5-2008

Intergenerational Educational Mobility and Child-Parent Relationships: A Response to Absolute or Structural Mobility?

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INTERGENERATIONAL EDUCATIONAL MOBILITY AND CHILD-PARENT
RELATIONSHIPS:
A RESPONSE TO ABSOLUTE OR
STRUCTURAL MOBILITY?

A Thesis
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Master of Science
Sociology

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by
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May 2008

Accepted by:
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ABSTRACT

Research exploring the negative effects of intergenerational educational mobility is very common throughout the social science literature. The primary question driving this research is whether those who exceed the highest level of education attained by either of their parents have less cohesive ties with their parents than those who do not. Most of this research uses a metric of absolute mobility which directly compares the child's education to the education of their mother and father. However, if more people are receiving a college degree in the child's than in the parents' generation, it is possible that the child's mobility will be viewed less as an individual achievement and more as a structural phenomenon (Kalmijn 2006).

The research presented here contributes to the growing body of research on the effects of educational mobility a new metric of *structural mobility* (Sorensen 1977), which takes into account the changing trends in educational attainment. The overall purpose of this paper is to analyze how structural educational mobility differs from absolute mobility in its effects on child-parent relationships.

I find that absolute mobility does not impact child-parent relationships significantly. However, structural mobility was found to have a negative impact on child-parent relations when an individual is upwardly-mobile. When an individual is downwardly-mobile, structural mobility has a positive impact. Therefore, the effects of structural mobility indeed are more influential than absolute mobility, but not in the ways hypothesized by Kalmijn (2006).

TABLE OF CONTENTS

Page

Table of Contents (Continued)

LIST OF TABLES

List of Tables (Continued)

LIST OF FIGURES

INTRODUCTION

Child-parent ties later in life are commonly viewed as an essential source of emotional or financial support (Cochran, Larner, Riley, Gunnarsson and Henderson 1990; Kulis 1992; Rossi and Rossi 1990; Wellman and Wortley 1989). These patterns of supportiveness have been described as an expression of both generosity and reciprocity, developing from an emotional bond which is "…unique to parents and their children, and ingrained from their earliest interactions." (Kulis 1992:43; Lopata 1979; Rossi and Rossi 1990). However, various transitions experienced throughout the life course, such as upward and downward mobility, have been shown to weaken child-parent relationships as reported by both the child and parent (Blau 1956; Blau and Duncan 1967; Hutter 1970; Kulis 1992; LeMasters 1954; Locke 1940; Stuckert 1963; Suitor 1987). Even though child-parent ties are permanent from birth, the reported dissolution or weakening of these ties marks a major transition for the mobile, as alternative sources of support and interaction are found (Blau 1956).

 Mobility can be measured in many ways, such as income, education or occupational prestige. Intergenerational mobility refers to the difference in one of these measures (education, occupation, or income) between parents and their children. The type of mobility explored in this paper is educational mobility. This is preferred, as education remains an influential factor influencing occupational and social mobility in the United States (Haveman and Smeeding 2006).

Most of the current research on intergenerational mobility, however, looks at the *literal* differences between the two generations in order to find mobility, such as the

difference in degree level between the father and the son. This difference in an individual's outcome and their family background is referred to as absolute mobility (Ferrie 2005). This approach often stresses the cultural transitions made by the upwardly-mobile, and the subsequent socialization undergone by the mobile. I will refer to this approach as the *individualistic* approach, because of its emphasis on absolute mobility and the socialization processes involved (Blau 1956; Blau and Duncan 1967).

However, as research has shown, the value of a given degree has changed from one generation to the next, as regulated by various changes in the economy (Collins 2000; Sorensen 1977). Taking this into account, levels of intergenerational educational mobility have changed, as well (Hout 1988; Karen 2002). In light of this, a *structural* approach to mobility has emerged. Structural mobility compares an individual's attainment to the median attainment of a particular time period or cohort. This approach emphasizes the effects of various aspects of the economy, such as job market fluctuations and vacancies, as well as the subsequent changes in educational attainment; such characteristics are known to change from one time period to another (Sorensen 1979; Sorensen 1975). Therefore, as Sorensen (1979) asserts, these structural characteristics tend to be very influential and relevant when measuring the level of mobility a person has experienced. Using this information, structural educational mobility can be measured by comparing an individual's attainment to the median attainment of all other individuals within a respective graduation cohort. This is in contrast to *absolute* mobility, which defines mobility as the difference in attainment between the child and his or her parents.

The existing body of research on the effects of educational mobility on child-parent relations uses the individualistic approach to mobility, or absolute mobility, which ignores the structural changes in education from the parents' to the child's time of graduation.   Therefore, the primary goal of this paper is to contribute to that growing body of research on the effects of mobility the concept of *structural* educational mobility and its effect on child-parent relations. As Kalmijn (2006) states, it is possible that structural mobility may have different effects on child-parent relations than those documented for absolute mobility. For instance, due to the fact that structural mobility is attributed to the educational structure of a particular time period, its effects may be less detrimental on child-parent relations than absolute mobility, which is attributed largely to the individual experiencing it (Kalmijn 2006). Therefore, the effects of both absolute and structural educational mobility on child-parent relations are explored.

Theoretical Background

The effects of mobility on social relations have been well documented, even as early as the nineteenth century. DeTocqueville (1835-1840), in his assessment of the United States during the early 1830s, noted the increasing levels of mobility among families in the United States, which contrasted sharply to the organization of the aristocratic societies at the time. For instance, during his visit to the United States, DeTocqueville, depicted mobility as families "…constantly springing up, [while] others [were] constantly falling away…" (DeTocqueville 1889:121). His description of the effects of mobility in the United States is also extended to *intergenerational* mobility when he describes how generational lineages are "effaced…[as] …the interest of man is

3

confined to those in close propinquity to himself." (DeTocqueville 1889:121; Ferrie 2005).   Here, the potentially negative impact of mobility on parental relations becomes apparent.

Many of the findings of mobility research subsequent to DeTocqueville's critique aren't necessarily exceptions to the potentially negative impacts of mobility observed by DeTocqueville.   The idea of social isolation due to mobility is very common in the mobility literature. For instance, Sorokin (1927) states how societies which have the greatest amount of social mobility are the least conducive to lasting, intimate social relations. Conversely, he contends that the more rigid structure of immobile societies allows for a greater degree of intimacy among the population. This, he contends, is due to the fact that people are continually within the same socio-economic group, allowing more time for intimate relations to develop.

The idea of social isolation due to mobility is further explored by Sorokin (1959). However, the view posited here merely describes mobility as the gaining of additional social "boxes" (pp.306-307) of relations, as opposed to a shift from one "box" to another. According to this, the upwardly-mobile maintain ties to those within their family of origin while making new ones within their class of destination. However, the strength of the tie to each social "box," including the family of origin, is weakened as obligations to each are maintained. The strength of parental ties for the upwardly-mobile, according to this perspective, is much like that of a polygamist to each of their spouses: instead of maintaining strong relations with those within their class of origin (including their extended family), additional relationships with those within their class of destination are

4

maintained simultaneously, thus diminishing the relationship and time spent with each (Sorokin 1959).

The idea of isolation due to mobility, however, has not only involved the isolation of an individual person. In the case of married individuals, it has changed from the isolated mobile individual to the isolated nuclear family. As Parsons (1953) notes, there is a pattern of separation of the nuclear family from the extended family (namely parents) in industrial, democratic societies in which high levels of social mobility are common. However, Parsons contends that this dissolution of parental ties "…is intimately connected with the functional requirements of our type of occupational system…[and]…that these functions are vital to the society…" (Parsons 1953:116). In other words, he is stating that the gradual dissolution of child-parent ties is normal and essential to the maintenance of a democratic, industrial society. This particular perspective, however, undermines the importance and efficacy of parental ties later in life, for both parents and adult children.

Education and Child-Parent Relations

The isolation of nuclear families, according to some research, stems not only from individual mobility, but, rather, the absence of strong parental ties among the middle and upper classes. Moreover, education is the strongest predictor of social class (Haveman and Smeeding 2006). Therefore, a logical extension of these findings would be that those who are educationally-mobile would have lower levels of child-parent relations as a result of their mobility.

For instance, McPherson et al (2006) find a significant decline in family relations among the educated, despite family background. In an analysis of discussion networks (those to whom the respondent is close) of individuals, the authors conclude that as one's educational attainment increases, the proportion of kin (such as parents) in their conversational network decreases. Similarly, Marsden (1987), in an earlier analysis of conversational networks, concluded that the proportion of kin included in these networks decreases with years of education. According to these findings, the most highly-educated have the weakest parental ties. This, therefore, means that that the subsequent decline in child-parent relations at the individual level due to educational mobility is explained by an overall social trend among the most highly educated. This finding is accentuated by the fact that education continues to be a significant predictor of the strength of cohesion among network associates, including kin (Suitor and Keeton 1997).

Socio-Economic Class and Child-Parent Relations

The findings of LeMasters (1954), Marsden (1987) and McPherson et al (2006) are extended to those attaining a high *economic* status following educational attainment. For instance, some authors contend that child-parent relations tend to be low across the entire middle and upper-classes (Aiken and Goldberg 1969; Ellis and Lane 1963; Locke 1940; Wharton and Thorne 1997). Conversely, others have concluded that the lower classes have higher levels of parental ties (Ellis and Lane 1963). In these cases, overall economic status of the children, as opposed to that of their parents (which would define mobility) is salient in determining child-parent relations.

