

**MOBILITY EFFECTS REDUX:
DOES INTERGENERATIONAL MOBILITY SHAPE INDIVIDUAL
PSYCHOLOGY?**

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ABSTRACT

Social Scientists have long been interested in how the social environment shapes individual health, well-being, and personality. In this study I expand on this issue and ask how changes in social status, particularly intergenerational occupational mobility, influence individual psychology. Though much modern sociological research seeks to describe processes of achievement, attainment, and mobility, “mobility effects” research seeks to understand the individual *consequences* rather than the *causes* of social mobility.

Drawing from the work of Sorokin (1927; 1959) and the “mobility effects” literature, I use data from the Wisconsin Longitudinal Study (WLS) and Sobel’s Diagonal Mobility models (1981; 1985) to estimate the association between mobility and psychological distress, Neuroticism and Openness to Experience. After accounting for background characteristics and origin and destination occupational status, I find little evidence for “mobility effects” insofar as they were theorized by Sorokin. In no instance were mobile individuals found to be significantly more psychologically distressed, emotionally instable (Neuroticism), or “open to experiences” than their nonmobile counterparts. I do find however that those who are mobile from farm origins tend to experience lower levels of distress and neuroticism than do their nonmobile counterparts, suggesting that the association of mobility and psychological outcomes may vary by social class origin and historical context. In addition, mobile individuals tended to resemble those in their destination rather than their origin social class, which suggests that destination social class plays a larger role in shaping psychological outcomes than does origin status. Implications of these results, as well as suggestions for future research are discussed.

INTRODUCTION

Social Scientists have long been interested in understanding how individuals internalize their social position. For example, the work of Pierre Bourdieu (1980; 1977) and the concept of *habitus*, as well as a vast literature linking socioeconomic status and mental health seek to describe how one's position in the hierarchy of society impacts their individual psychology. However, in a mobile society such as the United States, one's class or socioeconomic position is not fixed throughout the lifespan. Intergenerational mobility in the United States is relatively high, and when discussing how social position is internalized, it is important to consider how social positions — past and present — influence individual psychology.

In fact, classic works in sociological theory, namely the work of Sorokin (1927; 1959) and Durkheim (1951), suggest that mobility shapes individual psychology. Sorokin writes that the psychological impact of mobility is two-fold, as movement through social strata can lead to open-mindedness and creativity, as well as anxiety, psychological strain, and mental disease (1959:509). This occurs because mobile individuals are exposed to class-based norms, expectations, and values that are foreign to the cultural landscape of their social class of origin.

Informed by the classic sociological theories of Sorokin and Durkheim, as well as past quantitative and qualitative research, this paper seeks to understand how the experience of intergenerational mobility is related to individual psychology. I use data from the Wisconsin Longitudinal Study (WLS), a prospective cohort study of Wisconsin high school graduates in 1957 and Sobel's diagonal mobility models (1981; 1985) to examine the association between intergenerational mobility and three psychological outcomes — openness to experience, neuroticism (two of the Big Five personality factors (John 1990; 1991)), and psychological

distress, as measured by the Center for Epidemiologic Studies Depression (CES-D) scale (Radloff 1977).

The research question is two-fold: First, is mobility associated with elevated levels of distress, emotional instability, and “openness to experience”? If it is indeed true that mobility leads to a host of psychological outcomes, we would expect mobile individuals to differ significantly from their nonmobile counterparts on distress, emotional instability, and openness to experience. In addition, this study seeks to understand how the association between mobility and distress and emotional instability may vary depending on origin social class, especially for those from farm origins. Farm as an occupational category is often neglected in sociological study, though mobility out of farm was a major societal transition of the post World War II period (Labao and Meyer 2001). Those with farm origins differ from other respondents in key ways (Elder and Conger 2000) which likely impact the relationship between mobility and psychological characteristics.

Secondly, I ask how one’s origin and destination social class status contributes to the individual psychology of mobile individuals. I do this by analyzing how closely mobile individuals tend to resemble those in their origin versus destination social class on psychological outcomes. Given our interest in how socioeconomic position shapes health and mental health over the lifespan (Alwin and Wray 2005; Lynch and Kaplan 2000), it is important to understand how past and present social status shape individual psychology for mobile individuals.

Generally, I find little evidence that mobility is associated with elevated levels of distress, emotional instability, or “openness” and creativity. However, those who are mobile from farm origins tend to report lower levels of psychological distress and emotional instability than their nonmobile counterparts. In addition, I find that mobile individuals tend to resemble those in their

destination, rather than their origin social status on personality outcomes, suggesting that individual psychology is more shaped by an individual's current rather than prior social position. Implications of these results as well as suggestions for future research are discussed.

SOROKIN'S LEGACY: THE PSYCHOLOGICAL IMPACT OF MOBILITY

In the classic work *Social Mobility*, Sorokin (1959) put forth a series of hypotheses that state the consequences of intergenerational mobility for both society as a whole and individuals in society. In his chapter on the "Effects of Mobility" (508-529) Sorokin writes that the experience of social mobility entails "passing through different 'social atmospheres,' breathing different social air, experiencing different standards, habits, morals, ideas, customs, and beliefs" (509). This has a profound impact on the psychology of mobile individuals, both positive and negative.

According to Sorokin, the experience of social mobility transforms the lives of individuals by placing them in environments that likely have competing norms, expectations, and patterns of behaviors, which can cause *permanent* strain, stress, and hinder individual's ability to interact with others. Sorokin writes that "any change of occupation or social-economic status requires from [the mobile individual] new efforts and new work. This increases the activity of the nervous system, and causes a permanent mental strain ... great mental strain and versatility of behavior, demanded by life in a mobile society, are so exacting that they cannot be met by many individuals. Their nervous systems crumble under the burden of the great strains required of them" (1959:510;515). Indeed, this sentiment was predated by Durkheim (1951:248-252), who worried that mobility would weaken the "moral restraint" provided by society, allowing the passions and desires of individuals to run wild, resulting in psychological distress, social isolation, and anomic suicide, a hypothesis echoed by Sorokin (1959:522).

But however pessimistic may be Durkheim's view of mobility on psychological functioning, Sorokin's view is much more optimistic (1959:308). In addition to the negative psychological impact of mobility, according to Sorokin, being a mobile member of society means that one must be open to the experiences of an alien social class. He writes

Since they pass from occupation to occupation, from one economic and political status to another, the establishment of very rigid habits is hindered because a form of behavior suitable for one occupation becomes unsuitable for another. A change of status requires a corresponding accommodation of body, mind, and reactions ... a man who passes from one occupation to another who cannot correspondingly modify his responses and actions, and adapt himself to the new position, is likely to be discharged. In this way a greater versatility and plasticity of human behavior is a natural result of social mobility. (Sorokin 1954:508)

Therefore, the experience of social mobility is two-fold. Though it is hypothesized that mobility is associated with a host of negative psychological outcomes, "it also facilitates an increase of many opposite phenomena" (515), including a level of versatility or "openness" to experiences. Furthermore, Sorokin adds that mobility "tends to reduce narrow-mindedness" as well as an increase in "intellectual life" and inventions and discoveries. According to Sorokin, mobility in general creates a "cross-fertilization" of ideas which facilitates intellectual exchange, as well as creativity, invention, and discovery, where "the individual or group finding themselves at the crossroads of different ideas, beliefs, and values, or in a stream that impels them towards new creations" (Vexilard 1963:175).

Thus, according to Sorokin's hypothesis, mobile individuals should differ from nonmobile individuals in the sense that they should be more open to experiences, have a higher level of creativity, and be able to adapt to different environments more so than those who are nonmobile. However, this is a hypothesis that remains by and large untested. Though a great deal of research exists that studies the effect of mobility— or "mobility effects" — past quantitative research on this topic has been plagued by the identification problem. In addition, most studies

on the psychological impacts of mobility have focused almost solely on upward mobility and the negative impact of mobility — through measures of psychological distress, anxiety, social isolation, and life satisfaction.

A long line of researchers from the 1950's through the 1970's were influenced by Sorokin's work and focused on the "psychological cost of mobility" (Lipset and Bendix 1964:285). Generally, researchers were concerned with three competing hypotheses regarding the association between mobility and psychological characteristics. The first, coined the *dissociative hypothesis* (Ellis and Lane 1967) posited, as Sorokin did, that the experience of mobility led to anxiety, distress, and social isolation. The second, known as the *compensatory hypothesis* (Horney 1937), assumed the reverse causal ordering, where mobility serves as a compensatory mechanism in which those with unhappy childhood experiences attempt to escape the environment which they were raised. Finally, the *acculturation hypothesis* (Blau 1956) suggests that mobile individuals acculturate to their social class of destination, and tend to resemble those in their destination social class on a given outcome.

Indeed, a great deal of quantitative work tested these hypotheses extensively and was the subject of contentious discussion and debate in the major sociological journals (see Blalock 1967; Blau 1956; Ellis and Lane 1967; Hollingshead, Ellis, and Kirby 1954; Hope 1975; House 1978; Kessin 1971). And while some studies found links between mobility and psychological distress or mental illness (Ellis and Lane 1967; Hollingshead, Ellis, and Kirby 1954; Kessin 1971; Turner 1968), the bulk of the studies conducted found no link between mobility and psychological characteristics, leading researchers to conclude that individuals tend to acculturate to their social class of destination (Bean, Bonjean, and Burton 1973; Blau 1956; Jackson and Curtis 1972; Wegner 1973).

Though the “mobility effects” research agenda — and its sister subject, status inconsistency (e.g. Lenski 1967) — was at the forefront of discussion in the major sociological journals during this time period, all of this research suffers from major substantive and methodological limitations. Substantively, many studies lacked controls — such as measures of childhood psychological characteristics — that would allow researchers to reject the *compensatory hypothesis* in favor of the *dissociative hypothesis*. Controlling for childhood mental health, for example, would ensure that the measure of mental health is a measure that occurs *following* any mobility experienced. Second, all of the above studies limit their focus to upward or downward mobility, potentially missing how the experience of mobility may vary depending on social context.

