified random sampling technique. Theoretically, this type of sampling technique should be able to adjust for all of the other demographic imbalances

as well.

Future Research

The extreme limitations within this study due to the restricted sample size and unbalanced demographics could be resolved in future research. Three of the hypotheses failed to achieve significance. Two of these predictions were based on the noncongruity matrix, the size limitations of which have already been discussed. The third hypothesis that did not achieve significance, hypothesis three, would seem to indicate that based on the sample, current marital status of a same-sex custodial parent does not have an effect on the student's academic achievement as measured by GPA. Perhaps this finding is an artifact of the relatively small sample size or that the divorce and or remarriage are of long duration.

It would seem that the most robust findings in this study revolved around the issue of perceived familial conflict. A next step would be to question whether perceived familial conflict is an accurate measure of actual familial conflict. If this was found to be the case, family conflict would emerge as potentially the most detrimental stimuli in a child's life on their academic achievement.

This understanding of the impact of perceived familial

conflict could lead to the creation of a number of intervention programs in schools as well as potentially redirecting or expanding funds and programs that have previously been set aside for helping children whose parents have divorced. Additionally, with the current budgetary constraints within many school districts, this information could lead to a more cost-effective selection mechanism as to who will receive special attention and counseling.

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Appendix A

Questionnaire for Participants

ID CODE: _____

INSTRUCTIONS: Please answer the following questions as completely as you feel comfortable. If you have any questions please raise your hand and one of the administrators will assist you. All references to "Mother" or "Father" should be interpreted as referring to the individual that you consider your primary female and male parent. It is not necessary that you currently live with the individual in order for you to consider them a parent. These individuals may be your biological parent(s), step parent(s), foster parent(s), or other individuals that have assumed a parental role in your life (i.e. aunt, uncle, grandparents, family friends etc...).

1. What is the month, date, and year of your birth? _____

2. Are you male or female? _____

What race or ethnic background do you consider.....

3. Yourself? _____ 4. Your mother? _____ 5. Your father? _____ (see options below)
 a) White b) African American c) Hispanic d) Asian or Pacific Islander
 e) Native American or Eskimo f) Other (including biracial) _____

What is the occupation of your..... (please be as specific as possible)?

6. Mother _____

7. Father _____

8. Compared to your friends, and others at school, please circle your perception of the economic status of your family.

| | | | | | | |
|---------------------------------|----------|----------------------------------|----------|----------|---------------------------------|----------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| most everyone is richer than us | | some are richer, some are poorer | | | most everyone is poorer than us | |

For the following questions, the terms children, brothers, and sisters refer to individuals that **you** consider to be part of your family (whether they live with you or not). They may include biological siblings, adoptive siblings, half siblings, step siblings, foster siblings or other individuals who, for whatever reason, became a part of your family structure.

9. How many children are in your family? _____

10. How many brothers do you have? _____

11. How many sisters do you have? _____

12. Of the children you consider part of your family, what is your relative birth position (first born, second born, etc...)? _____

13. Have your parents ever undergone a divorce (If no, please skip to question 30)? _____

14. Did you live with your parents at the time of their divorce? _____

15. In what year did the separation or divorce take place? _____

16. How old were you at the time? _____
17. Did your parents ever reconcile (Did they get back together)? _____ If so, how old were you when they got back together? _____
18. Did the reconciliation last (Did they stay together)? _____
19. Please circle the official **custody** situation for **you** following your parent's divorce.
 a) Mother had sole custody b) Father had sole custody
 c) Mother and Father had joint custody d) Someone else had custody (if so, who) _____
20. Please circle who you **primarily** lived with following your parent's divorce.
 a) Mother b) Father c) Shared time equally with both d) Other (if so, who) _____
21. Please circle the official **custody** situation for **your family** (i.e. you, your brothers, and your sisters) following your parent's divorce.
 a) Mother had sole custody b) Father had sole custody c) Mother and Father had joint custody
 d) Mother had sole custody of some children, Father had sole custody of others
 e) Someone other than Mother or Father had custody (if so, who) _____
22. Please list **how many** of your brothers and sisters **primarily** lived in each situation following the divorce.
Sisters---with Mother _____ with Father _____ shared time equally with both _____
 with someone else (please list who) _____
Brothers---with Mother _____ with Father _____ shared time equally with both _____
 with someone else (please list who) _____

Of the total time spent with one of your parents, what percentage is spent with your...

23. Mother _____ Father _____
- 24./25. Did your Mother ever remarry? _____ If you answered yes, is she still married? _____
- 26./27. Did your Father ever remarry? _____ If you answered yes, is he still married? _____

28. Please circle the frequency of quarrels between your parents prior to their divorce.

1 2 3 4 5 6 7
 once a month or less two or three times a month once a week or more

29. Please circle the frequency of quarrels in your family the year after your parents' divorce.

1 2 3 4 5 6 7
 once a month or less two or three times a month once a week or more

30. Please circle the frequency of quarrels that occur in the family with which you currently live.

1 2 3 4 5 6 7
 once a month or less two or three times a month once a week or more

31. Please circle the approximate length of most quarrels that occur or have occurred in your family.

1 2 3 4 5 6 7
 less than 5 minutes 10 minutes more than 20 minutes

Appendix B

Parental Consent Form

Parent Informed Consent Form

IRB #136-96

Effects of Divorce and Conflict on Academic Achievement

Your son/daughter has been invited to participate in this research study. The following information is provided in order to help you make an informed decision about whether or not to allow your son/daughter to participate. If you have any questions at any time, please do not hesitate to ask.