6

Hutter (1970) refers to mobility as a "transformation of identity" (p. 136). He contends that class background remains salient in determining the effects of class on child-parent relations. Hutter concludes that those who experienced the greatest "transformation of identity," reported the lowest levels of parental solidarity (Hutter 1970). Therefore, the negative effects of intergenerational mobility on family relations become apparent.

Perspective I: Individual Differences and Absolute Mobility

There have been several documented perspectives or explanations for these negative effects of intergenerational mobility on child-parent relations. The first perspective focuses more on the individual experience of mobility, such as the socialization patterns experienced by the upwardly-mobile. The measure of mobility predominately used in this research is absolute mobility. Moreover, this perspective tends to focus on the social-psychological rather than the economic aspects of mobility. Therefore, the research within this perspective emphasizes the negative effects of intergenerational mobility as pertaining to the often contrasting cultural views of the upwardly-mobile and their families of origin. This perspective of intergenerational mobility and child-parent relations is perhaps the most common in the intergenerational mobility literature. Much of the research in intergenerational mobility indicate that the value and belief systems of the upwardly-mobile and their family of origin often differ due to the re-socialization undergone by the mobile in order to become more integrated within their destination stratum (Blau 1956; LeMasters 1954; Bean, Bonjean and Burton 1973). It is this subsequent conflict in values between the upwardly-mobile and their

family of origin which, according to this perspective, leads to a decline in child-parent relations (Blau 1956; LeMasters 1954; Mutran 1985; Hutter 1970; Suitor 1987).

Blau (1956) contends that the sustained interaction between the upwardly-mobile and others with similar credentials can constrain the individual to conform to their values, norms and views. Furthermore, he states that if ties to those within one's own background are maintained, it becomes more difficult to interact effectively with them. This is because the creation of ties to, and interaction with, those of the same status force and individual adhere to a much different value system than that of their original background. In other words, the dissimilarity in values between the upwardly-mobile individual and their family of origin, and the reoccurring pressure to conform to the norms and values of the class of destination, may lead to a gradual dissolution of parental ties (Blau 1956).

The effect of mobility on cultural outlooks and perspectives, however, varies according to the type of mobility experienced. Subsequent research has examined how the cultural experiences and lifestyles of the upwardly-mobile contrast to those of the downwardly-mobile. For instance, Kulis (1987) found that upwardly-mobile children were more likely than the downwardly-mobile to describe their lifestyle as dissimilar to that of their parents. "The asymmetries here seem to revolve, in short, around who is 'on top'… . The children, in turn, report dissimilarities in lifestyle with their lower-status parents but do not call attention to the lifestyle gaps that might also be expected when the parents are more occupationally successful than the children" (Kulis 1987: 426-427).

Bourdieu and Passeron (1970), argue that education serves as a mechanism which reproduces cultural differences between the classes. Research in intergenerational mobility often refers to education as the major factor influencing the effect of mobility on values, and, consequently, child-parent (Kalmijn 1996; London 1989; Suitor 1987). Generally-speaking, those from uneducated families who enroll in college often attain cultural views which are incongruous with those attained earlier in life. These include traditional gender roles (Suitor 1987), cultural identities (London 1989), and attitudes of achievement. In each case examined, the contrast between the views and outlooks attained through the college experience and those attained earlier in life has led to an eventual dissolution in child-parent relations (Suitor 1987). Furthermore, feelings of emotional or psychological isolation or detachment from others with similar educational attainments, including others at school, have also been found to occur as a result of this discordance (Aries and Seider 2005; London 1989;Wegner 1973).

Others within this perspective contend that the individual experiences of mobility vary according to the social atmosphere of the school they attend. Moreover, it has been shown that, in addition to mere educational attainment, interaction among others from different class backgrounds can strongly affect the socialization process (Aries and Seider 2005; Suitor 1987). For instance, lower or middle-class students at more prestigious schools, which commonly have a higher proportion of students from upper-class backgrounds, experience a greater transition in the formulation of a new identity than those at public schools. As a result, they are also more likely to feel psychologically distant from their parents and others at the school (Aries and Seider 2007; Aries and

Seider 2005). "For the mobile student, a disjuncture between the university environment and past social contexts is likely to be stressful." (Wegner 1973:277). Therefore, the degree of social or psychological isolation between a mobile individual and their parents can vary according to the social environment in which they experience the mobility (Ellis and Lane 1963). Moreover, as found by Aries and Seider (2007, 2005) and Wegner (1973), any socialization and acculturation experienced by the upwardly-mobile can also vary according to not only their educational attainment, but also the social environment in which they experience the transition.

The elements of the social environment considered by Aries and Seider (2007, 2005), Wegner (1973) and Ellis and Lane (1963) are the characteristics of the school attended. Each of the authors concludes that, for the upwardly-mobile, any variations in child-parent relations are best explained by the characteristics of the atmosphere in which they experience the mobility. The characteristics of a school hold meaning when compared across other schools, making it a structural aspect. In this case, deterioration in child-parent relations as observed by the previous research (Hutter 1970; Kalmijn 2006; Kulis 1987; LeMasters 1954; London 1989; Suitor 1987) may be conflated by factors which are structural in nature. Therefore, a different definition of mobility which takes into account the structural aspects is warranted.

Perspective II: Structural Mobility

Previous research, using a metric of mobility which is based on absolute differences in educational attainment between the respondent and their parents, has found how intergenerational mobility negatively impacts child-parent relations.   Ellis and Lane

(1963), Wegner (1973) and Aries and Seider (2005, 2007) contributed to this body of research by observing how the structural aspects of a school regulates the impact of educational mobility on personal relationships. However, when considering mobility between one time period and another (i.e. intergenerational mobility), a host of other structural variables characteristic of each time period come into play. As stated by Sorensen (1975), the presence of "…'barriers' to mobility and the influence of supply and demand for positions in the social structure are largely ignored in status attainment research" (pg. 457).

In the case of educational mobility, supply and demand for a college degree, at all levels, has changed from one time period to another. As reported by the National Center for Educational Statistics (NCES), between the years 1970 and 1996, college enrollments increased by 66 percent (NCES 2000:127; Karen 2002). More notably, over the past fifty years, expansions in the economy, increases in financial aid, changes in the college-age population, as well as military draft deferments have led to large increases in the supply, as well as the demand for a college degree, and thus educational mobility (Centra 1980). This finding reaffirms the fact that the structures of educational attainment of one time period and another are often quite different (Hoenack and Weiler 1979). In consequence, individual family background, or the highest level of education attained by both parents, becomes apparently less salient than the structural patterns in attainment in determining levels of mobility (Hout 1988).

In further support of this, Biblarz, Bengtson and Burcur (1996) and Goldthorpe (2003), find that the effect of family background on a person's individual mobility has

gradually weakened.   This new trend in mobility is in sharp contrast to the findings of

Blau and Duncan (1967).   As stated by the Blau and Duncan (1967), the educational

outcome of an individual is most heavily influenced by "...the educational climate in his

home" (Blau and Duncan 1967:295). However, advocates of structural mobility assert

that the educational climate of society at a given time period are most salient in

determining an individual's outcome (Hallinan 2004; Sorensen 1977; Sorensen 1979).

Sorensen (1977) proposes a new metric for mobility, which takes into account

generational variations in attainment. This new metric is referred to as the "vacancy

competition model," which measures variances in vacancies and competition from one

time period to another. This metric has been used most frequently in measuring levels of

occupational mobility. However, because the demand for and access to higher education

varies from one period to another, a similar metric can be used to measure the extent of

educational mobility between one generation and the next (Hallinan 2004; Sorensen

1977; Sorensen 1979). Just as job occupational mobility refers to the movement from

one position in the job structure to another, similarly, educational mobility refers to the

movement from one level of attainment to another (i.e. from a high school degree to a

B.A. or vis versa).

As Sorensen (1979) asserts for occupational mobility, mobility "…can only take

place if the destination position is vacant." (pg. 364). Analogously, educational mobility

is highly influenced by the educational structure of a particular time period. The

educational structure includes factors such as enrollment rates, and the demand placed on

higher education at a given time period, both of which are highly influenced by the

number of people graduating with a particular degree at a given time period. In this sense, people are compared to others within the same cohort, instead of people within an earlier cohort—such as their parents. This has often been referred to by many authors as *intra*generational, as opposed to *inter*generational mobility (Hallinan 2004; Sorensen 1977; Sorensen 1979). However, some of the same components used to measure intragenerational mobility can be used to create a metric for educational intergenerational mobility which takes into account the educational structure of a particular time period. It is this modified operationalization of intergenerational educational mobility which I intend to contribute to the existing research on the effects of educational mobility on parental relationships.

Although the effect of structural mobility on parental relationships has not been directly measured, it has been hypothesized. Much of the previous research, using an individualistic measure of mobility, has concluded that upward mobility has negative effects on child-parent relationships. However, a structural measure of upward mobility would not necessarily measure an individual's achievement but the individual's placement within a broader, dynamic educational structure. Therefore, as hypothesized by Kalmijn (2006), mobility viewed as a structural, as opposed to an individual, phenomenon would be less likely to lead to a dissolution in personal relationships.