Methodologically, many of the studies conducted prior to 1960’s failed to account for the effects of origin and destination social class when modeling mobility effects. After accounting for origin and destination class, many studies found no association between mobility and psychological characteristics (Jackson and Curtis 1972). However, nearly all studies that did model origin and destination effects utilized Duncan’s square-additive model (1966), which yield unidentified models where the estimate for the impact of mobility on a given outcome cannot be disentangled from one’s destination social class¹ (Blalock 1967; Hope 1975; Sobel 1981; Sobel 1985). Indeed, this once vibrant subfield was seemingly abandoned due to these methodological issues and a body of null findings for psychological outcomes (Jackson and Curtis 1972). However, if mobility effects research was abandoned largely because of null findings that were based on methods that *cannot* estimate mobility effects (Hope 1975; Sobel 1981), then in fact

¹ These models were unidentified, similar to the age, period, cohort problem in demography (Glenn 2004; Sobel 1981).

very little is known about the association of mobility and psychological outcomes, especially outcomes such as creativity and open-mindedness that were stressed by Sorokin.

Diagonal Mobility Models developed by Sobel (1981; 1985) solve the identification problem described above by comparing mobile individuals to the nonmobile members of their origin and destination social class. This method is especially useful, because in addition to modeling the association of mobility and a given outcome, it provides point estimates that describe how closely mobile individuals, on average, resemble the nonmobile members from their origin versus destination social class. In effect, Diagonal mobility models allow researchers to examine both association between mobility and outcomes, as well as how both past and present social class position contribute to those outcomes.

To date, only one published study exists that examines mobility and psychological characteristics exists utilizing Sobel's Diagonal Models. In their work on mobility and life satisfaction in ten industrialized countries, Marshall and Firth (1999) found no evidence that mobile individuals were more or less satisfied than nonmobile individuals on several different dimensions of life satisfaction—including satisfaction with family life, community, job satisfaction, overall standard of living and political system. Indeed, modern mobility effects research that study the impact of mobility on political attitudes and voting behavior too finds very little evidence for mobility effects, though they find that mobile individuals report voting in a way that more closely resembles those in their destination rather than their origin social status (Breen 2001; Clifford and Heath 1993; De Graaf, Nieuwbeerta, and Heath 1995; Nieuwbeerta, De Graaf, and Ultee 2000; Weakliem 1992).

Despite the methodological advances by Sobel (1981; 1985) implemented by Marshall and Firth (1999), many improvements can be made to the quantitative study of mobility and

psychological characteristics. One of the first places to look for expanding prior research is from the vast qualitative literature that describes how the experience of mobility impacts individual identity and psychology (e.g. Bettie 2002; 2003; Jones 2003; 2004; Newman 1999; Ryan and Sackrey 1996). Unlike quantitative work, which largely explores the association between mobility and psychological outcomes for all mobile individuals in a population, qualitative work in this tradition tends to focus on specific social contexts in which mobility may impact individual psychology. For example, Newman (1999) describes how downwardly mobile professionals are especially at-risk for feeling distressed, alienated, and blaming themselves for their downward mobility during times of relative economic prosperity —falling behind when everyone else seems to be getting ahead. Therefore, it is possible that the association between mobility and psychological characteristics is largely dependent on social and historical context, as well as social class of origin.

Perhaps one of the most understudied areas in sociology is the occupational status of farm, and the historical era following World War II in which the economy shifted away from agriculture and mobility out of farm occupations comprised a large proportion of intergenerational mobility (Duncan 1965; Featherman and Hauser 1978; Labao and Meyer 2001). Two factors are especially important in this area when discussing the potential impact of mobility on psychological characteristics.

First, research has consistently shown that those with farm origins are unique insofar that they experience psychological benefits from their social status of origin. For instance, Elder and Conger (2000) show that individuals from farm origins — with “ties to the land”— grow up in communities and family situations with much higher levels of social capital, and tend to exhibit higher levels of self-esteem and mastery than nonfarm youth. In addition, the benefits of these

childhood and adolescent experiences carry over into adulthood, impacting academic success and instilling a sense of resiliency which “create opportunities for the future,” long after they move off the farm (242).

Secondly, the decades following the societal shift away from agriculture were incredibly hard times for those who remained farmers. The result of a global market bubble-burst, the Farm Crisis of the 1980’s occurred when farm land and crop values plummeted as demand faltered (Buttel, Larson, and Gillespie Jr. 1990). The impact of the crisis on farmers was devastating, as farm incomes dropped, debt rose, and entire communities were thrust into economic hardship (Heffernan and Heffernan 1986). Indeed, research has shown that farmers who continued to farm despite the Crisis experienced a great deal of financial and psychological distress as they struggled to make ends meet (Armstrong and Schulman 1990; Conger and Elder 1994; Hoyt et al. 1997; Schulman and Armstrong 1989).

Those who are mobile out of farm during this historical era, then, may provide a unique test of the existence of mobility effects. If those who are mobile out of farm experience the psychological benefits of their farm origin, yet do not experience the burden of the Farm Crisis (as did their nonmobile counterparts), they may psychologically be better off than those who are in both their origin (farm) and destination status. In other words, those who are mobile from farm may get all of the benefits from growing up on a farm, without the cost of staying on the farm during this historical period.

Though it is often hypothesized that mobility should lead to greater levels of distress, those who are mobile out of farm may in fact benefit greatly from their mobility, as they avoid the fate of their nonmobile counterparts. Like much of the qualitative research on this topic, this example shows how it may be important to consider the specific experience of mobility and the

historical context in which it occurs in order to better understand the association between mobility and psychological outcomes.

THE CURRENT STUDY

In this study I draw from classical theory, past quantitative research, methodological advances, and qualitative research to better understand how mobility may be related to individual psychology. I expand on past research in several ways. First, I utilize Diagonal Mobility models developed by Sobel (1981; 1985) to estimate the association between mobility and psychological characteristics. The Diagonal mobility — or Diagonal Reference — model is the only accepted quantitative method for the assessment of mobility effects and status inconsistency (Hendrickx, De Graaf, Lammers, and Ultee 1993).

Second, in addition to analyzing the relationship between measures of distress, anxiety, and mobility, I include a measure of open-mindedness, creativity, and versatility of behavior theorized by Sorokin to be associated with mobility. I do this using three primary outcomes: psychological distress as measured by the Center for Epidemiologic Studies Depression (CES-D) scale (Radloff 1977), a measure of distress experienced in the past week; the Neuroticism subscale of the Big Five Personality Inventory (John 1990; 1991), indicating the extent to which individuals tend to be nervous, under stress, fearful, and emotionally unstable; and finally the Openness to Experience subscale of the Big Five Personality Inventory (John 1990; 1991), in which high scores refer to “persons who are imaginative, curious, creative, and susceptible to absorbing experience” (Hauser et al. 1994:15).

Third, I include control variables — especially childhood mental health characteristics, family background, cognitive ability measured in high school, and age at first marriage — to ensure a more stringent test of the *dissociative* rather than the *compensatory* hypothesis, and

account for any background characteristics that may be predictive of both mobility and psychological characteristics (see Ellis 1952; Horney 1937).

And finally, drawing from insights from qualitative research I examine how the experience of mobility may differ for those who are mobile from farm during a specific historical time period, specifically for the outcomes of psychological distress (CES-D) and Neuroticism. This is especially important given the Farm Crisis of the 1980's and its impact on farmers and the farming community (e.g. Armstrong and Schulman 1990; Heffernan and Heffernan 1986), as well as the intrinsic benefits of having “ties to the land” (Elder and Conger 2000). In addition, I include supplementary analyses that compare upwardly vs. downwardly mobile individuals, as to better understand how the experience of mobility may differ among mobile individuals. It is reasonable to consider the upwardly mobile as the reference category in some models, as WLS respondents were born into a cohort where the prospects of upward mobility were high (Easterlin 1987), and was the most predominant form of mobility. In fact, in the WLS data, the upwardly mobile outnumber nonmobile individuals in most cases. Based on the above description, I propose three hypotheses:

Hypothesis 1 (Mobility Effects): Following the work of Sorokin, individuals who experience intergenerational mobility should report higher levels of psychological distress and neuroticism, as well as higher levels of “openness to experience” than their nonmobile counterparts.

Hypothesis 2 (Acculturation): As an alternative hypothesis to (H1), mobile individuals should more closely resemble those in their destination rather than origin status on the psychological outcomes of study.

Hypothesis 3: (Farm Mobility Effects): Due to the historical circumstances in which these individuals experienced mobility, those who are mobile out of farm status should experience significantly lower levels of distress and emotional instability than the nonmobile counterparts in both their origin and destination statuses.

Next, I describe the data, methods, and measures used to test these hypotheses.

METHODS AND DATA

Data

Data are drawn from the Wisconsin Longitudinal Study, a prospective cohort study of 10,317 randomly selected men and women who graduated high school in Wisconsin in 1957. The WLS respondents are widely considered to be representative of non-Hispanic white American high school graduates in the late 1950's (Preliminary Wisconsin Longitudinal Study Handbook 2006). In this study I utilize data from the 1957, 1975, and 1992 follow-up surveys, when respondents were roughly 52 years of age. The 1992 follow-up includes 8,493 (3981 men, 4512 women) of the original 10,000 respondents (443 deceased, 87% response rate).

Analysis is limited to males who were employed at the time of the 1992-1993 survey whose fathers were employed and head of household in 1957. While studying the mobility of women is an incredibly important venture, it is beyond the scope of this study, especially in the historical period in which this data is drawn, where women were much less likely to be the primary breadwinners than they are today and the social status of women was largely determined by their marital status (see Goldthorpe 1983 for further discussion). In fact, in the WLS data, the correlation between father (1957) and daughter's occupational status (in 1992-93) is significantly lower than the correlation between father and son's occupational status (Jencks and Tach 2006). Therefore, in this study I limit my analysis based on classic mobility studies (e.g. Blau and Duncan 1967; Featherman and Hauser 1978), and examine the intergenerational mobility of the sons of fathers who were employed and head of household.

I use respondents' occupation in 1992-1993 (as opposed to 1975) to measure occupational status for several reasons. First, in 1992-1993 respondents were roughly 52-53

years old, had yet to reach the average age of retirement², and had likely reached their peak occupational attainment. In addition, respondents most closely matched their father's age in 1957, when father's occupation was measured (respondents' age in 1992-1993 = 52-53; mean father's age in 1957 = 49.26) indicating that father and sons were at a comparable age in the socioeconomic life cycle. Finally, the primary outcome variables—psychological distress, neuroticism, and openness to experience—were also measured in the 1992-93 survey, ensuring that the outcomes are measuring psychological characteristics after mobility had occurred.