Your son/daughter is eligible to participate due to an agreement between the Council Bluffs Community School District, Abraham Lincoln Senior High School, Principal James Lake, and the University of Nebraska at Omaha (UNO).

The purpose of the study is to determine how divorce and/or conflict will affect children's academic achievement as measured by grade point average (GPA) and the Iowa Tests of Basic Skills (ITBS) or Iowa Tests of Educational Development (ITED).

Participation in this study may require up to approximately 15 minutes of your child's time and is not considered to be part of any school programs in which your son/daughter might be currently enrolled. During the experiment, your son/daughter will be administered a brief questionnaire. The questionnaire will inquire about their family structure and history as well as their demographic background. Once completed, the questionnaire will be collected. The questionnaires will then be matched with the appropriate GPA and ITBS or ITED scores by the principal investigator at your child's high school. By allowing your child to participate in this study, you are giving the principal investigator permission to access the necessary academic records.

Occasionally, some children may experience discomfort answering questions about the effects of divorce or conflict. Should this be the case, your child is free to terminate participation at any time.

Any information obtained during this study which could identify your son/daughter will be kept strictly confidential. The information obtained in this study may be published in scientific journals or presented at scientific meetings, but, again, your son/daughter's identity will be kept strictly confidential.

IRB #136-96

You are free to decide not to allow your son/daughter to participate in this study or to withdraw them at anytime without adversely affecting your and their relationship with the investigator or their school. Your decision will not result in any loss of benefits or privileges to which they are otherwise entitled.

Your child's rights as a research subject have been explained to you. If you have any additional questions concerning your child's rights, you may contact the University of Nebraska Institutional Review Board (IRB), telephone 402/559-6463.

DOCUMENTATION OF INFORMED CONSENT

YOU ARE VOLUNTARILY MAKING A DECISION WHETHER OR NOT TO ALLOW YOUR CHILD TO PARTICIPATE IN THIS RESEARCH STUDY. YOUR SIGNATURE CERTIFIES THAT YOU HAVE DECIDED TO ALLOW YOUR CHILD TO PARTICIPATE HAVING READ AND UNDERSTOOD THE INFORMATION PRESENTED. YOU WILL BE GIVEN A COPY OF THE CONSENT FORM TO KEEP.

SIGNATURE OF PARENT

DATE

IN MY JUDGEMENT THE PARENT/LEGAL GUARDIAN IS VOLUNTARILY AND KNOWINGLY GIVING INFORMED CONSENT AND POSSESSES THE LEGAL CAPACITY TO GIVE INFORMED CONSENT TO PARTICIPATE IN THIS RESEARCH STUDY.

SIGNATURE OF INVESTIGATOR

DATE

IDENTIFICATION OF THE INVESTIGATORS:

PRINCIPAL INVESTIGATOR

Michael J. Hall

Phone: 554-4817

SECONDARY INVESTIGATOR

Deana F. Liddy

Phone: 554-2548

Appendix C

Student Assent Form

Participant Informed Assent Form IRB #136-96

Effects of Divorce and Conflict on Academic Achievement

1. We would like to invite you to take part in this study. You are eligible to take part because you are a student in the Council Bluffs Community School District's high school system.
2. Your parents will also be asked to give their permission for you to take part in this study.
3. If you have any questions at any time, please ask.
4. In this study we will try to learn more about how divorce and conflict can affect high school student's academic achievement.
5. In this study we will ask you to fill out a brief questionnaire. It should only take about 15 minutes of your time. In the questionnaire, we will ask background questions (age, sex, number of brothers and sisters, etc...) as well as questions regarding your family structure (are your parents divorced, how long have they been divorced, etc...).

To complete the study, we will access information from your academic records (grades and Iowa Tests of Basic Skills scores). All of your personal information will be kept strictly confidential by the principal investigator. The results of the study may be reported at scientific meetings or published in scientific journals, but, again, your name will remain confidential and will never be associated with any answers you may give on the questionnaire or with any information from your academic records.

6. Occasionally, some students may feel uncomfortable answering questions about the effects of divorce or conflict. Should this happen to you, remember, you are free to stop participating in this study at any time.

IRB #136-96

DOCUMENTATION OF INFORMED ASSENT

YOU ARE MAKING A DECISION WHETHER OR NOT TO BE IN THIS STUDY. SIGNING THIS FORM MEANS THAT YOU HAVE DECIDED TO PARTICIPATE AND HAVE READ ALL THAT IS ON THIS FORM. YOU AND YOUR PARENTS WILL BE GIVEN A COPY OF THIS ASSENT FORM TO KEEP.

SIGNATURE OF PARTICIPANT

DATE

SIGNATURE OF INVESTIGATOR

DATE

IDENTIFICATION OF THE INVESTIGATORS:

PRINCIPAL INVESTIGATOR

Michael J. Hall

Phone: 554-4817

SECONDARY INVESTIGATOR

Deana F. Liddy

Phone: 554-2548