Summary of Literature

The literature has shown a number of ways in which mobility negatively affects child-parent relations. First, research on the effects of mobility on parental relations has used a metric of mobility that focuses entirely on the individual differences in attainment

between the child and the parents. However, as research in mobility and educational attainment has shown, structural changes in educational attainment have occurred, which heavily influence patterns in intergenerational mobility. The existing research assessing the impacts of intergenerational mobility on child-parent relations emphasizes the effect of family background over any structural effects. Thus, a measure for mobility which takes into account generational changes in attainment and mobility is needed. Such a measure was proposed by Sorensen (1977), which was referred to as intragenerational mobility. Research using both absolute mobility (which does not explore structural changes) and structural mobility (which does) have been explored. Research using absolute mobility has tended to emphasize the importance of family background when explaining levels of mobility. Moreover, a heavy reliance on social psychological explanations, such as socialization, for the decline in cohesion also exists in much of the research. The negative effects of educational mobility found in much of this research may be due to vast increases in educational attainment over the past few decades. In other words, as enrollments increase, the economic value of and demand for a college degree have not remained constant (Hoenack and Weiler 1979; Karen 2002). Individual experiences vary not only for individuals and their families, but most importantly, for the time period in which they experience the mobility. Therefore, the general purpose of this paper is to consider structural mobility in addition to absolute mobility in order to compare how each affect child-parent relations.

Hypotheses

Much of the current research on the effects of educational mobility on child-parent relations have found that mobility leads to a subsequent decline in cohesion. However, the type of mobility discussed in this research is based on absolute differences in attainment, and *does not* consider structural differences in attainment between the two time periods.   Therefore, while assessing the effect of absolute educational mobility on child-parent relations, I would hypothesize that

> *The greater the level of absolute mobility between an individual and their parents, the lower the quality of the relationship between them.*

In other words, the greater the absolute differences in attainment, the lower I would expect child-parent relations to be. However, given how educational mobility has drastically risen over the past few decades (Hoenack and Weiler 1979; Hout 1988), I would next expect that:

> *Absolute mobility will have a higher negative effect on child-parent relationships than structural mobility.*

The second hypothesis takes into consideration the speculation made by Kalmijn (2006), stating that the effect of absolute mobility on parental relationships varies according to how the mobility is perceived. For instance, if a high percentage of people are graduating from college at a given time period in the respondent's graduation cohort, then, speculatively, it becomes more likely that this mobility will be viewed as something structural in nature, rather than as something individualistic in nature. Therefore, because absolute mobility is a measure which is attributed to an individual's achievement it would be expected to have a more detrimental impact on parental relationships than a measure

15

which is structural in nature.   It is because of this, and the hypothesis made by Kalmijn (2006), that I would expect absolute mobility to have the greatest negative impact on child-parent relationships.

DATA AND METHODS

The Data

The data set used for this analysis is the National Survey of Families and Households, a nationally-representative survey of households, which includes a random adult representative as the primary respondent plus an extra reference respondent (cohabiting partner or spouse) from each household in the sample. This data set consists of longitudinal data collected in three waves. The first wave of data collected between 1987 and 1988 consists of a national sample of 13,007 with a cross-section of 9,637 households and an over-sampling of racial minorities, single-parent families, recently-married couples and cohabiting couples (Sweet, Bumpass and Call 1988). The second wave consists of data collected from 10,007 interviews of the original respondents conducted between 1992 and 1994 (Sweet and Bumpass 1996). Lastly, the third wave consists of data collected from interviews of a subset of the first wave of respondents using telephone interviewing (81% of first-wave respondents were located, 72% of them were interviewed). This wave includes a total of 9,230 interviews which were conducted between 2001 and 2002 (Sweet and Bumpass 2002).

Data Selection

Two separate groups of models are computed in this analysis, one for the father and one for the mother. Due to the longitudinal aspect of the data, the *most recent* data for each respondent is used in the analysis. More specifically, since the availability of data for the dependent variable depends on whether the respondent's parents still being alive, the data from the most recent wave containing the appropriate parental information

17

are used in the analysis. In other words, for each respondent, the "father" model contains

the wave of data corresponding to the *most recent* wave containing data for the father-

child relationship. The "mother" model contains the wave of data corresponding to the

most recent data for the respondent's relationship with their mother.   If a particular case

does not include *any* parental relationship data for *any* of the waves, then the case is

excluded from the analysis.   As educational attainment and levels of mobility can change

from one wave to another, all of the data used in the analysis will be based upon the most

recent child-parent relationship data for each respondent.

Dependent Variable

In the survey the respondent is asked to rate their relationship with their mother:

"How would you describe your relationship with your mother?" The same was asked for

the father. In the first wave of data, the response choices were ranked from 1 ("very

poor") to 7 ("excellent"). In the second and third waves, the choices changed from 0

(really bad) to 10 ("absolutely perfect").

The distribution of responses for this variable is heavily skewed toward more

positive responses. In order to remedy this, the median for each wave is obtained for

both parents at each wave of data, which are shown in table 2.1 below.

Table 2.1   **Child-Parent Relationship Medians**

Wave	Parent	Median
1	Father	6
	Mother	6
2	Father	8
	Mother	8
3	Father	8
	Mother	9

Once the medians were found, the respondent's score given for a particular parent at a

particular wave was compared to the median. New variables consisting of three

categories are computed for each wave. These categories refer to how the respondent's

reported relationship with his or her parents compares to the median relationship within a

particular wave, where 3='Better', 2= 'Typical', and 1= 'Worse'. These two new

variables (one for each parent) are found for each wave. This categorization allows for a

much more parsimonious multinomial logistic model.

Independent Variables

The main effects for each model are the two forms of educational mobility. Since

education for each parent is provided, the mobility with respect to each parent is

computed. Education is measured in years for the mother and father, ranging from 0 to

17 (17+ as max). For the respondent, however, education is measured in years ranging

from 0 to 20. In order to compare the education of both the respondent and their parents,

both scales are set to a range of 0 to 17, where 17 represents 17 years of education or

higher.

I. Absolute Mobility

The first independent variable included in the models represents a measure of mobility which has been used in the bulk of the intergenerational mobility research, which consists of the difference in educational attainment between the respondent and each parent. The difference in the educational attainment found above between the respondent and each parent is computed by using the number of years of education. This yields the absolute educational mobility between the father and respondent and the absolute educational mobility between the mother and respondent. The resulting variable consists of values ranging from -17 to 17. In order more closely analyze the effect of the *level* of mobility, the absolute value of these values is computed, yielding an interval of levels of mobility from the parent ranging from 0 to 17.

II. Structural Mobility

The measure of structural mobility, as provided by Sorensen (1979), consists of first grouping the respondents into cohorts. The cohorts are defined by year of graduation, which is available in the NSFH data for the respondents. Defining the cohorts this way, as opposed to year of birth, is important because "…graduation cohorts…enter the labor force at the same time." (Sorensen 1979:371). The same size of five-year cohorts recommended by Sorensen (1979) is used in this analysis.

However, since all three waves are used in the analysis, cohort assignments are based on the most recent graduation for the wave being used for the respondent. The wave being used for the respondent is not only based on their most recent response, but

the most recent parent data. A chart outlining the cohort assignments can be found in

Appendix A.

For those who did not complete high school, the year at which they dropped out is

not provided in the data. However, using the year of birth and the grade at which they

left, an estimate can be estimated. First, an age is assigned to each of the following

grades available in the data: 4th, 5th, 6th, 7th, 8th, 9th, 10th, and 11th [1] as follows:

Table 2.2   **Age Assignments for HS Drop-outs**

Grade	Age
4th	9
5th	10
6th	11
7th	12
8th	13
9th	14
10th	15
11th	16

The respondent's year of dropping out of school is estimated by adding to the

respondent's year of birth the assigned age for the last grade they completed before

dropping out of school[2]. The respondent is then assigned to the cohort in which the

resulting year is located.

Next, the median education of each cohort is obtained. Structural mobility is

defined as an individual's level of attainment compared to a particular time period, or

cohort. Thus, structural educational mobility is computed by subtracting the individual's

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[1] The grade at which the respondent left school is available in the data for those who did not complete HS
or the equivalent.
[2] Note: This will only be done for those who did not complete a GED. If they had, the year they earned
their GED (provided) will instead be used.

attainment (in years) from the median attainment of their respective graduation cohort. This provides a reliable estimate of structural mobility for the respondent[3].

The higher the value of mobility, the larger the difference in attainment between the respondent and a parent or cohort is expected to be. However, a negative or positive value indicates that the individual has a lower or higher education than the parent or cohort. An increase in this measure indicates that the individual either has a more similar or dissimilar education as their parent or cohort, depending on whether the measure of mobility is above or below 0. Therefore, the absolute value of the structural mobility measures are computed. This yields mobility values which show the *extent* of mobility in either direction.

III. Type of Mobility

In addition to this, four dummy variables are computed which indicate whether the individual is upwardly or downwardly-mobile. These variables are computed for both absolute and structural mobility. Also, both the upward and downward mobility variables are added to separate models[4], one which uses upward mobility and one which uses downward mobility. These variables indicate the type of mobility experienced by the respondent.

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[3] Census data was tried in place of the medians obtained from the data. The data medians were preferred over the Census medians, due to how years of education is measured in the data set. Because the main purpose of this is to compare the effects of the 2 types of mobility, the medians computed from the education variable most similar to parents' education were used to compute structural mobility.

[4] This is due to the lack of independence with the implied reference category when all are added to the model (0), which will be perfectly correlated with values of 0 in the absolute and structural mobility variables.