Of the 3,981 men in the primary sample, 27 cases were lost that did not have valid data for their last or current occupation in the 1992 survey. Additionally, 363 men who reported that their father was not the head of household or did not provide employment information about their father in 1957 were excluded from the analysis. An additional 215 cases were lost for those who were missing data on the age at first marriage question in the 1975 interview (3,398 cases). Since the primary outcome variables were asked in the 1992 mail survey, which had a significantly lower response rate than the phone survey (where the 1992 occupational status questions were asked), the sample size is reduced to 2702 after accounting for missingness on the CES-D, Neuroticism, and Openness to Experience measures. Finally, an additional 615 cases were lost due to the fact that depression history (for childhood depression) items in 1992 were asked only to an 80% random sample of respondents in the telephone survey. The final analytic sample after listwise deletion is 2,087.

Measures

Origin, Destination, and Mobility Variables

² Only 7 percent of men and women in the WLS sample had retired by age 52-53 (Hauser et al. 1994)

In the 1975 survey, respondents were asked to report their father's education in 1957, when they were seniors in high school. In the 1992 survey, respondents were then asked to report their primary occupation (or last held job). Responses were coded according to the 1970 U.S. Census major occupational groups.

A collapsed six class version of the Erikson-Goldthorpe-Portocarero occupational schema is used to measure occupational status (Erikson and Goldthorpe 1992: Appendix Table 2; Erikson, Goldthorpe, and Portocarero 1979). Respondents and their fathers were mapped onto this schema based on their self-reported occupations, as categorized by the 1970 Major Census Occupational Groups, consisting of 17 major occupational categories based on the occupation, industry, and class of workers (U.S. Bureau of the Census 1984; Featherman and Stevens 1982). The figure below illustrates how individuals were mapped on the EGP schema (labeled I-VI) based on their major occupational group according to the 1970 Census:

[Figure 1 About Here]

[Table 1 About Here]

As shown in Table 1, fathers of respondents were most likely to be skilled laborers (40%) or farmers (20.7%) in 1957. In addition, approximately 12% of fathers were categorized as professionals (service class), 11% as petty bourgeoisie, 8% as routine nonmanual workers, and 7% were nonskilled laborers.

Respondents' occupations in 1993 highlight the decline of farm as an occupation, as well as the increase in nonmanual labor positions. Only 3.3% of respondents reported that farming was their primary occupation, while over 50% of respondents were either professionals or routine nonmanual workers (40.4% and 13.2%, respectively). The remaining respondents were skilled workers (26.4%), petty bourgeoisie (9.6%), or unskilled workers (7.2%).

To measure intergenerational mobility I construct mobility measures meant to capture a variety of forms of mobility. First, I construct a general mobility variable meant to capture any intergenerational mobility, where son's occupation in 1992 differs from father's occupation in 1957. The variable, "any mobility," is coded 1 for those who experienced intergenerational mobility and 0 for those who were nonmobile. As shown in Table 1, the vast majority of the sample is mobile, with 73% of respondents having an occupational status that differs from that of their fathers.

Second, I distinguish different types of mobility and create dummy variables indicating upward mobility, downward mobility, or other (horizontal mobility). Since the EGP schema was not intended to be strictly hierarchical (Erikson and Goldthorpe 1992; Erikson, Goldthorpe, and Portocarero 1979), I operationalize upward mobility in terms of 1. a shift from a manual to nonmanual status; or 2. An increase in wealth, ownership, or authority such as a shift from a manual position to Farm or from Routine nonmanual to Professional status. Similarly, I classify individuals as downwardly mobile if they fall from nonmanual to manual status, or from positions with greater authority/autonomy to positions with lesser (i.e. Professional to Routine Nonmanual). Horizontal, or "other" mobility is meant to capture those who are mobile but it is not clear whether the move is an upward or downward shift (i.e. Professional Status to Petty Bourgeoisie). While the horizontal or "other" mobility category is not considered to be theoretically relevant to the research question, it is included to ensure that mobile individuals will be compared to those who are nonmobile (the primary reference group). The Classification of the mobility variables is shown in FIGURE 2.

[Figure 2 About Here]

Third, I construct two variables to measure mobility out of farm. I construct a dummy variable indicating mobility (coded 1 if mobile, 0 otherwise) from farm (IV) to any nonmanual position (I, II, III). I repeat this for those with farm origins who are mobile into manual positions (V, VI). Finally, for models that include only mobility out of farm, I construct a dummy variable meant to capture any individual who is mobile but does not have farm origins, to ensure the reference group is always nonmobile individuals.

As shown in TABLE 1, the majority of mobile individuals (35.3% of respondents, 46.87% of mobile individuals) are categorized as upwardly mobile. This trend is not surprising given that all respondents have at least a high school education, and were born into a relatively small, pre-baby boom cohort where the opportunity for upward mobility was high (Easterlin 1987). As expected, downward mobility in this sample is much less prevalent than upward mobility (13.3% of the sample, 17.6% of the sample), likely for the reasons discussed above. 6.5% of the sample (8.6% of mobile individuals) are classified as experiencing “other” mobility.

Mobility out of farm for this sample is high, as expected, with only 12% of the sons of farmers themselves becoming farmers. In addition, For those with farm origins, mobility into nonmanual positions was more prevalent than mobility into manual positions (47.8% vs. 39.73% of those with farm origins). Those who are mobile from farm make up 18% of the sample, and 24% of all mobile individuals. Approximately 55% of the sample (73% of mobile individuals) experience intergenerational mobility but do not have farm origins.

Psychological Distress (CES-D)

I assess psychological distress using a modified version of the Center for Epidemiologic Studies Depression (CES-D) scale (Radloff 1977). The CES-D scale has been used widely as a general measure of psychological distress, and has excellent psychometric properties.

In the 1992-93 mail survey follow-up, respondents were posed a series of twenty questions that asked out of how many days in the past week (0-7) they experienced a variety of depressive symptoms. These symptoms include how often “you could not shake the blues,” “feel bothered by things that usually didn’t bother you,” “think your life had been a failure,” “felt happy” (RC³), “people were unfriendly,” “you enjoyed life” (RC), “had crying spells,” “feel people disliked you,” “feel sad,” “feel depressed,” “have trouble keeping your mind on what you were doing,” “feel like not eating or have a poor appetite,” “feel just as good as other people” (RC), “everything you did was an effort,” “feel hopeful about the future” (RC), “feel fearful,” “sleep restlessly,” “talk less than usual,” and “feel you could not get going.” (for a complete list of items reference the WLS codebook or see MacLean and Hauser 2000:APPENDIX A). Individual responses on each item were added, with the final CES-D scale ranging from 0-110 ($\alpha=.88$). Due to the extreme right-skewed nature of the scale, the final outcome variable transformed by its natural log + k (a constant) (MacLean and Hauser 2000; Miech and Shanahan 2000). The started log was computed using the “lnskew0” command in STATA, with a constant of 4.59. The started log of the CES-D scale has a distribution that approaches normal, and ranges from 1.52 - 4.74 with a mean of 2.75 and a standard deviation of .66.

Neuroticism

I measure mental strain (emotional instability) with the “Neuroticism” subscale of the Big Five Personality Inventory (John 1990; John 1991). While CES-D is a state-like (situational) measure of psychological distress (MacLean and Hauser 2000:1) Neuroticism is a considerably more “trait-like” dimension of personality and is highly stable throughout adulthood (Ardelt 2000:393; Gelissen and de Graaf 2006). The Neuroticism scale is widely considered to be a

³ Reverse Coded

valid indicator of poor psychological adjustment and “reflects multiple elements of negative emotionality, such as nervous tension, fearfulness, and brittleness under stress” (Hauser et al. 1994:15)

In the 1992 mail survey, WLS respondents were asked to respond on a 1-6 scale (1=Agree Strongly, 6=Disagree Strongly) to what extent they agreed with the following five statements: (1) they see themselves as someone who is tense (RC); (2) see themselves as emotionally stable and not easily upset; (3) they are someone who worries a lot (RC); (4) they are someone who remains calm in tense situations; (5) they see themselves as someone who gets nervous easily (RC). Individual responses on each item were summed ($\alpha = .76$), with high scores indicating higher levels of emotional instability. The Neuroticism scale is approximately normally distributed, and ranges from 2-30, with a mean of 15.2 and a standard deviation of 4.77.

Openness to Experience

I test Sorokin’s hypothesis that mobility is associated with “open mindedness,” creativity, and versatility of behavior by utilizing the with the “Openness to Experience” subscale of the Big Five Personality Inventory (John 1990; John 1991). Like Neuroticism, Openness to Experience is considered to be a valid and reliable personality trait that is stable throughout adulthood. The Openness to Experience scale was designed to measure the extent to which individuals appreciate having new experiences, and “refers to persons who are imaginative, curious, creative, and susceptible to absorbing experience” (Hauser et al. 1994:15).

In the 1992 mail survey, WLS respondents were asked to respond on a 1-6 scale (1=Agree Strongly, 6=Disagree Strongly) to what extent they saw themselves as someone who: (1) prefers the conventional, traditional; (2) prefers work that is routine and simple; (3) values

artistic, aesthetic experiences (RC); (4) has an active imagination (RC); (5) wants things to be simple and clear-cut; (6) sophisticated in art, music, or literature (RC). Individual responses on each item were summed ($\alpha = .60$), with high scores indicating high levels of creativity, curiosity, and an appreciation of “new experiences and novel ideas” (Gelissen and de Graaf 2006:704). Next, I describe the control variables in the study.

Control Variables

The control variables chosen in this study—prior depressive symptoms, early marriage, cognitive ability in high school, and family background—are included to ensure a test of the *dissociative* rather than the *compensatory* hypothesis. Controlling for these traits helps make certain that the relationship observed between mobility and psychological characteristics has the correct time ordering.

Prior Depressive Symptoms

To account for depressive symptoms experienced prior to mobility, I construct a retrospective measure of depressive symptoms collected in the 1992-93 survey (Carr 1997). Following Carr, I include a dichotomous variable indicating whether or not respondents experienced depressive symptoms in their teenage years — symptoms that likely occurred prior to any mobility. In the phone portion of the 1992 survey, a 79% random sample responded to questions inquiring about depression and alcohol history. Respondents were asked if they had “a time in life lasting two weeks or more when nearly every day you felt sad, blue, depressed, or when you lost interest in most things like work, hobbies, or things you usually liked to do for fun?” If respondents answered yes, they were asked a series of detailed questions about their depression, including the age of their first, last, and worst episodes of depression. Depression in

the sample is relatively rare, with .4% of respondents reporting that they were depressed at or before they were 19 years of age.