Control Variables

The control variables included in this analysis are factors which research has shown to significantly affect child-parent relations. First, a large portion of the existing research on child-parent relations to date has found that women have a significantly higher level of child-parent relations than do men (McPherson et al 2006; Wharton and Thorne 1997). Therefore, a dummy variable for sex "FEMALE," (coded as 1=Female, 0=Male) are included in the final models.

Also, research has found that blacks have a significantly higher quality of child-parent relations than whites (Wharton and Thorne 1997). Therefore, race (coded as 1= Minority, 0 = Non-Hispanic White) is also be included in the models.

Previous research has found that the distance one lives from his or her parents also negatively affects his or her relationship with them (Kulis 1992; Lawton, Silverstein and Bengtson 1994; Litwak 1960; Rossi and Rossi 1990; Smith 1998). A variable indicating the geographic distance (measured in miles) to each parent is added to the respective models. This variable ranges from 1 – 1,000. Dyer (1970), Kalmijn (2006) and Litwak (1960) conclude that the effect of mobility on child-parent relations is mostly explained by the geographic distance separating them. This was in part because those who were mobile tended to live further away from their parents. Therefore, in order to have more interpretable estimates for the effect of distance, the values are divided by 100.

Additional variables known to affect parental relations are socio-economic class (Blau 1956; LeMasters 1954), and the marital status of the parents (Acquilno 1994; Cooney, Hutchinson and Leather 1995). These are also added to each of the final models.

Total personal income is used as a proxy for socioeconomic status. This variable is

divided by 10,000 in order to have more interpretable estimates. As for the marital status

of the parents, a dummy variable indicating whether the parents are currently married and

living together is added to the model. This variable is coded to indicate whether the

respondent's parents are currently together or not due to either divorce or widowhood

(1=Together, 0= Separated/ Single/Widowed).

Summary of Models and Analyis

The main purpose of this paper is to compare the effects of absolute and structural

educational mobility on child-parent relations. In order to analyze the effect of these

measures of mobility on relations, two multinomial logistic regressions models (one for

each parent) are formed[5]. Logistic regression is desired over ordinary least squares

regression because of the ordinal nature of child-parent relations which is set up much

like a Likerts scale. Both models contain both absolute and structural mobility as the

main effects.

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[5] Due to the ordinal nature of the relationship variable, a cumulative logistic model was first attempted.
However, the proportional odds assumption was not met for either model ($p < .0001$).

Table 2.3   **Regression Models**

Father		Mother	
DV: Relations with Father	**DV:** Relations with Father	**DV:** Relations with Mother	**DV:** Relations with Mother
IV-1: Absolute mobility from father	**IV-1:** Absolute mobility from father	**IV-1:** Absolute mobility from mother	**IV-1:** Absolute mobility from mother
IV-2: Structural Mobility	**IV-2:**Structural Mobility	**IV-2:** Structural Mobility	**IV-2:** Structural Mobility
IV-3: Upward Mobility	**IV-3:** Downward Mobility	**IV-3:** Upward Mobility	**IV-3:** Downward Mobility
Controls	**Controls**	**Controls**	**Controls**

Table 2.3 shows the proposed logistic regression analyses to be conducted to test

my hypotheses. There are two models (one for each parent), which include both

measures of mobility (absolute and structural), dummy variables indicating the type of

mobility, as well as the control variables: sex, age, income, race, parent's marital status,

respondent's marital status, number of children respondent has fathered/mothered, and

geographic distance from parent's (father or mother) residence.

The type of statistical analysis used is multinomial logistic regression. There are

7 levels of relationship quality at the first wave and 11 levels at the second and third

waves.   In order to refer only to the *most relevant* data for each respondent, the *most*

recent relationship measure was used for each parent. For instance, if the latest

relationship data for a respondent's father is at wave 2, then the data gathered at that

wave is used for the respondent in the respective "father" model. The same is done for

the mother.   If no parental relationship measure is given in *any* wave, then the case is

excluded from the analysis.

Advantages and Limitations

The analyses summarized above have some good advantages. First, the analysis is broken up into separate models for each parent. This will allow for an analysis on not only the effect of mobility on general child-parent relations, but the effect of mobility on an individual's relationship with their mother *and* their father. Most of the current research on mobility and family relations pertains to the father's attainment (Blau 1956; Blau and Duncan 1967; Dyer 1972; Stuckert 1963). Including absolute mobility with regard to the mother will help to address how mobility affects relations with the mother, and also control for any *inherent* differences in relations with the mother and father.

Second, having the measures of mobility within the same models will help to assess how one type of mobility affects child-parent relations *net* of the other. In other words, the effect of absolute mobility on child-parent relations will be the effect of absolute mobility when controlling for the individual's structural mobility. Absolute and structural mobility are both functions of an individual's educational attainment. Therefore, having both mobility measures in the same models will allow for more reliable estimates of the effect of an individuals *overall* attainment to provide a better comparison of each.

However, the analyses are not without limitations. The most striking limitation is that of the perception of mobility. In the analysis conducted here, mobility is quantified. This still leaves the question of whether the individual's mobility is perceived as structural or just an achievement. Structural mobility is quantified and categorized according to the level and type of mobility. However, it is still possible that an

individual's mobility (both structural and absolute) would be viewed more as an achievement rather than a structural phenomenon. The data do not provide information on the perception of mobility. Therefore, mobility will remain quantified and categorized.

Also, the graduation cohorts extend to 2002, which marks the third and final wave of data. Additionally, the data selection process uses the wave which contains the respondent's most recent parental relationship data to determine the level and type of mobility to use in the respective 'mother' or 'father' model. This process may lead to the right-censoring of the effects of mobility for those who graduated most recently. In other words, the actual effect of mobility on child-parent may be a long-term process. In this case, those who graduated at a time close to the collection of the wave of data used may not have had enough time for true effects of mobility to set in.

I. Missing Values

At the inclusion of the independent variables, a large number of cases were excluded from the model due to missing values for the independent variables. In order to assess how child-parent relationship measures differ between those in the model and those excluded due to missing values, a brief analysis is performed. This analysis compares the distributions of the dependent variables of two populations: one which consists of the cases in the model, and one which consists of the cases which were excluded due to missing values on one or more of the independent variables.

In order to do this analysis, a dummy variable is computed which indicates whether a particular case contained missing data for *any* of the covariates in the model. Table 2.4 shows the cross-tabulation of this variable by relationship with father.

Table 2.4 **Distribution of Missing Values for Relationship with Father**

Relation- Father	Included in Model	Not Included in Model
Better	496	1,280
	31.44%	38.81%
Typical	335	720
	21.23%	21.83%
Worse	747	1,298
	47.33%	39.36%
Total	1,578	3,298
	100%	100%
		$\chi^2 = 32.346$, $p < .0001$

The chi-square statistic indicates that, in regard to relationship with father, the missing cases do significantly differ from those in the model. The percents show that a higher percentage of the missing cases (38.8%) have 'better' child-father relations. A lower percentage of the missing cases (39.4%) have 'worse' child-father relations. This indicates that those who are included in the "father" model have slightly worse relations with their father than those who are missing.

Table 2.5 shows the cross-tabulation of the missing variable by relationship with mother.

Table 2.5 **Distribution of Missing Values for Relationship with Mother**

Relation- Mother	Included in Model	Not Included in Model
Better	2,633	279
	43.79%	39.46%
Typical	1,800	261
	29.94%	29.26%
Worse	1,580	352
	26.27%	31.28%
Total	6,013	892
	100%	100%
		$\chi^2 = 148.907$, $p < .0001$

The chi-square indicates that those excluded from the model do significantly differ from those in the model, with regard to their relationship with their mother. A slightly lower percentage (39.5%) of those missing was in the 'better' category, indicating that those who are included in the model have slightly *better* relations with their mother than those who are missing.

Next, an analysis is performed to assess the bias due to missing values on both the independent and dependent variables. In order to do this, micro-data from the 1990 Census (King, Ruggles, Alexander, Leicach and Sobek 2004) are obtained for 6 basic demographics: sex, race, income, education, marital status, and age. The 1990 Census is used because this is the nearest complete U.S. census to the wave which contains the most cases represented in the models (least sensitive to attrition). Therefore, data from the first wave of the *National Survey of Families and Households* are also gathered for these variables. In order to find the data used in the actual models, a dummy variable indicating whether the case is missing for any variable in the "father" models was computed. The same variable was computed for the "mother" models, as well. Table 2.6 shows the distribution of these demographic characteristics for each of these sets of data. The table shows that the cases used in the models are different from the overall U.S. population in 1990. For the "father" model, the greatest difference can be seen for socioeconomic characteristics such as education and income. For both models, however, the individuals represented in the data are younger, disproportionately female, non-white and single, and have higher personal income. The "mother" model in particular is younger and disproportionally single, non-white and female.

Table 2.6   Analysis of Missing Values for 'Mother' and 'Father' Models

	1990 Census[6]	Wave 1	Father Model	Mother Model
Median Age	40	40	37	37
Gender				
Male	47.9%	43.6%	41.9%	41.8%
Female	52.1%	56.4%	58.1%	58.2%
Race				
Non-Hispanic-				
White	82.2%	80.5%	78.0%	75.8%
Other	17.8%	19.5%	22.0%	24.2%
Median Income				
(per capita)	$14,420[7]	$13,000	$20,000	$18,000
Median Educ.	12	12	13	12
Marital Status				
Married	58.5%	62.1%	57.1%	40.8%
Not Married	41.5%	37.9%	42.9%	59.2%
Total		13,017	1,578	6,013

The differences in these data could also be due to the availability of parent data. The individuals represented in the data have at least one living parent, which would include a higher proportion of *younger* than older individuals. This helps explain the lower age medians. It also explains the higher income and education medians, which are a reflection of the structural changes in education and income experienced by younger individuals.

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[6] In order to more accurately compare to those who were able to complete the NSFH survey, the Census data only includes those who are 18 years of age or older (King et al 2004).
[7] Median income was retried directly from U.S. Census. (U.S. Bureau of the Census 1990).

The findings presented in Table 2.6 have some implications for estimating child-parent relations. For instance, the fact that the data are disproportionately female and non-white suggests that child-parent relations may be slightly higher than expected. This is due to the previous research which concludes that females and minorities have higher than average family ties (Marsden 1987; Wharton and Thorne 1997). However, the table also suggests that those included in the model have a slightly higher socioeconomic status than the overall U.S. population. Conversely, previous research on the effects of income on extended family relations would suggest that the higher income of those in the data would lead to *lower* than expected levels child-parent relations (Aiken and Goldberg 1969; Ellis and Lane 1963; LeMasters 1954). Taken together, the characteristics of the included data indicate that child-parent relations may be slightly lower *or* slightly higher than expected. However, there is no clear indication of which may be the case.

RESULTS

Independent Variables

Before entering data into the final regression models, each respondent was assigned to a particular graduation cohort based on their most recent educational information, despite the availability of parent data. This was done to visually analyze trends in educational attainment and mobility across cohorts. Figure 3.1 contains a chart displaying the median educational attainment (in years) for each cohort. Due to the small number of observations in earlier cohorts, cohorts 1 through 7 are excluded from the analysis. In order to facilitate a multivariate analysis, only cohorts with at least 40 observations are included in the analysis.

Figure 3.1 shows that there is some variation in attainment with each successive cohort, showing a steady increase in attainment. However, from 1940 to 1979, the median educational attainment remains unchanged at 12 years, or a high school degree. It isn't until 1980 that the median extends beyond 12 years. The median appears to peak at 16 years (the equivalent of a B.A.) at cohort 19. This may be due to the nature of the cohort, as the respondents in cohorts 19 and 20 include only those who *returned* to or finished school subsequent to the first wave. This bias is reflected in the graph. Due to the apparent bias in attainment among the last two cohorts, a dummy variable indicating graduation in these time periods is added to the final regression models.

Figure 3.1

Median Years of Education by Cohort
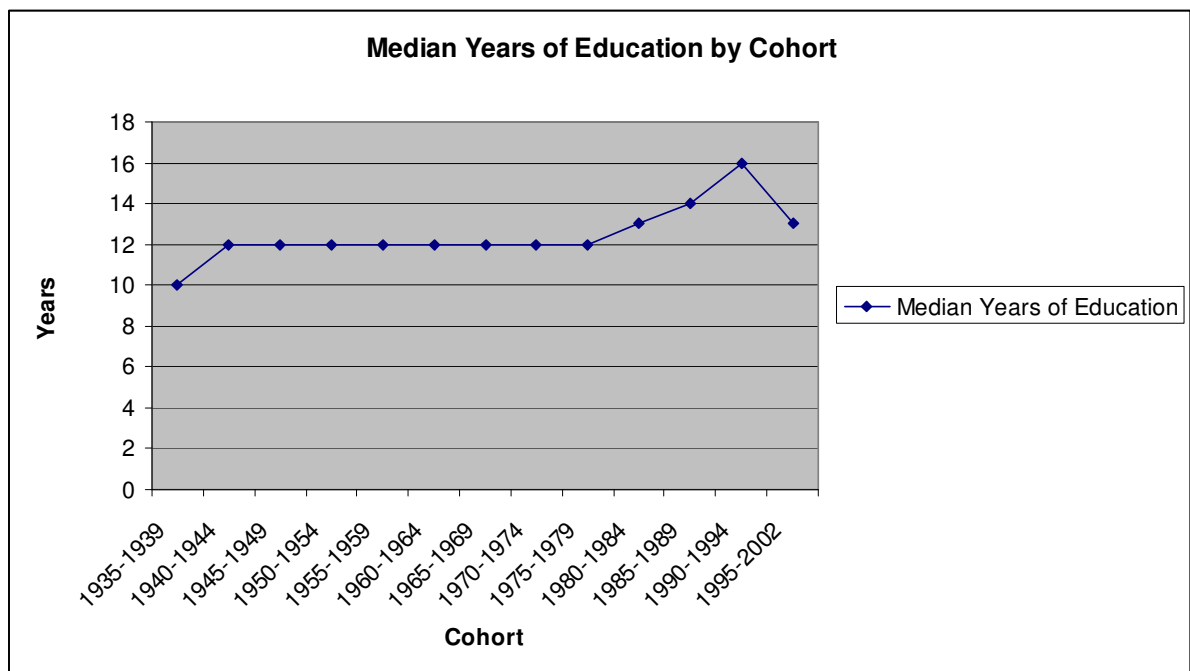
Levels of absolute mobility also tend to vary, but, unlike attainment, are highly skewed toward lower values. In other words, individuals tend to attain a level of education which is similar to that of their parents (Blau 1956). However, their level of attainment also varies according to the attainment of all others within a particular time period. Table 3.1 shows univariate statistics for both measures of mobility for each parent.

The statistics shown in Table 3.1 indicate that absolute and structural mobility have dissimilar distributions. The median value for structural mobility is much lower than the median level of absolute mobility. Moreover, there is much less variability in structural than in absolute mobility. In other words, individuals appear to be less mobile

with regard to structural characteristics than with regard to parental education. This

confirms the research which concludes how structural characteristics are more influential

on an individual's outcome than family background (Biblarz et al 1996).

Table 3.1   **Univariate Statistics for Structural
                          and Absolute Mobility**

FATHER			
Structural Mobility		**Absolute Mobility**	
N^8	5,013	N	4,514
Median	1	Median	2
Variance	3.29	Variance	7.18
Range	12	Range	16
MOTHER			
Structural Mobility		**Absolute Mobility**	
N	5,003	N	5,018
Median	1	Median	2
Variance	3.28	Variance	5.99
Range	12	Range	16

In order to confirm whether those who graduated in the last two cohorts have

significantly different levels of mobility, a two-sample test of equality of medians was

performed. The results are shown below in Figure 3.2.

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[8] The sample sizes presented here are the sizes of the data for which father-child or mother-child
relationship as well as educational background data are available.

Figure 3.2   **Test of Equality of Medians**
for Cohorts 7-18 and 19-20

Cohorts 7-18	Abmob	Stmob
FATHER	2	1
	(n=4,264)	(n=4,749)
MOTHER	2	1
	(n=6,890)	(n=6,820)
Cohorts 19-20		
FATHER	2	2
	(n=253)	(n=268)
MOTHER	2	2
	(n=382)	(n=382)

FATHER

Structural Mobility				**Absolute Mobility**			
Statistic			166.41	Statistic			133.11
Z			4.9412	Z			0.9107
One-Sided	Pr >	Z	<.0001	One-Sided	Pr>	Z	0.1812
Two-Sided	Pr >	|Z|	<.0001	Two-Sided	Pr>	|Z|	0.3625

MOTHER

Structural Mobility				**Absolute Mobility**			
Statistic			180.44	Statistic			185.1
Z			4.3945	Z			4.4361
One-Sided	Pr>	Z	<.0001	One-Sided	Pr>	Z	<.0001
Two-Sided	Pr>	|Z|	<.0001	Two-Sided	Pr>	|Z|	<.0001

The statistics above indicate that those who completed school between waves 1 and 3 have significantly higher levels of structural mobility. The median level of structural mobility for those who graduated *before* 1990 is 1, whereas the median level of structural mobility for those graduating *after* 1990 is 2. This difference is significant with regard to the data for both parents (P < .0001).

The difference in absolute mobility is less apparent.   The median absolute

mobility for both the "father" and "mother" models is the same. However, the test of

significance for the "mother" model data indicates that absolute mobility is significantly

different between the two groups of cohorts (P < .0001). This cannot be said of the data

relating to the most recent child-father relations data. Therefore, the inclusion of a

variable in the final regression models indicating whether an individual graduated in this

time period (1990-2002) is essential when estimating the effects of either absolute or

structural mobility.

Dependent Variables

The dependent variables in the models indicate the respondent's level of

attachment to their father or mother. Median values were computed from the original

data, in order to create three categories: *"Better"* (above-median), *"Typical"* (at-median),

and *"Worse"* (below-median). These were computed for each wave, however only the

most recent value of this variable is used. Table 3.2 below shows the distribution of these

values of the dependent variables.

Table 3.2　　　　　　**Frequency Distribution of Child-Parent Relations**

MOTHER

	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Worse	2092	25.76%	2092	25.76%
Typical	2446	30.12%	4538	55.87%
Better	3584	44.13%	8122	100.00%

FATHER

	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Worse	2572	41.91%	2572	41.91%
Typical	1296	21.12%	3868	63.03%
Better	2269	36.97%	6137	100.00%

The table shows that almost half of the respondents who reported their relationship with their father had lower than median relations with them (42 percent). Only about 25 percent of those who reported their relationship with their mother reported lower than median relations. Almost the same percent of those who have "better" relations with their mother have "worse" relations with their father.   In short, individuals' relations with their mother tend to be much more favorable than their relations with their father.