Marital Status

Another factor that likely impacts both mobility and psychological characteristics is early marriage. Marriage has a great deal of psychological benefits, perhaps especially for men (Bernard 1982; Waite 1995), and has a positive association with occupational attainment, especially those that hope to attain professional or managerial positions (Pfeffer and Ross 1982). To control for marital status prior to mobility, I constructed a dichotomous variable indicating whether or not the respondent was first married in their teenage years. In the 1975 survey, respondents were asked their age at first marriage. If they reported that they were married at or before they were 19 years of age, they were coded as having an early marriage. 9.6% of respondents reported being married before they were 20 years of age.

Family Background

I include two measures of family background in this study. The first is a dummy variable indicating whether or not the respondent grew up in an “intact family,” living with both their mother and father in the same household in their childhood years. In the 1975 survey respondents were asked “Did you live with both parents most of time up until 1957?” Those who responded yes were coded 1, 0 otherwise. The vast majority of respondents (98.3%) reported that they grew up in a household with both parents present.

The second indicator of family background is father’s education. In the 1957 and 1975 surveys, respondents were asked to report how many years of schooling the head of household (father) had completed by 1957. If respondents did not give their father’s education in 1957

survey, the 1975 survey measure was used. Years of schooling ranges from 0-24 years, with a mean response of 9.80 years and a standard deviation of 3.5 years.

Cognitive Ability

Finally, I control for cognitive ability utilizing Henmon-Nelson test scores when respondents were in their junior year in high school that were mapped onto IQ scores (Wisconsin Longitudinal Study 1957-1977). If respondents were missing data on cognitive ability, test scores from their first year in high school were substituted. In this sample, cognitive ability ranges from 61-145, with a mean score of 102.17 and a standard deviation of 14.8. Though no studies of mobility effects have accounted for baseline (pre-mobility) measures of human capital, this is especially important for mobility effects research, as ability is a strong predictor of mobility (Lipset and Bendix 1964:227) and is likely correlated with personality characteristics, such as creativity or openness to experience.

Sobel's Diagonal Reference Models

For analyses I utilize Diagonal Mobility Models as developed by Sobel (1981; 1985). Past research on mobility effects have been flawed insofar as they have failed to adequately model the effects of origin status, destination status, and mobility simultaneously (for a review of mobility effects methods see Hendrickx, De Graaf, Lammers, and Ultee 1993). On the whole, past studies have utilized the linear-additive (Blalock 1967) or square-additive approach⁴ (Duncan 1966), which model mobility effects as the interaction of origin and destination status in a standard OLS framework. The square additive approach can be written as follows:

⁴ Some studies that were completed before the square-additive or linear-additive approaches were developed modeled mobility without modeling origin and destination statuses.

$$Y = \alpha + \beta_1(\text{origin}) + \beta_2(\text{destination}) + \beta_3(\text{origin}*\text{destination}) \quad (1)$$

Where, in the case of this study, the outcome Y is a measure of psychological distress, origin is father's occupational status in 1957, and destination is occupational status in 1993. β_3 , then, is the “mobility effect”— the coefficient representing the association between Y and the interaction of origin and destination status. However, the above equation yields unidentified models where the effects of mobility cannot be disentangled from the effects of origin and destination — similar to the age, period, cohort problem in demography (Glenn 1989; 2004; Sobel 1981). In other words, “Duncan’s formulation did not adequately distinguish origin, destination and mobility effects. For example, respondents in a given destination will include both mobile and stable individuals, and the simple additive model will thus confuse the effects of destination with those of mobility” (Clifford and Heath 1993:53)

While some have attempted to solve this problem (namely Brody and McRae 1987; Hope 1975), Sobel’s method is the most widely accepted, and the only method used to model mobility effects in modern research (e.g. Breen 2001; Marshall and Firth 1999; Nieuwbeerta, De Graaf, and Ultee 2000). Sobel’s Diagonal Reference models (1981; 1985) account for origin and destination effects by modeling mobile individuals as a weighted sum of nonmobile individuals (“stayers”) in a given individual’s origin and destination class. Mobility effects are then modeled independently of origin and destination status.

In other words, Sobel (1981:896) solves the identification problem by assuming that the primary referents for mobile individuals will be the nonmobile — or permanent — members of a given class or occupational status. According to Sobel, “mobility effects are effects over and above this partial determination, i.e., mobility effects are those systematic influences which are left after the process of acculturation (socialization to reference norms) has been modeled”

(1981:896). However, while those who claim to solve the age-period-cohort problem in demography are often accused of making implausible assumptions with complicated statistical methods (see Glenn 2004; Smith 2004), Sobel’s assumption is much more reasonable and theory-based. De Graaf and colleagues (1995:1007) rightly cite Sorokin (1959:509-510) in defense of this assumption, who writes:

If we want to know the characteristic attitudes of a farmer, we do not go to a man who has been a farmer for a few months, but we go to one who is a farmer for life. On the other hand, take a man of any occupation who has followed it for a lifetime—be he a dentist, a fisher, a soldier, a professor, a factory operative—he will necessarily exhibit the narrow-mindedness, idiosyncrasies, and *l’esprit de corps* of his social status more conspicuously than a man who has passed through several different positions.

Therefore, if we want to understand the impact of mobility on individuals, we *want* to compare them to the nonmobile members of the class, as these individuals are the ones who make up the “core of the class” (De Graaf et al.1995) and bear the characteristics of that class more than anyone else. While this assumption could be problematic in occupational statuses that have relatively few “stayers,” (Sobel 1981:904) the merits of this assumption seemingly far outweigh its costs.

The functional form of the diagonal model is shown below:

$$Y_i = q \mu_j + (1-q)\mu_k + e_{ij} \tag{2}$$

$$Y_i = q \mu_j + (1-q) \mu_k + \beta_m \text{MOB1} + \beta_m \text{MOB2} + e_{ij} \tag{3}$$

$$q + (1-q) = 1 \tag{4}$$

Where μ_j is the estimated mean outcome value for stayers in destination occupational category j and μ_k is the estimated mean outcome value for stayers in origin occupational category k ⁵. q and $(1-q)$ are item weights, providing point estimates for how closely mobile individuals resemble stayers in their origin $(1-q)$ versus destination class q on the outcome Y . Equation (2) shows the simple diagonal model with no mobility effects, while equation (3) shows the functional form of the diagonal model with mobility effects, where $\beta_m\text{MOB1}$ and $\beta_m\text{MOB2}$ estimate the association between two types of mobility and outcome Y (i.e. MOB1 = upward mobility; MOB2 = downward mobility).

The item weights $q, 1-q$ estimate the similarity of mobile individuals to stayers in their destination versus origin class. Weights are bounded between 0 and 1 and provide direct measures of acculturation. For example, if analyses revealed $q = .8$ (and $1-q$ therefore = $.2$), we could conclude that individuals most resemble those in their destination q , rather than their origin $(1-q)$ status. Similarly if we found that $q = .5$, we would conclude that origin and destination status appear to have relatively equal weight on individual outcomes.

I estimate Sobel's diagonal mobility models (1981; 1985) using the DREF subcommand of the GNM package in R (developed by Turner and Firth 2007). DREF is the only prewritten package to estimate diagonal mobility models, and has accurately replicated published studies that have utilized diagonal mobility models (i.e. Clifford and Heath 1993; Van der Slik, De Graaf, and Gerris 2002).

⁵ It is important to note that μ_j and μ_k are estimated means, *not* sample means. For more discussion see (Sobel 1981:899)

RESULTS

Descriptive Results

Before reporting the results for the diagonal mobility models, I present descriptive tables showing the mean values of the logged CES-D score, Neuroticism, and Openness to Experience for each cell of the mobility table in Tables 3, 4, and 5, respectively. The shaded boxes in the table show the mean value on a given outcome for stayers in their respective class statuses, which serve as the reference groups for mobile individuals in Sobel's model. For readers who wish to see correlation coefficients for the independent and dependent variables used in the analysis, Table 2 shows bivariate correlations for mobility, controls, and three outcome variables.

[Table 2 about here]

[Table 3 about here]

Psychological Distress (CESD)

Table 3 displays the mean logged CES-D scores by father and son's (respondent's) occupational category. Among nonmobile "stayers," Farmers tend to report the highest level of distress (2.87), followed by Skilled Manual laborers (2.83), Petty Bourgeoisie (2.76), Unskilled Manual Laborers (2.74), Service Class Professionals (2.66) and Routine Nonmanual workers (2.64).

When comparing mobile individuals to their nonmobile counterparts, Table 3 shows that those who are mobile out of farm tend to report lower levels of psychological distress than individuals in both their origin and destination class. For example, the sons of farmers who are mobile to the nonmanual classes report average levels of psychological distress that are lower

than farm stayers (I: 2.54; II: 2.63; III: 2.68 *versus* 2.87) *and* their class of destination (I: 2.66 *versus* 2.54; II: 2.64 *versus* 2.63; III: 2.76 *versus* 2.68). Though it remains to be seen whether or not these are significant differences once all controls are accounted for in the diagonal models, these descriptive results provide preliminary evidence for the existence of mobility effects for those who are mobile out of Farm.

[Table 4 about here]

Neuroticism

Table 4 displays the mean levels of Neuroticism for respondents in each cell of the mobility table. Among the nonmobile, stayers in the Service class report the lowest levels of Neuroticism (13.94), followed by Farm (15.20), Routine Nonmanual (15.27), Petty Bourgeoisie (15.44), Skilled Manual (15.68) and Unskilled Manual laborers (17.25). Similar to the trend above, the sons of fathers who do not themselves become farmers on average report lower levels of Neuroticism than do respondents who are themselves Farmers (14.58 vs. 15.31). Also similar to the trend above, the sons of farmers who are mobile to nonmanual statuses tend to report lower levels of Neuroticism than do stayers in their origin and destination status. For instance, sons of farmers who are mobile to Routine Nonmanual (14.46) and Petty Bourgeoisie (14.33) classes report levels of neuroticism that are lower than stayers in their origin (Farm: 15.2) and destination (Routine Nonmanual: 15.27; Petty Bourgeoisie: 15.44) classes.