Correlations

Two multinomial logistic regression models were computed using a total of eleven predictors. A correlation matrix including some of the variables used can be found in Tables 3.5 and 3.6 below. Referring back the research design, the two models are based on data using the wave which contains the most recent child-parent relationship data for each respondent. Therefore, correlations in Table 3.3 are computed using the values according to the most recent data for the *father,* while the correlations in Table 3.4 are computed using the most recent data for the *mother.*

There are a total of four dichotomous indicator variables which are not included in the matrix. These include sex, marital status, parents' marital status, and race. The two main variables of interest are the level of *absolute mobility* (ABMOB) and the level of *structural mobility* (STMOB). Education is also omitted from the models, as it was used to compute structural mobility. The type of correlation used is a spearman correlation, due to the ordinal nature of the mobility variables.

Table 3.3   **Spearman Correlations for "Father" Model Variables**

	Abmob	**Stmob**	**Income**	**Age**	**Distance**	**Num. Child**
Abmob	1.00					
Stmob	0.13133***	1.00				
Income	0.04336**	0.11192***	1.00			
Age	0.14903***	0.06186***	0.30928***	1.00		
Distance	-0.01843	0.04610*	-0.06023**	-0.06267**	1.00	
Num. Child	0.06253***	-0.03119*	-0.15446***	0.37721***	0.00967	1.00

* P< .05, ** P < .01, *** P < .001

The above correlations show some interesting characteristics about the variables. For instance, income is more highly correlated with structural (r = .11) rather than absolute mobility (.04). Almost all of the correlations are highly significant, which is to be expected with very large sample sizes. How far the respondent lives from their parents is slightly more highly correlated with structural mobility than absolute mobility. This shows that geographic distance from their parents, or where one lives is more of a structural characteristic rather than an individual one. This comes at no surprise, as many of the things which determine structural mobility also have some effect on where an individual lives, such as specific job markets and various other economic changes.

Table 3.4 **Spearman Correlations for "Mother" Model Variables**

	ABmob	Stmob	Income	Age	Distance	Num. Child
Abmob	1.00					
Stmob	0.28592***	1.00				
Income	0.07949***	0.09916***	1.00			
Age	0.18610***	0.07451***	0.29085***	1.00		
Distance	0.03830**	0.09437***	0.14020***	0.5989***	1.00	
Num. Child	0.06338***	-0.00811	-0.14205***	0.36996***	-0.00046	1.00

* P < .05, **P < .01, *** P < .001

Some of the same patterns can be found in the correlations for the "mother" variables. However, there are some interesting differences. For instance, the correlation between the two types of mobility has almost doubled. The correlation between absolute mobility from the mother and income (0.08) is also twice that of the father (0.04). All other variables remain relatively unchanged between the "father" and "mother" variables.

Reduced Regression Models

The effect of structural and absolute mobility on child-parent relations is first presented in a number of reduced models in order to assess the effects of mobility on child-parent relations alone. Table 3.5 below shows the results of the five models computed.

Table 3.5   **Reduced Models for "Father" Data**

Model	Relations-Father	N	Estimate	Std. Error	Chi-Sq	Pr > Chi-Sq
Abmob	Better	5.022	0.0260	0.0148	3.0916	.0787
	Worse		-0.00697	0.0149	0.2186	.6401
Stmob	Better	5,017	-0.0200	0.0202	0.9791	.3224
	Worse		-0.0750	0.0204	13.5643	.0002
Up	Better	5,022	-0.1964	0.0946	4.3084	.0379
Stmob	Worse		-0.2940	0.0918	10.2603	.0014
Dw	Better		0.1529	0.0986	2.4046	.1210
Stmob	Worse		0.0706	0.0958	0.5432	.4611
Up-	Better	5,022	0.0156	0.1026	0.0230	.8794
Abmob	Worse		-0.1038	0.1015	1.0468	.3062
Dw-	Better		-0.2155	0.1152	3.5007	.0613
Abmob	Worse		0.1909	0.1101	3.0048	.0830
Cohort	Better	5,020	-0.3399	0.1628	4.3601	.0368
19-20	Worse		-0.3119	0.1569	3.9511	.0468

The models above indicate that structural mobility, rather than absolute mobility, affects father-child relationships significantly. For every 1-year increase in the *level* of structural mobility an individual experiences, their estimated odds for having "worse" as opposed to "typical" relations with their father decrease by about 7 percent ($e^{-0.0706} = 0.928$). This lends *partial* support to my second hypothesis, which states that structural mobility has a less negative impact on child-parent relations than absolute mobility. Absolute mobility, however, does not affect relations significantly.

Moreover, those who are upwardly-structural mobile have about 18 percent lower odds of having "better" as opposed to "typical" relations with their father ($e^{-0.1964} =$

0.822). Similarly, the same people also have about 25 percent lower odds of having "worse" as opposed to "typical" relations with their father ($e^{-0.2940} = 0.745$).

Those who graduated between 1990 and 2002 have almost 29 percent lower odds of having "better" as opposed to "typical" relations with their father than those who graduated before this time period ($e^{-0.3399} = 0.712$). The same graduates also have nearly 27 percent lower odds of having "better" as opposed to "typical" relations than others graduating prior to 1990 ($e^{-0.3119} = 0.732$).

Table 3.6 shows the reduced models for the "mother" data.

Table 3.6   **Reduced Models for "Mother" Data**

Model	Relations-Mother	N	Estimate	Std. Error	Chi-Sq	Pr > Chi-Sq
Abmob	Better	7,272	0.0370	0.0109	11.4679	.0007
	Worse		0.0261	0.0122	4.5615	.0327
Stmob	Better	7,272	0.0313	0.0154	4.1162	.0425
	Worse		0.0615	0.0168	13.3330	.0003
Up	Better	7.272	0.2932	0.0693	17.9246	< .0001
Stmob	Worse		0.3808	0.0794	22.9816	< .0001
Dw	Better		-0.0815	0.0697	1.3663	.2424
Stmob	Worse		0.2465	0.0785	9.8567	.0017
Up-	Better	7.272	0.0718	0.0686	1.0943	.2955
Abmob	Worse		0.0605	0.0776	0.6088	.4352
Dw-	Better		-0.0923	0.0896	1.0619	.3028
Abmob	Worse		0.1664	0.0978	2.8963	.0888
Cohort	Better	7,272	-0.0442	0.1375	0.1031	.7482
19-20	Worse		0.6325	0.1342	22.2107	< .0001

Similar results can be seen in the reduced models using the "mother" data. However, here absolute mobility affects mother-child relations significantly. For every additional

year in the level of absolute mobility from the mother, the odds of them having "better" as opposed to "typical" relations with them increases by about 4 percent ($e^{0.037}$ = 1.038). A similar change in odds can be seen for the "worse" versus "typical" comparison ($e^{0.0261}$ = 1.026); for every additional year in the level of absolute mobility from the mother, the odds of having "worse" as opposed to "typical" relations increases by about 3 percent.

The type of absolute mobility is not significant. However, those who are upwardly-structurally mobile have nearly 34 percent higher odds of having "better" versus "typical" relations with their mother ($e^{0.2932}$ = 1.341). Also, the same people have nearly 46 percent higher odds of having "worse" as opposed to "typical" relations with their mother ($e^{0.3808}$ = 1.463). Those who are downwardly-structurally mobile have nearly 28 percent higher odds of having "worse" rather than "typical" relations ($e^{0.2465}$ = 1.28). These results also indicate that structural mobility has a greater impact on child-parent relations than absolute mobility, again, lending at least some support to my second hypothesis.

Those who graduated between 1990 and 2002 have nearly 88 percent higher odds of having "worse" as opposed to "typical" relations with their mother than those who graduated previous to that time. This is in sharp contrast to the results from the "father" data, which suggested that these graduates are more likely to have "typical" relations with their father. These findings also underline the importance of including this variable in the full regression models.

Full Regression Models: "Father" Models

I. Upward-Mobility (FATHER)

The analysis used here is multinomial logistic regression. The dependent variable consists of three groups, representing child-parent relationships: above average (3), average (2), below average (1). All variables were entered into the model using the "typical" category as the reference group. Table 3.7 shows the results, including the fit statistics and maximum likelihood estimates for the "father" model, excluding the variable "education." This first model includes the dummy variable for upward mobility.

The coefficients for the *level* of absolute and structural mobility are not significant. However, one *type* of upward mobility is significant and worth noting. Upward structural mobility does significantly impact the odds of an individual having "better" relations with their father (P = 0.0463). Those who are upwardly-structurally-mobile have 31 percent lower odds of having "better" as opposed to "typical" relations with their father than those who aren't. The estimates for absolute mobility are not significant. This does not support the first hypothesis, stating that an increase in the level of absolute mobility will lead to a decrease in the quality of child-parent relations. My second hypothesis states that absolute mobility has a more negative impact on child-parent relations. However, the estimate for upward structural mobility indicates that structural mobility does in fact impact child-parent relations *more* than absolute mobility, which does not support my second hypothesis.

Controlling for whether an individual graduated in the last two cohorts does not regulate the effect of mobility on child-father relations significantly. Therefore,

graduating in this time period does not appear to regulate the effect of mobility on child-father relations to a great extent. More importantly, graduating in this time period does not affect the child-father relations significantly. In addition to this, no significant interaction was found between the level of mobility and type of mobility in this model.