[Table 5 About Here]

Openness to Experience

Table 5 displays the mean levels of Openness for respondents in each cell of the mobility table. The data show that, on average those in and from nonmanual positions report higher levels of openness than do those who were currently in or from manual positions, especially farm. Stayers in the Service class reported the highest levels of openness (23.43), followed by Petty Bourgeoisie (23.16), Routine Nonmanual (21.19), Skilled Manual (20.37), Unskilled Manual (19.55), and Farm (18.33).

While Tables 3 and 4 suggested some support for mobility effects out of farm on the outcomes of Neuroticism and psychological distress, the mean values of Openness to Experience appear to lend support for an acculturation explanation. For example, the mean Openness scores for those who are downwardly mobile from the Service Class to the Nonskilled Manual Labor class is 21.27, which falls directly between the mean scores for stayers of the Service (23.43) and Nonskilled Manual Labor (19.55) classes. Indeed, the mean values for those who are downwardly mobile tend to fall between the stayers in their respective origin and destination classes, and appear to more closely resemble stayers in the destination, rather than origin class. These preliminary findings suggest that mobile individuals tend to acculturate to their class of destination when it comes to their reported level of curiosity, creativity, and overall openness to experience. To better understand these descriptive findings, I now turn to results estimated using the Diagonal Mobility Models.

Is there evidence for “Mobility Effects”?

Tables 6, 7, and 8 show the Diagonal Reference Coefficients estimating the association of intergenerational mobility and the three main outcomes — Psychological Distress (Table 6),

Neuroticism (Table 7) and Openness to Experience (Table 8). Each table includes five models. Model One shows estimates with no mobility variables. Model 2 displays estimates for the association of experiencing any mobility and the outcomes. Model 3 shows estimates for detailed mobility, including upward mobility, downward mobility, farm to nonmanual, farm to manual, and other mobility. Model 4 includes the same mobility variables as Model 3, but the omitted category is changed so the upwardly mobile are the reference group. Finally, because both the descriptive tables and the hypotheses suggest that only those mobile from farm should experience a “mobility effect,” a simplified model (Model 5) with only mobility from farm and other mobility is estimated. I use Bayesian Information Criterion (BIC) (Raftery 1995) and Akaike Information Criterion (AIC) (Akaike 1974) to examine model fit statistics, which are displayed beneath the reported coefficients for their respective models.

[Table 6 about here]

Psychological Distress (CESD)

Table 6 reports diagonal reference coefficients estimating the association of intergenerational mobility and psychological distress (CES-D). Across all models in Table 5, predicted population means of psychological distress for stayers in their respective occupational classes (the diagonal means) are reported. The predicted means vary slightly from model to model, though in general they tend to reflect the diagonal means in Table 3. Among the control variables in all five models, only the retrospective measure of depressive symptoms experienced at or before the respondent was 19 years old was significant. On average, those who report

depressive symptoms in childhood tend to report levels of psychological distress .5 points higher than those who did not experience depressive symptoms in childhood and adolescence.

In Model 1 (no mobility effects), the results suggest that mobile individuals tend to resemble stayers in their origin, rather than their destination class ($q = .318$; $1-q = .682$) on their reported level of psychological distress. Descriptively, these results suggest that the effect of origin on psychological distress is more than double the effect of destination (Sobel 1981:902).

Models 2, 3, 4, and 5 display coefficients predicting the association of the different forms of mobility with psychological distress (CES-D). In model 2, the results show that, in its simplest form, mobility is not significantly associated with psychological distress ($\beta = -.007$, $SE = .036$). Similar to Model 1, Model 2 shows that mobile individuals more closely resemble stayers in their origin rather than destination status on the outcome of psychological distress ($q = .304$, $1-q = .696$). Model three displays the coefficients for the detailed forms of mobility. With the exception of mobility from Farm to Nonmanual, there is little evidence that those who experience upward, downward or other mobility report significantly higher levels of psychological distress than do those who are nonmobile. However, this model does provide some support for the hypothesis that those mobile from farm should be less distressed than stayers in their respective origin and destination statuses. Net of background characteristics and origin and destination occupational status, those who are mobile from Farm to Nonmanual positions (I, II, III) report significantly lower levels of psychological distress than their nonmobile counterparts at the $p < .10$ level ($\beta = -.156$, $SE = .082$).

Similarly, when we compare mobile individuals to the upwardly mobile (as opposed to the nonmobile) in Model 4, we find that net of background characteristics and origin and destination, those who are mobile from Farm to Nonmanual positions report significantly

($p < .001$) lower levels of psychological distress than do upwardly mobile individuals ($\beta = -.222$ SE = .068). Indeed, this provides further evidence that there is something unique about mobility to nonmanual statuses from farm origins that may be beneficial to the mental health of these individuals.

Finally, Model 5 shows a simplified mobility model, with only mobility from farm (and nonfarm mobility to ensure the reference category is nonmobile individuals). According to the AIC fit statistics, this model is the best fit to the data (4189.7, see TABLE 6). In this simplified model, the case that for mobility effects for farm origins is further strengthened, as individuals mobile from farm-nonmanual are significantly less distressed than their nonmobile counterparts at the $p < .05$ level ($\beta = -.203$ SE = .085).

The data show mixed evidence regarding the effect of origin and destination status on psychological distress. Of the three most preferred models (BIC: Models 3 and 4; AIC Model 5), models 3 and 4 suggest mobile individuals tend to resemble stayers in their destination rather than origin class ($q = .721$, $1-q = .279$), while model 5 suggests origin and destination status have relatively equal weight in determining psychological distress ($q = .455$, $1-q = .545$). Though the addition of parameters does impact the estimation of the item weights (Sobel 1981), these disparate results may suggest that psychological stress is determined equally by both origin and destination status.

[Table 7 about here]

Neuroticism

Table 7 displays the diagonal reference coefficients estimating the association of intergenerational mobility and Neuroticism scores. The predicted population means for the

stayers in their respective occupational categories are largely similar to those reported in Table 3. As with models predicting psychological distress, depressive symptoms reported in adolescence and childhood was the best predictor of Neuroticism of the control variables. On average, those who report depressive symptoms in childhood tend to report levels of Neuroticism 4.7 points higher than those who did not experience depressive symptoms in childhood and adolescence. In addition, in models 3-5, there was a marginally significant negative association between cognitive ability and Neuroticism ($p > .10$).

Models 2-5 estimate the association of varying forms of mobility and Neuroticism. Model 2 shows no association between any mobility and Neuroticism. On average, individuals who experience any mobility do not differ significantly from those who are nonmobile ($\beta = -.164$ SE = .253). However, when mobility is broken down into its various forms, Model 3 shows that individuals who experience “other” (or horizontal) mobility report significantly higher levels of neuroticism than their nonmobile counterparts at the $p < .05$ level ($\beta = 1.025$ SE = .517). Indeed, while this is the only finding to show support for Sorokin’s hypothesis that mobility should lead to greater mental strain, theoretically the “other mobility” variable makes little sense, and is used only to ensure that the nonmobile are retained as the reference group. Therefore, it is difficult to give a meaningful interpretation of this finding.

In addition, Model 3 lends little support to the hypothesis that mobile individuals with farm origins should experience lower levels of Neuroticism than their nonmobile counterparts. However, in model 4, once again we find evidence that mobility from farm differs significantly from other forms of upward mobility. On average, individuals who are mobile from Farm to Nonmanual occupational statuses report significantly lower levels of Neuroticism than their upwardly mobile counterparts at the $p < .01$ level ($\beta = -1.224$ SE = .393). In addition, the

coefficient for downward mobility achieves marginal significance ($p < .10$), and indicates that contrary to the hypothesis, the downwardly mobile may actually have lower levels of Neuroticism (higher emotional stability) than their upwardly mobile counterparts.

In the simplified mobility model (Model 5), the results again show evidence that those who are mobile from farm may experience psychological benefits to their mobility. After accounting for background variables and origin and destination status, on average individuals who are mobile from farm origins to nonmanual statuses report significantly lower levels of Neuroticism than do their nonmobile counterparts ($\beta = -.956$ SE = .427).

Despite the significant finding in Model 5, the coefficient for mobility from Farm to Nonmanual status does not achieve statistical significance in Model 3, the preferred and most parsimonious models according to the BIC and AIC statistics. However, substantively this is a very small difference in model fit, and overall the evidence suggests that those who are mobile from Farm to nonmanual status are in fact less Neurotic than both their nonmobile and upwardly mobile counterparts.

In addition, the results show that mobile individuals tend to most report levels of Neuroticism that most resemble those in their destination, rather than their origin social class. As a personality dimension, it is reasonable that levels of Neuroticism are more closely determined by an individuals' destination, rather than origin social status, as past research has shown that personality is "malleable" throughout young adulthood, and becomes extremely stable across midlife (Alwin, Cohen, and Newcomb 1991; Alwin and McCammon 2004).

[Table 8 about here]

Openness to Experience

Table 8 presents Diagonal Reference estimates for models investigating the association between intergenerational mobility and the “Openness to Experience” dimension of personality. Across all models, the predicted means for stayers in occupational classes largely mirror the trends shown in Table 5. Overall, those in nonmanual occupations — especially those in the Service Class and Petty Bourgeoisie — report higher levels of openness to experience than those in manual occupations (Farm, Skilled Manual, Unskilled Manual). In addition across all models Father’s education and Cognitive ability are the best predictors, and are significantly and positively associated with levels of openness ($p < .001$).

Across all models that include mobility variables, there is no evidence that mobile individuals report higher levels of Openness to Experience, and none of the mobility variables in any model approach statistical significance. Indeed, these findings show little support for Sorokin’s hypothesis that mobility leads to open-mindedness, creativity, and versatility of human behavior and psychology.

However, though the results show no evidence for “mobility effects,” across all 5 models there is convincing evidence that mobile individuals report openness to experience scores that near perfectly match their destination status. For example, Model 1 (the best-fitting model according to the AIC statistic) suggests perfect acculturation ($q=1.00$). Descriptively, this implies that individuals come to perfectly acculturate to their class of destination on the outcome of Openness to Experience. In other words, mobile individuals, on average, come to report similar levels as openness as those in their destination class. As described above, this finding is intuitive in the framework of the midlife stability model of personality.