Table 3.7 Maximum Likelihood Estimates for "Father" Model (UPMOB)

Parameter	Relations	DF	Estimate	Std. Error	Chi-Sq	Pr > Chi-Sq
Intercept	Better	1	0.0755	0.3338	0.0511	0.8212
Intercept	Worse	1	1.7075	0.3092	30.4935	<.0001
Abmob	Better	1	0.0315	0.0317	0.9884	0.3201
Abmob	Worse	1	0.0253	0.0308	0.6762	0.4109
Stmob	Better	1	0.022	0.0489	0.2021	0.6531
Stmob	Worse	1	-0.0227	0.048	0.2236	0.6363
Up Abmob	Better	1	0.2016	0.1665	1.4656	0.226
Up Abmob	Worse	1	0.1424	0.1562	0.8314	0.3619
Up Stmob	Better	1	-0.3696	0.1855	3.9713	0.0463
Up Stmob	Worse	1	-0.0855	0.1734	0.2429	0.6221
Cohort 19-20	Better	1	-0.3218	0.2584	1.5511	0.213
Cohort 19-20	Worse	1	-0.3613	0.2436	2.2001	0.138
FEMALE	Better	1	0.1288	0.1548	0.6919	0.4055
FEMALE	Worse	1	0.4469	0.1463	9.3357	0.0022
Minority	Better	1	0.1593	0.18	0.7831	0.3762
Minority	Worse	1	-0.2066	0.1721	1.4411	0.23
Income/10,000	Better	1	-0.00909	0.0184	0.2428	0.6222
Income/10,000	Worse	1	0.00499	0.0183	0.0744	0.785
Age	Better	1	0.00156	0.00923	0.0285	0.866
Age	Worse	1	-0.0282	0.00884	10.1587	0.0014
Married	Better	1	-0.0235	0.1587	0.0219	0.8824
Married	Worse	1	0.1445	0.1485	0.9475	0.3303
Distance/100	Better	1	-0.00236	0.00935	0.0637	0.8007
Distance/100	Worse	1	0.0131	0.00799	2.6733	0.102
Num. Childs	Better	1	0.0716	0.0606	1.3965	0.2373
Num. Childs	Worse	1	0.0119	0.0583	0.0415	0.8386
Parents Tog.	Better	1	-0.1175	0.1751	0.4508	0.502
Parents Tog.	Worse	1	-0.9948	0.1771	31.5507	<.0001

N=1,561, -2 Log Likelihood = 3248.142, Pseudo R-Sq = 0.0952, X^2 = 159.2498, P < .0001

II. Downward-Mobility (FATHER)

In order to compare the odds estimates of upward and downward mobility, the same multinomial logistic regression model was run with dummy variables for

downward-mobility replacing those for upward-mobility. The model fit statistics and maximum likelihood estimates of this modified model are below in Table 3.8. At the inclusion of downward-mobility in place of upward-mobility, there are very few notable changes to the overall model. The estimate for upward absolute mobility remains insignificant. Also, downward-structural mobility does not affect child-father relations significantly. These results show no support for either of my hypotheses.

The impact of graduating between 1990 and 2002 was also assessed. Once the dummy variable indicating these two graduation cohorts was excluded, the significance tests for all of the mobility estimates remained above P=0.05. An interaction term was also computed with this variable and each of the mobility variables separately, but produced no statistically-significant estimates.

However, an interaction term between the type and level of mobility produced significant results. For those who are downwardly-structurally mobile, a 1-year increase in the level of structural mobility *increases* the odds of having "better" as opposed to "typical" relations by about 36 percent ($e^{0.3084} = 1.361$). Therefore, the effect of the level structural mobility is highly regulated by the type of mobility experienced.

Table 3.8 Maximum Likelihood Estimates for "Father" Model (DWMOB)

Parameter	Relations	DF	Estimate	Std. Error	Chi-Sq	Pr > Chi-Sq
Intercept	Better	1	0.164	0.3533	0.2156	0.6424
Intercept	Worse	1	1.8771	0.3307	32.2208	<.0001
Abmob	Better	1	0.05	0.0296	2.8586	0.0909
Abmob	Worse	1	0.0359	0.0288	1.5534	0.2126
Stmob	Better	1	-0.0323	0.0449	0.5166	0.4723
Stmob	Worse	1	-0.026	0.0436	0.3546	0.5515
Down Abmob	Better	1	-0.3111	0.1706	3.3258	0.0682
Down Abmob	Worse	1	-0.1079	0.1564	0.476	0.4902
Down Stmob	Better	1	0.1926	0.1556	1.5328	0.2157
Down Stmob	Worse	1	-0.0931	0.1484	0.3937	0.5304
Cohort 19-20	Better	1	-0.3044	0.2584	1.3881	0.2387
Cohort 19-20	Worse	1	-0.3616	0.2433	2.2085	0.1373
FEMALE	Better	1	0.1288	0.1547	0.6932	0.4051
FEMALE	Worse	1	0.4424	0.1464	9.1366	0.0025
Minority	Better	1	0.1625	0.1798	0.8172	0.366
Minority	Worse	1	-0.1947	0.1718	1.2849	0.257
Income/10,000	Better	1	-0.00854	0.0184	0.216	0.6421
Income/10,000	Worse	1	0.00408	0.0184	0.0491	0.8246
Age	Better	1	-0.00026	0.00921	0.0008	0.9773
Age	Worse	1	-0.0304	0.00886	11.7602	0.0006
Married	Better	1	-0.0254	0.1587	0.0256	0.8728
Married	Worse	1	0.1442	0.1485	0.9435	0.3314
Distance/100	Better	1	-0.00192	0.00934	0.0423	0.8371
Distance/100	Worse	1	0.0126	0.00803	2.4462	0.1178
Num. Childs	Better	1	0.0701	0.0605	1.3429	0.2465
Num. Childs	Worse	1	0.0137	0.0582	0.0554	0.8139
Parents Tog.	Better	1	-0.1021	0.175	0.3409	0.5593
Parents Tog.	Worse	1	-0.9848	0.177	30.9619	<.0001

N=1,561, -2 Log Likelihood = 3248.142, Pseudo R-Sq = 0.0963, X^2 = 158.1325, p < .0001

Full Regression Models: "Mother" Models

I. Upward-Mobility (MOTHER)

Next, the variables referring to the wave with the most recent "mother" data were entered into a multinomial logistic regression model, as previously done with the "father" variables. Table 3.9 shows the results of the regression model, excluding the variable for downward-mobility for the time being. There are some striking differences in the results

for the "mother" model. For instance, the variable indicating the *level* of structural

mobility ("Stmob") is highly significant for both group comparisons ("better" versus

"typical" and "worse" versus "typical"). However, the odds of an individual having

"worse," as opposed to "typical," relations with their mother are slightly higher. For

every 1-year difference (below or above) in education between an individual and the

median of their cohort, the odds of them having "worse" rather than "typical" relations

with their mother increases by almost 10 percent ($e^{0.0934}$ = 1.098). A 1-year increase in

the level of structural mobility also increases the odds of an individual having "better," as

opposed to "typical," relations with their mother, but only by about 7 percent ($e^{0.0682}$ =

1.071).

These measures only indicate the *level* of mobility a person experiences, and not

the type (i.e. whether it is upward or downward). Those who are upwardly-structurally-

mobile have about 36 percent lower odds of having "better" rather than "typical"

relations with their mother ($e^{-0.446}$ = 0.64). However, the odds of the same individual

having "worse" rather than "typical" relations with their mother decrease, as well, by

almost 31 percent ($e^{-0.3784}$ = 0.685). In short, those who are upwardly-structurally-mobile

are the *least* likely to have "typical" relations with their mother. Also, those graduating

between 1990 and 2002 have nearly 91 percent higher odds than those graduating earlier

of having "worse" as opposed to "typical" relations with their mother, after controlling

for mobility and demographics ($e^{0.6445}$ = 1.905). However, as reported in the results for

the "mother" model, no significant interaction between membership in these cohorts and

mobility was found in the "mother" model.

Table 3.9 Maximum Likelihood Estimates for "Mother" Model (UPMOB)

Parameter	Relations	DF	Estimate	Std. Error	Chi-Sq	Pr > Chi-Sq
Intercept	Better	1	-0.7797	0.1801	18.7385	<.0001
Intercept	Worse	1	-2.306	0.2037	128.166	<.0001
Abmob	Better	1	-0.00583	0.019	0.0941	0.759
Abmob	Worse	1	-0.0266	0.0222	1.4323	0.2314
Stmob	Better	1	0.0682	0.0268	6.4874	0.0109
Stmob	Worse	1	0.0934	0.0296	9.9359	0.0016
Up Abmob	Better	1	0.0673	0.0894	0.5657	0.452
Up Abmob	Worse	1	0.000579	0.1026	0	0.9955
Up Stmob	Better	1	-0.446	0.0985	20.4811	<.0001
Up Stmob	Worse	1	-0.3784	0.1114	11.5317	0.0007
Cohort 19-20	Better	1	0.1692	0.1719	0.9691	0.3249
Cohort 19-20	Worse	1	0.6445	0.1772	13.228	0.0003
FEMALE	Better	1	0.0971	0.0806	1.4529	0.2281
FEMALE	Worse	1	0.2449	0.0915	7.1723	0.0074
Minority	Better	1	0.6111	0.0937	42.5447	<.0001
Minority	Worse	1	-0.2931	0.1189	6.0734	0.0137
Income/10,000	Better	1	-0.0618	0.0188	10.7687	0.001
Income/10,000	Worse	1	0.0185	0.0161	1.3059	0.2531
Age	Better	1	0.0276	0.00517	28.6305	<.0001
Age	Worse	1	0.0619	0.00551	126.2455	<.0001
Married	Better	1	0.2453	0.0797	9.4759	0.0021
Married	Worse	1	0.1794	0.0909	3.8933	0.0485
Distance/100	Better	1	0.00999	0.00409	5.9531	0.0147
Distance/100	Worse	1	0.00205	0.0049	0.1744	0.6762
Num. Childs	Better	1	-0.0648	0.0318	4.1382	0.0419
Num. Childs	Worse	1	-0.044	0.0354	1.5448	0.2139
Parents Tog.	Better	1	0.0486	0.0777	0.3922	0.5312
Parents Tog.	Worse	1	-0.4359	0.0871	25.0379	<.0001

N=4,239, -2 Log Likelihood = 9129.668, Pseudo R-sq = 0.0953, X^2=424.5988, P<.0001

The effect of geographic distance after controlling for mobility is also significant, though very small. For every 100 miles an individual lives, the odds of them having "better" as opposed to "typical" relations with their father increase by about 1 percent ($e^{0.00999}$ = 1.01). This is similar to what was found in the "father" model. Distance has very little impact on mother-child relations when controlling for mobility and basic demographics.

An interaction term was computed using the dummy variable for upward-structural mobility and the level of structural mobility. The results indicate that, for those who are upwardly-structurally-mobile, every 1-year increase in the level of structural mobility leads to about a 17 percent decrease in the odds of having "better" rather than "typical" relations with their mother ($e^{-0.1666} = 0.83$). This shows that the effect of the level of structural mobility is highly regulated by the type of mobility experienced. No other significant interaction was found.

II. Downward-Mobility (MOTHER)

The next model replaces the dummy variable for upward-mobility with downward-mobility. It is shown in Table 3.10. The significance of the effect of the level of structural mobility is not apparent here. However, those who are downwardly-structurally-mobile have about 57 percent higher odds of having "better," as opposed to "typical" relations with their father ($e^{0.4506} = 1.569$). The same people have almost 73 percent higher odds of having "worse" as opposed to "typical" relations with their father ($e^{0.5497} = 1.733$). Therefore, those who are downwardly-structurally-mobile are most likely to have "worse" relations with their father. Also, those graduating between the years 1990 and 2002 have 99 percent higher odds (almost twice the odds) of having "worse" as opposed to "typical" relations with their father ($e^{0.6857} = 1.985$).

Table 3.10   Maximum Likelihood Estimates for "Mother" Model (DWMOB)

Parameter	Relations	DF	Estimate	Std. Error	Chi-Sq	Pr > Chi-Sq
Intercept	Better	1	-1.0298	0.1961	27.563	<.0001
Intercept	Worse	1	-2.7262	0.2208	152.4074	<.0001
Abmob	Better	1	0.00649	0.0174	0.139	0.7093
Abmob	Worse	1	-0.0144	0.0205	0.4917	0.4832
Stmob	Better	1	-0.0112	0.024	0.2166	0.6416
Stmob	Worse	1	0.0183	0.0266	0.4723	0.4919
Down Abmob	Better	1	-0.136	0.1003	1.8361	0.1754
Down Abmob	Worse	1	0.0406	0.1118	0.132	0.7164
Down Stmob	Better	1	0.4506	0.0865	27.1473	<.0001
Down Stmob	Worse	1	0.5497	0.0986	31.0867	<.0001
Cohort 19-20	Better	1	0.2224	0.1717	1.6774	0.1953
Cohort 19-20	Worse	1	0.6857	0.1778	14.8651	0.0001
FEMALE	Better	1	0.0972	0.0806	1.4546	0.2278
FEMALE	Worse	1	0.2524	0.0918	7.5629	0.006
Minority	Better	1	0.611	0.0936	42.5801	<.0001
Minority	Worse	1	-0.3031	0.119	6.4921	0.0108
Income/10,000	Better	1	-0.0602	0.0189	10.0831	0.0015
Income/10,000	Worse	1	0.0217	0.0165	1.7285	0.1886
Age	Better	1	0.03	0.00527	32.4444	<.0001
Age	Worse	1	0.0661	0.00563	138.0691	<.0001
Married	Better	1	0.2385	0.0799	8.9236	0.0028
Married	Worse	1	0.1791	0.0912	3.8545	0.0496
Distance/100	Better	1	0.0104	0.00412	6.3376	0.0118
Distance/100	Worse	1	0.00276	0.00492	0.3139	0.5753
Num. Childs	Better	1	-0.0623	0.0318	3.8372	0.0501
Num. Childs	Worse	1	-0.0483	0.0354	1.8637	0.1722
Parents Tog.	Better	1	0.0524	0.0781	0.4511	0.5018
Parents Tog.	Worse	1	-0.4091	0.0877	21.7781	<.0001

N=4,293, -2 Log Likelihood=9129.668, Pseudo R-Sq=0.0995, X^2=444.5009, P<.0001

No significant interaction was found with those graduating between 1990 and 2002. However, an interaction between the level of structural mobility and downward-structural mobility was computed and found significant. This interaction indicates that, of those who are downwardly-structurally-mobile, every increase in the level of mobility leads to a 12 percent increase in the odds of having "better" as opposed to "typical" relations with their father. For the same people, the same increase also leads to about a 13 percent decrease in the odds of having "worse" as opposed to "typical" relations.

DISCUSSION

Discussion of Results

  The results of the analysis have shown that the effect of structural mobility on child-parent relationships depends not only on the level of mobility, but the type of mobility. The results indicate that absolute mobility does not significantly affect their relationships with them, when controlling for basic demographics. Structural mobility, on the other hand, does affect child-parent relations. However, the dummy variable indicating the type of mobility suggests that the effect of structural mobility varies according to whether an individual is above or below the median attainment of their cohort. Upward-structural mobility has a negative impact on relations with the father, and a modest effect on child-mother relations. Those who are upwardly-structurally mobile have higher odds of having both worse relations with their father and only typical relations with their mother. Therefore, the effect of mobility on child-parent relations depends on not only the type of structural mobility, but also the parent in question.

  Downward-structural mobility has an indecisive impact on relations with the mother. Those who are downwardly-structurally mobile have higher odds of having better and worse relations with their mother than typical relations. This contrasts to the finding of upward-mobility, where the odds of having typical child-mother relations were the highest.

  The hypothesis posited by Kalmijn (2006) concerning the perception of mobility as a structural rather than an individual phenomenon also has *conditional* support in the results. Structural mobility for those who are downwardly-mobile has a positive impact

51

on relations, whereas upward-mobility has a negative impact. This may be due to the issue of the perspective of mobility. For instance, the parent would have as a reference their own relative standing within a much different educational structure which is (in most cases) more recent to their son or daughter's graduation. Therefore, the intergenerational mobility experienced by the son or daughter would most likely be perceived as structural by the parent and as an individual achievement by the child. The data set used in the analysis (*National Survey of Families and Households*), uses measures of child-parent relations reported by the son or daughter and not a parent. However, if such measures were provided by a parent, it is plausible, given the theoretical assumption provided by Kalmijn (2006), that the effect of upward-structural mobility on child-parent relations would have been slightly more positive than those reported in this paper.

Considering the type of mobility, alone, upward mobility remains to have a slightly negative impact on child-parent relations (Blau 1956; Hutter 1970; Kulis 1992; LeMasters 1954; Locke 1940; Stuckert 1963; Suitor 1987). However, these results are only tenuous when controlling for demographic characteristics. Upward structural mobility negatively affects child-father relations, but only modestly impacts child-mother relations. The fact that the results suggest that structural mobility is more robust than absolute mobility can be attributed to the previous research finding that the effect of family background is becoming less important than family background (Biblarz et al 1996; Goldthorpe 2003). Just as family background is becoming a weaker determinant

of individual outcomes, it also appears to be less influential on the effect of mobility on child-parent relations.

Suggestions for Future Research

Many of the limitations of this study can be improved upon by the inclusion of additional data not used in the analysis presented in this paper. For instance, data relating to the perception of mobility is not contained in the data set used here. Also, the child's, as well as the parents' *perception* of the quality of child-parent solidarity should also be collected. This data would better facilitate an analysis to test whether mobility which is viewed as achievement-oriented is more detrimental to child-parent relations than mobility viewed as structural in nature.

APPENDIX

Cohort Assignments

Cohort	Year of Graduation
1 [EXCLUDED]	1900-1904
2 [EXCLUDED]	1905-1909
3 [EXCLUDED]	1910-1914
4 [EXCLUDED]	1915-1919
5 [EXCLUDED]	1920-1924
6 [EXCLUDED]	1925-1929
7 [EXCLUDED]	1930-1934
8	1935-1939
9	1940-1944
10	1945-1949
11	1950-1954
12	1955-1959
13	1960-1964
14	1965-1969
15	1970-1974
16	1975-1979
17	1980-1984
18	1985-1989
19	1990-1994
20	1995-2002[9]

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[9] Cohort 20 is set at 8 years in order to account for the decline in graduation rates for the later waves. Waves 1 through 7 were excluded due to lack of data.

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