DISCUSSION AND CONCLUSION

Social Scientists have long been interested in how the social environment shapes individual health, well-being, and personality. In this study I expand on this issue and ask how changes in social status, particularly intergenerational occupational mobility, influence individual psychology. Drawing from the work of Sorokin (1927; 1959) and the “mobility effects” literature, I use Sobel’s Diagonal Mobility models (1981; 1985) to estimate the association between mobility and psychological distress, Neuroticism and Openness to Experience. After accounting for background characteristics and origin and destination occupational status, I find little evidence for “mobility effects” insofar as they were theorized by Sorokin. In no instance were mobile individuals found to be significantly more psychologically distressed, emotionally unstable (Neuroticism), or “open to experiences” than their nonmobile counterparts. These findings are similar to those found by Marshall and Firth (1999), the only other existing study that uses Sobel’s method and psychological outcome variables.

However, while I do not find evidence for “mobility effects” as theorized by Sorokin, these findings suggest that it may be useful to consider the meaning of mobility within certain historical and social contexts. Overall, the results suggest that those with farm origins not only seem to experience psychological advantages over their nonmobile counterparts, but their counterparts who are mobile to similar positions (read, Nonmanual occupational statuses).

Understanding “Mobility Effects” in Historical and Social Context

WLS respondents with farm origins came of age, were mobile, and eventually established their careers in a unique historical period. Those with farm origins came of age in a time when structural mobility out of farm was high, as the number of farms rapidly declined in the post World War II era (Featherman and Hauser 1978; Labao and Meyer 2001). In the WLS data, out

of 433 respondents with farm origins, only 12.47% (54) went on to themselves become farmers. For the first time in history, it became a relatively rare occurrence for the sons of farmers to follow in the footsteps of their fathers (Laband and Lentz 1983).

But for those who remained farmers as their fathers did, life took a turn for the worst as the Farm Crisis of 1980 created a great deal of psychological and financial strain that was felt far into the 1990's (Armstrong and Schulman 1990; Conger and Elder 1994; Hoyt et al. 1997; Schulman and Armstrong 1989). In fact, those who remained farmers throughout the Crisis experienced a great deal more financial strain than those with farm origins who did not remain farmers (Elder and Conger 2000:26-28). Indeed, WLS respondents who report farming as their occupation tend to report higher levels of psychological distress than respondents in any other occupational category (see Table 3).

Finally, in *Children of the Land*, Elder and Conger (2000) show that those who have farm origins—those who stay on the farm, as well as those who eventually leave the farm—have significantly higher levels of self-confidence, self-esteem, and social success than nonfarm youth. According to the authors, those with farm origins grow up in communities with a high level of social capital, and learn the importance of hard work and responsibility at a very young age, providing “a resource for life” (243). Therefore, those mobile from farm origins have both an advantage over their nonmobile and their upwardly mobile counterparts, seemingly due in part to the experience of their youth. Given the historical snapshot of the WLS respondents, it makes sense that it is those with farm origins with higher paying, more stable careers —such as nonmanual occupational statuses (and to an extent, skilled manual labor statuses, seen descriptively in Table 3) — seem to experience the greatest benefits to their mobility. More research is needed to understand this seemingly cohort specific finding. Future research may

wish to compare this association across cohorts, as well as across societies at the time of the transition out of agriculture.

Perhaps most surprisingly, with the exception of mobility from farm, we find little evidence that upwardly mobile individuals differ significantly in levels of psychological distress from their downwardly mobile counterparts (Model 4). WLS respondents are from a relatively small birth cohort where the prospects of upward mobility were high compared to the baby boom cohorts who followed (Easterlin 1987). Indeed, upwardly mobile individuals are more prevalent than nonmobile individuals in the WLS sample (see Table 1). In this context, downward mobility occurs in an “age of affluence,” — where upward mobility is high — which has been hypothesized to lead to a great deal of psychological distress and self-blame among the downwardly mobile as they compare their trajectories to their successful upwardly mobile counterparts (Newman 1999). While this study finds no support for this perspective, it is possible that the weight of destination versus origin class may vary depending on type of mobility. For instance it is plausible to believe that downwardly mobile individuals may exhibit levels of distress that resemble those from their origin rather than destination, while upwardly mobile individuals may exhibit levels of distress that more closely resemble their destination rather than origin. Future research on the psychological impact of mobility should consider this “asymmetrical” or “status maximization” model, and calculate separate origin and destination weights by mobility type (for examples of this in research on political preference see Breen 2001; Clifford and Heath 1993; De Graaf et al. 1995; Newman 1999). Such research would provide further information on how mobility may shape individual psychology.

Mobility Effects or Acculturation?

A major advantage of Diagonal mobility models are the item weights (q), which serve as estimates of the degree of acculturation—or how much an individual resembles those in their destination, rather than origin status. On two of three outcomes — Neuroticism and Openness to Experience — the results show support for the *acculturation hypothesis*, as the destination weight tended to be greater than the origin weight on these outcomes. However, the models show relatively equal weight of origin and destination status on the outcome of psychological distress.

These results are perhaps best understood through the life-course and life-span development perspectives on the stability of personality over the life-span. As dimensions of personality, Neuroticism and Openness to Experience are best conceptualized as personality *traits* rather than *states*, as they remain largely stable throughout adulthood and tend to follow the midlife stability model of personality. According to this perspective, personality is malleable and open to change throughout early adulthood, and becomes increasingly stable across midlife. (Alwin 1997; Alwin, Cohen, and Newcomb 1991; Alwin and McCammon 2004). Similarly, other authors understand the midlife stability model in terms of the stability in environment, arguing that personality is largely stable across midlife because individuals are in much more stable environments at that life stage (Ardelt 2000; Mortimer, Finch, and Kumka 1982). Psychological distress, however, is more *state-like* and situational (MacLean and Hauser 2000) and presumably less stable over the life-span.

Based on this perspective, it follows that the two personality traits — Neuroticism and Openness to Experience — are seemingly most determined by one's current, rather than one's origin social status, while Psychological Distress is equally related to origin and destination status across the models. If personality traits are stable largely because of social environment, and we consider occupational status as a stable form of an environment, then it follows that

mobile individuals would acculturate to their destination status on a given outcome after leaving their prior social status. This is especially so on the outcome of Openness to Experience, which in many models suggests perfect acculturation ($q=1$) to the destination class. Indeed, life-span development scholars agree “social positions carry a burden of custom and rules that prescribe behavior for their occupants. These prescriptions mold and reformulate behavior and personality as the person learns to perform and moves through sequences of positions” (Featherman 1983:8).

Finally, the outcome of Openness to Experience provides a perfect example of the necessity of controlling for origin and destination status. The importance of using diagonal mobility models that properly account for origin and destination social status is especially demonstrated in the bivariate correlations. For example, Table 2 shows the correlations for mobility and Openness to Experience. In general these correlations show that the upwardly mobile report higher levels of openness than do those who are not ($r = .059$), and the downwardly mobile tend to report lower levels of openness than those who are not ($r = -.071$). In other words, before accounting for origin and destination, it appears as if upward mobility may be associated with higher levels of openness, as theorized by Sorokin, while downward mobility is associated with lower levels of openness. However, the results show this is not the case. Rather, these correlations better reflect an *acculturation effect* (as shown in Table 7) — meaning mobile individuals tend to resemble those in their destination social status on their level of openness. Logically, this implies that upwardly mobile individuals from social statuses with lower average levels of openness (i.e. Manual social statuses), come to resemble those in their destination status, who have higher overall mean levels of openness (i.e. Nonmanual social statuses). The reverse could be said for downwardly mobile individuals.

Limitations

While a primary goal of this paper was to improve on past mobility effects research by utilizing the appropriate methodology, controlling for background characteristics, testing outcomes that remained untested, and considering different forms of mobility in analysis, this paper also has limitations that need to be noted in light of the above findings.

First and foremost, the interpretation of these findings are limited to white male Wisconsin high school graduates who graduated high school in 1957. Further research is needed to better understand how these findings hold up across other, more representative data over historical time. As mentioned earlier, replication is necessary to better understand how the psychological experience of mobility may vary across cohorts (Janson and Saphire 1993). Furthermore — though the data and historical period couldn't permit it in this case — future research should include nonwhite and female respondents in the sample, in order to better understand how the experience of mobility may differ by race and gender. While future research obviously needs to consider the mobility of daughters (and how the occupations of mothers, fathers, and potential spouse contribute to such mobility), also of interest would be to examine mobility effects for those from non-traditional family structures, where the head of household is someone other than the biological father. Such research may yield interesting findings, and would intersect nicely with research on family structures and social stratification and mobility.

Secondly, missing data is an issue in these data. In addition to the sample attrition in the WLS from 1957-1993, we lose a significant amount of data due to nonresponse on our independent and dependent variables. Though the cases missing from the prior depression variable may be classified as missing completely at random (MCAR)⁶, over 700 cases were lost

⁶ Only a random sample of the respondents were administered these questions.

due to item nonresponse. Therefore, the interpretation of our results are further limited to the subset of respondents included in these analyses.

Finally, though it is necessary to control for prior depression in these models, our measure of depression is retrospective, from the 1992-1993 survey. However, this retrospective measure of depression when included in the model may yield estimates that are biased downwards. If respondents are remembering past experiences (childhood depression) in reference to more recent experiences (such as levels of current psychological distress or Neuroticism), then we may be “controlling away” some of the effect of mobility on psychological distress and Neuroticism when we control for prior depression. In other words, by controlling for a retrospective measure of mental health, prior depressive symptoms may be deflating the association between mobility and current psychological distress and Neuroticism, and therefore leading to downwardly biased or conservative estimates. (See Ross 1989; Schacter 2001 for a review of literature on consistency bias in memory recall).

Despite the limitations, this study revisits classic sociological theories and provides new evidence that shows how social mobility shapes individual psychology. Future “mobility effects” studies may consider alternate forms of mobility—such as educational, or income—as well as a broad range of behaviors and health that may be impacted by movement through the hierarchy of society. Indeed, Sorokin himself provides a range of hypotheses regarding the impact of mobility on individuals that have yet to be tested (1959:522-526), and understanding how mobility impacts individuals fits well within the project of understanding how social stratification impacts individuals in a life course perspective (Alwin and Wray 2005; Lynch and Kaplan 2000). Studies of this kind will only broaden our understanding and give us a more nuanced knowledge of the complex ways in which social stratification shapes individual experiences across the life span.

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Figure 1: 1970 Census Major Occupational Groups as Mapped onto Revised EGP Schema

<i>EGP Schema</i>		<i>1970 Major Census Occupational Groups</i>
I	Service Class: Professionals, Administrators and managers; higher-grade technicians; supervisors of non-manual workers	(1) Professional, technical and kindred (salaried); (2) Managers, officials, and proprietors (salaried);
II	Routine Non-Manual Workers: Employees in Administration and commerce; sales personnel; other rank and file service workers	(3-4) Sales workers, retail and non-retail; (5) Clerical and Kindred workers
III	Petty Bourgeoisie: Small Proprietors and Artisans, etc., with and without employees	(6) self-employed professional, technical and kindred; (7) self-employed managers, officials and proprietors
IV	Farmers: Farmers and smallholders and other self-employed workers in primary production	(8) Farmers and Farm managers
V	Skilled Manual Workers: Lower grade technicians; supervisors of manual workers; skilled manual workers	(9-11) Craftsmen, foremen, and kindred workers: manufacturing, construction, and other; (12-13) Operatives, manufacturing and other;
VI	Non-skilled workers: semi-and unskilled manual workers; Agricultural laborers and other workers in primary production	(14) Service and Private Household; (15-16) Laborers, manufacturing and other; (17) Farm laborers

Source: Erikson and Goldthorpe 1992; US Bureau of the Census

Figure 2: Operationalization of Mobility Variables

<i>Father's Occupation</i>	<i>Respondent's (Son's) Occupation</i>					
	Service Class (I)	Routine Nonmanual	Petty Bourgeoisie	Farm (IV)	Skilled Manual (V)	Unskilled Manual
Service Class (I)	X	Down	Other	Down	Down	Down
Routine Nonmanual (II)	Up	X	Up	Down	Down	Down
Petty Bourgeoisie (III)	Other	Down	X	Down	Down	Down
Farm (IV)	*	*	*	X	**	**
Skilled Manual (V)	Up	Up	Up	Up	X	Down
Unskilled Manual (VI)	Up	Up	Up	Up	Up	X

*Farm to Nonmanual Status Mobility Variable; **Farm to Manual Status Mobility Variable; X = Nonmobile
 Up = Upward Mobility; Down = Downward Mobility; Other = Other or Horizontal Mobility

Table 1: Variable Descriptive Statistics

	Mean	SD
<i>Parent's (Origin) Occupational Status (1957)</i>		
Service Class (Professionals)	.124	
Routine Non-Manual Workers	.080	
Petty Bourgeoisie	.114	
Farmers	.207	
Skilled Laborers	.403	
Unskilled Laborers	.072	
<i>Respondent's (Destination) Occupational Status (1992-1993)</i>		
Service Class (Professionals)	.404	
Routine Non-Manual Workers	.132	
Petty Bourgeoisie	.096	
Farmers	.033	
Skilled Laborers	.264	
Unskilled Laborers	.072	
<i>Outcome Variables</i>		
CES-D scale	14.94	13.96
Started Log of CES-D scale	2.75	.665
Neuroticism scale	15.22	4.77
"Openness to Experience" scale	21.54	5.01
<i>Mobility Variables</i>		
Nonmobile	.267	
Mobile (Any Mobility)	.733	
Upward Mobility	.353	
Downward Mobility	.133	
Horizontal (other) Mobility	.065	
Mobility from Farm to Nonmanual	.099	
Mobility from Farm to Manual	.082	
Nonfarm Mobility (Mobility where origins are not Farm)	.551	
<i>Controls</i>		
Early Marriage (<=20 years old) (1=married)	.096	
Cognitive Ability	102.42	14.77
Depressive Symptoms prior to 1960 (1=yes)	.004	
Lived in intact family in childhood (1=yes)	.983	
Father's Education in 1957 (in years, 0-24 years)	9.80	3.47

N=2087

Source: Wisconsin Longitudinal Study

Table 2: Bivariate Correlation Coefficients

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1) CES-D (started log)	1														
(2) Neuroticism	.434	1													
(3) Openness to Experience	-.124	-.148	1												
(4) Any Mobility (1=yes)	.016	.028	.059	1											
(5) Upward Mobility	-.007	-.016	-.071	.446	1										
(6) Downward Mobility	-.003	.018	.098	.160	-.195	-.104	1								
(7) Horizontal (other) Mobility	-.084	-.073	.052	.200	-.245	-.130	-.088	1							
(8) Mobility from Farm to Nonmanual	.009	.044	-.102	.181	-.221	-.117	-.079	-.099	1						
(9) Mobility from Farm to Manual	.034	.026	.057	.669	.666	.354	.238	-.368	-.332	1					
(10) Nonfarm Mobility	.009	.014	-.005	.006	.000	.035	-.020	-.032	.020	.014	1				
(11) Early Marriage	-.011	-.057	.238	.074	.118	-.095	.163	.026	-.143	0.13	-.041	1			
(12) Cognitive Ability in High School (IQ)	.049	.062	.004	-.015	-.030	-.002	.078	-.021	-.019	0.009	.006	.021	1		
(13) Depressed when Young (1=yes)	-.006	-.030	.166	-.099	-.116	.087	.225	-.104	-.154	0.06	-.045	.253	.019	1	
(14) Father's Education in Years	-.011	-.031	.003	-.005	-.025	.041	-.010	-.005	.000	-.001	.031	.022	-.051	.016	1
(15) Lived in Intact Family in High School (1=yes)															

Note: Boldface Coefficients significant at $p < .05$, shaded portion highlights correlation of mobility with main outcome variables

N= 2087

Source: Wisconsin Longitudinal Study

Table 3: Mean CES-D scores (logged) by Father's (1957) and Respondent's Occupational (1993) Status

<i>Father's Occupation</i>	<i>Respondent's Occupation</i>						Row Means
	Service Class (I)	Routine Nonmanual	Petty Bourgeoisie	Farm (IV)	Skilled Manual (V)	Unskilled Manual	
Service Class (I)	2.66 (155)	2.86 (28)	2.65 (36)	2.87 (04)	2.94 (25)	2.68 (11)	2.71 (259)
Routine Nonmanual (II)	2.77 (73)	2.64 (26)	2.63 (20)	0.00 (00)	2.72 (39)	2.48 (09)	2.71 (167)
Petty Bourgeoisie (III)	2.78 (100)	2.75 (34)	2.76 (43)	3.36 (02)	2.71 (45)	2.72 (13)	2.76 (237)
Farm (IV)	2.54 (131)	2.63 (46)	2.68 (30)	2.87 (54)	2.74 (143)	2.92 (29)	2.69 (433)
Skilled Manual (V)	2.80 (333)	2.84 (115)	2.71 (60)	3.17 (05)	2.83 (260)	2.67 (68)	2.80 (841)
Unskilled Manual (VI)	2.76 (52)	2.66 (26)	3.05 (11)	2.32 (03)	2.87 (38)	2.74 (20)	2.78 (150)
Column Means	2.73 (844)	2.76 (275)	2.72 (200)	2.88 (068)	2.80 (550)	2.72 (150)	

N= 2087

Numbers in Parentheses indicate number of respondents in each cell of the mobility table

Source: Wisconsin Longitudinal Study

Table 4: Mean Neuroticism scores by Father's (1957) and Respondent's Occupational (1993) Status

<i>Father's Occupation</i>	<i>Respondent's Occupation</i>						Row Means
	Service Class (I)	Routine Nonmanual	Petty Bourgeoisie	Farm (IV)	Skilled Manual (V)	Unskilled Manual	
Service Class (I)	13.94 (155)	15.32 (28)	14.67 (36)	16.50 (04)	16.32 (25)	11.91 (11)	14.37 (259)
Routine Nonmanual (II)	15.56 (73)	15.27 (26)	14.55 (20)	0.00 (00)	15.13 (39)	13.44 (09)	15.18 (167)
Petty Bourgeoisie (III)	15.86 (100)	15.74 (34)	15.44 (43)	16.00 (02)	15.60 (45)	13.54 (13)	15.59 (237)
Farm (IV)	14.03 (131)	14.46 (46)	14.33 (30)	15.20 (54)	15.69 (143)	17.07 (29)	14.99 (443)
Skilled Manual (V)	15.28 (333)	16.80 (115)	14.15 (60)	15.60 (05)	15.68 (260)	14.54 (68)	15.47 (841)
Unskilled Manual (VI)	14.29 (52)	16.04 (26)	16.54 (11)	14.67 (03)	15.24 (38)	17.25 (20)	15.40 (150)
Column Means	14.87 (844)	15.91 (275)	14.72 (200)	15.31 (068)	15.64 (550)	15.05 (150)	

N= 2087

Numbers in Parentheses indicate number of respondents in each cell of the mobility table

Source: Wisconsin Longitudinal Study

Table 5: Mean Openness to Experience scores by Father's (1957) and Respondent's Occupational (1993) Status

<i>Father's Occupation</i>	<i>Respondent's Occupation</i>						Row Means
	Service Class (I)	Routine Nonmanual	Petty Bourgeoisie	Farm (IV)	Skilled Manual (V)	Unskilled Manual	
Service Class (I)	23.43 (155)	22.75 (28)	24.61 (36)	20.25 (04)	19.28 (25)	21.27 (11)	22.98 (259)
Routine Nonmanual (II)	22.12 (73)	21.19 (26)	25.80 (20)	0.00 (00)	20.54 (39)	21.11 (09)	21.99 (167)
Petty Bourgeoisie (III)	22.95 (100)	19.85 (34)	23.16 (43)	19.00 (02)	19.98 (45)	24.38 (13)	22.03 (237)
Farm (IV)	22.57 (131)	22.24 (46)	21.33 (30)	18.33 (54)	19.59 (143)	21.00 (29)	20.83 (433)
Skilled Manual (V)	22.55 (333)	20.27 (115)	22.63 (60)	19.60 (05)	20.37 (260)	20.29 (68)	21.37 (841)
Unskilled Manual (VI)	21.12 (52)	22.19 (26)	19.54 (11)	19.00 (03)	20.39 (38)	19.55 (20)	20.75 (150)
Column Means	22.64 (844)	21.07 (275)	23.06 (200)	18.59 (068)	20.10 (550)	20.81 (150)	

N= 2087

Numbers in Parentheses indicate number of respondents in each cell of the mobility table

Source: Wisconsin Longitudinal Study

Table 6: Diagonal Reference Coefficients estimating the association of Intergenerational Mobility and Psychological Distress (CES-D)

	Model 1 <i>No Mobility</i>	Model 2 <i>Any Mobility</i>	Model 3 <i>Detailed</i>	Model 4 <i>Ref = Up</i>	Model 5 <i>Farm Mobile</i>
<i>Origin and Destination Weights</i>					
Destination (Occupational Status in 1993) Weight (q)	.318	.304	.721	.721	.455
Origin (Father's Occupational Status in 1975) Weight (1-q)	.682	.696	.279	.279	.545
<i>Mobility Variables (Nonmobile = reference group)</i>					
Any Mobility (1 = yes)		-.007 (.036)			
Nonmobile (1=yes)				-.066 (.048)	
Upward Mobility			.066 (.048)		
Downward Mobility			-.010 (.055)	-.077 (.064)	
Horizontial (Other) Mobility			.040 (.071)	-.026 (.072)	
Mobility from Farm to Nonmanual			-.156 † (.082)	-.222 *** (.066)	-.203 * (.085)
Mobility from Farm to Manual			-.039 (.067)	-.106 (.068)	-.060 (.074)
Nonfarm Mobility					.034 (.040)
<i>Predicted Means for Stayers in Occupational Classes</i>					
Service Class	2.704 *** (.171)	2.709 *** (.172)	2.701 *** (.171)	2.767 *** (.169)	2.701 *** (.172)
Routine Nonmanual	2.729 *** (.172)	2.736 *** (.175)	2.743 *** (.172)	2.809 *** (.167)	2.717 *** (.176)
Petty Bourgeoisie	2.766 *** (.171)	2.773 *** (.173)	2.710 *** (.175)	2.776 *** (.173)	2.726 *** (.176)
Farm	2.717 *** (.158)	2.723 *** (.162)	2.889 *** (.171)	2.955 *** (.174)	2.888 *** (.173)
Skilled Manual	2.852 *** (.152)	2.856 *** (.153)	2.827 *** (.154)	2.893 *** (.155)	2.826 *** (.153)
Unskilled Manual	2.791 *** (.164)	2.800 *** (.166)	2.734 *** (.169)	2.800 *** (.171)	2.726 *** (.169)
<i>Control Variables</i>					
Early Marriage	.011 (.049)	.011 (.036)	.009 (.049)	.009 (.049)	.007 (.049)
Cognitive Ability	.000 (.001)	.000 (.001)	.000 (.001)	.000 (.001)	.000 (.001)
Depressive Symptoms when Young (1=yes)	.511 * (.234)	.510 * (.234)	.492 * (.234)	.492 * (.234)	.485 * (.234)
Father's Education in 1957	.002 (.005)	.002 (.005)	.002 (.005)	.002 (.005)	.002 (.005)
Grew up in Intact Family (1=yes)	-.046 (.111)	-.046 (.111)	-.040 (.111)	-.040 (.111)	-.045 (.111)
χ^2	900.7	900.7	895.2	895.2	895.9
AIC	4194.9	4196.8	4192.2	4192.2	4189.7
BIC	-801.3	-793.7	-757.6	-757.6	-773.6
Δ BIC		-7.6	-43.7	-43.7	-27.7
Degrees of Freedom	13	14	18	18	16

Note: *** $p < .001$; ** $p < .01$; * $p < .05$; † $< .10$; Standard errors in parentheses; Sample size=2087

Table 7: Diagonal Reference Coefficients estimating the association of Intergenerational Mobility and Neuroticism scores

	Model 1 <i>No Mobility</i>	Model 2 <i>Any Mobility</i>	Model 3 <i>Detailed</i>	Model 4 <i>Ref = Up</i>	Model 5 <i>Farm Mobile</i>
<i>Origin and Destination Weights</i>					
Destination (Occupational Status in 1993) Weight (q)	.487	.556	.976	.976	.945
Origin (Father's Occupational Status in 1975) Weight (1-q)	.513	.444	.024	.024	.055
<i>Mobility Variables (Nonmobile = reference group)</i>					
Any Mobility (1 = yes)		.164 (.253)			
Nonmobile (1=yes)				-.518 (.387)	
Upward Mobility			.518 (.387)		
Downward Mobility			-.440 (.411)	-.958 † (.552)	
Horizonta (Other) Mobility			1.025 * (.517)	.506 (.572)	
Mobility from Farm to Nonmanual			-.706 (.453)	-1.224 ** (.393)	-.956 * (.427)
Mobility from Farm to Manual			.389 (.453)	-.129 (.590)	.595 (.435)
Nonfarm Mobility					.231 (.276)
<i>Predicted Means for Stayers in Occupational Classes</i>					
Service Class	16.744 *** (1.229)	16.703 *** (1.236)	17.029 *** (1.213)	17.547 *** (1.186)	17.504 *** (1.183)
Routine Nonmanual	18.338 *** (1.231)	18.201 *** (1.257)	18.259 *** (1.246)	18.777 *** (1.153)	18.506 *** (1.207)
Petty Bourgeoisie	17.575 *** (1.243)	17.301 *** (1.265)	16.827 *** (1.239)	17.345 *** (1.229)	17.343 *** (1.213)
Farm	17.116 *** (1.148)	16.948 *** (1.180)	17.508 *** (1.217)	18.027 *** (1.234)	17.646 *** (1.211)
Skilled Manual	18.008 *** (1.099)	17.925 *** (1.107)	17.868 *** (1.106)	18.387 *** (1.115)	17.885 *** (1.100)
Unskilled Manual	17.374 *** (1.189)	17.146 *** (1.215)	17.548 *** (1.175)	18.066 *** (1.207)	17.216 *** (1.178)
<i>Control Variables</i>					
Early Marriage	.118 (.354)	.113 (.354)	.122 (.353)	.122 (.353)	.121 (.354)
Cognitive Ability	-.012 (.008)	-.012 (.008)	-.014 † (.008)	-.014 † (.008)	-.014 † (.008)
Depressive Symptoms when Young (1=yes)	4.765 ** (1.686)	4.799 ** (1.687)	4.561 ** (1.687)	4.561 ** (1.687)	4.711 ** (1.684)
Father's Education in 1957	-.006 (.034)	-.004 (.034)	-.011 (.034)	-.108 (.034)	-.023 (.032)
Grew up in Intact Family (1=yes)	-1.048 (.801)	-1.029 (.801)	-.892 (.799)	-.892 (.799)	-.966 (.800)
χ^2	46770.0	46762.0	46396.0	46396.0	46545.0
AIC	12438.0	12440.0	12431.0	12431.0	12434.0
BIC	-46670.6	-46655.0	-46258.4	-46258.4	-46422.7
Δ BIC		-15.6	-412.2	-412.2	-247.9
Degrees of Freedom	13	14	18	18	16

Note: *** $p < .001$; ** $p < .01$; * $p < .05$; † $p < .10$; Standard errors in parentheses; Sample size=2087

Table 8: Diagonal Reference Coefficients estimating the association of Intergenerational Mobility and Openness to Experience scores

	Model 1 <i>No Mobility</i>	Model 2 <i>Any Mobility</i>	Model 3 <i>Detailed</i>	Model 4 <i>Ref = Up</i>	Model 5 <i>Farm Mobile</i>
<i>Origin and Destination Weights</i>					
Destination (Occupational Status in 1993) Weight (q)	1.000	1.000	.989	.989	1.000
Origin (Father's Occupational Status in 1975) Weight (1-q)	.000	.000	.011	.011	.000
<i>Mobility Variables (Nonmobile = reference group)</i>					
Any Mobility (1 = yes)		-.243 (.260)			
Nonmobile (1=yes)				.118 (.372)	
Upward Mobility			-.118 (.372)		
Downward Mobility			-.488 (.436)	-.369 (.572)	
Horizontal (Other) Mobility			.106 (.527)	.225 (.566)	
Mobility from Farm to Nonmanual			.343 (.752)	.462 (.577)	.217 (.433)
Mobility from Farm to Manual			-.536 (.614)	-.417 (.574)	-.477 (.441)
Nonfarm Mobility					-.229 (.277)
<i>Predicted Means for Stayers in Occupational Classes</i>					
Service Class	15.573 *** (1.145)	15.816 *** (1.174)	15.483 *** (1.227)	15.365 *** (.120)	15.648 *** (1.181)
Routine Nonmanual	14.314 *** (1.139)	14.576 *** (1.173)	14.327 *** (1.210)	14.211 *** (1.155)	14.405 *** (1.180)
Petty Bourgeoisie	16.043 *** (1.171)	16.280 *** (1.198)	15.938 *** (1.259)	15.820 *** (1.248)	16.113 *** (1.205)
Farm	12.390 *** (1.210)	12.473 *** (1.213)	12.349 *** (1.230)	12.230 *** (1.233)	12.398 *** (1.215)
Skilled Manual	13.891 *** (1.088)	14.055 *** (1.102)	14.045 *** (1.115)	13.927 *** (1.123)	14.038 *** (1.106)
Unskilled Manual	14.575 *** (1.136)	14.824 *** (1.167)	14.918 *** (1.204)	14.799 *** (1.243)	14.478 *** (1.168)
<i>Control Variables</i>					
Early Marriage	.243 (.356)	.248 (.356)	.256 (.356)	.256 (.356)	.256 (.356)
Cognitive Ability	.054 *** (.008)	.054 *** (.008)	.054 *** (.008)	.054 *** (.008)	.054 *** (.008)
Depressive Symptoms when Young (1=yes)	.092 (1.695)	.085 (1.695)	.035 (1.701)	.035 (1.701)	.104 (1.695)
Father's Education in 1957	.127 *** (.031)	.122 *** (.032)	.130 *** (.035)	.130 *** (.035)	.127 *** (.032)
Grew up in Intact Family (1=yes)	-.059 (.805)	-.057 (.805)	-.042 (.806)	-.042 (.806)	-.070 (.805)
χ^2	47275.0	47255.0	47190.0	47190.0	47213.0
AIC	12459.0	12440.0	12431.0	12431.0	12462.0
BIC	-47183.3	-47155.6	-47052.4	-47052.4	-47098.4
Δ BIC		-27.4	-130.6	-130.6	-84.7
Degrees of Freedom	12	13	18	18	15

Note: *** $p < .001$; ** $p < .01$; * $p < .05$; † $p < .10$; Standard errors in parentheses; Sample size=2087

