

Does intergenerational mobility shape psychological distress? Sorokin revisited

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Abstract

Drawing from Sorokin's hypothesis that socially mobile individuals are at greater risk of experiencing psychological distress than their non-mobile counterparts, we investigate whether intergenerational occupational mobility influences psychological distress, as measured by the Center for Epidemiologic Studies Depression (CES-D) scale. Using data for men from the Wisconsin Longitudinal Study (WLS) and Sobel's Diagonal Mobility Models, we find little evidence for Sorokin's hypothesis; mobile individuals are no more likely to be psychologically distressed than their non-mobile counterparts. In fact, one group of mobile men – those who left their farming origins – are actually *less* distressed than the sons who remain as farmers and non-mobile men in higher-ranked social classes. We speculate that this reflects the fact that farming became very arduous during the late 20th century and these mobile sons of farmers appreciate their improved life chances. Our findings suggest that the association between mobility and psychological distress varies across specific class backgrounds and is contingent upon the broader social and economic context.

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1. Introduction

The 20th century witnessed one of the greatest economic transformations in history. In the course of sixty years, the United States went from having nearly one-third of its workforce employed as farmers in the early 1900s, to less than 5% in 1970 (Labao & Meyer, 2001). At a societal-level, this macro-economic shift contributed to increased urbanization and decreased fertility, while, at the individual-level, new and more varied career opportunities became available (Lipset & Bendix,

1964; Notestein, 1945). As people took advantage of these opportunities, rates of intergenerational mobility increased dramatically, especially in the movement out of farming. Yet these opportunities and increased rates of mobility were not universally celebrated; some scholars even expressed apprehension. Among them, Sorokin (1959) argued that the social mobility was detrimental to people's mental health. Social mobility, he claimed, led mobile individuals to experience permanent psychological strain and distress because they would never feel comfortable in their current social milieu Sorokin (1959: 509).

Sorokin's *dissociative hypothesis* spurred a research agenda that attempted to determine if mobility diminishes mental health and well-being (Ellis & Lane, 1967; Hollingshead, Ellis, & Kirby, 1954; Jackson & Curtis,

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1972; Kessin, 1971). But the investigation of this topic stalled because of a methodological challenge that prevented the estimation of mobility effects. Class mobility is linearly dependent on both class of origin and destination (as the simple difference between the two) (Blalock, 1967; Hope, 1975; Sobel, 1981, 1985). As a result, research to-date has not been able to disentangle the independent effects of origin social class, destination social class, and social mobility for mental health. Thus, Sorokin's hypothesis remains largely unanswered. This paper revisits this question, and investigates Sorokin's hypothesis for a cohort who came of age during the structural shift away from farming and, given the times, we pay particular attention to the sons of farmers themselves. We use a novel approach to overcome this methodological problem and data from the Wisconsin Longitudinal Study (WLS). By examining the association between intergenerational mobility and psychological distress, we provide insight on this classic sociological question.

2. Sorokin's legacy: the psychological impact of mobility

According to Sorokin, social mobility places individuals in unfamiliar social environments with new norms, values and expected behaviors that mobile individuals have difficulty adjusting to (1959).¹ Further, Sorokin argued that this discomfort continues as long as people remain in their destination social class because its nuances would remain foreign and incongruent with their identity (Sorokin, 1959: 509–510). As a result, Sorokin predicted that mobile individuals would be at greater risk of experiencing psychological distress relative to those who are non-mobile.

This hypothesis remains largely unanswered. Researchers have sought to test Sorokin's "dissociative hypothesis" (Ellis & Lane, 1967) but past research was hindered because there is insufficient information to estimate the independent effects of experiencing a particular social class during childhood, experiencing a particular social class during adulthood, and the effect of transitioning between them. This identification problem (similar to that of age–period–cohort models) requires scholars to make an assumption to calculate these estimates, but none of the prior approaches were

deemed satisfactory (Hendrickx, De Graaf, Lammers, & Ultee, 1993; Sobel, 1981, 1985). For example, Hope's Diamond model (1975) broke the linear dependence between prior class, current class, and mobility by making the assumption that prior and current class could be combined into a single continuum of status. This assumption was later shown to be untenable (House, 1978; Sobel, 1981, 1985). As a result, findings from prior research cannot be leveraged to evaluate Sorokin's hypothesis.

We provide a test of the dissociative hypothesis with a newer method that allows us to isolate the effects of mobility. The Diagonal Mobility Model² (Sobel, 1981, 1985) achieves identification by assuming that one can derive estimates of the importance of one's origin and destination social class by comparing the well-being of mobile individuals to the well-being of non-mobile members of the classes they left and the classes they joined. This comparison is reasonable and theoretically grounded given that non-mobile members make up the "core of the class" (De Graaf, Nieuwbeerta, & Heath, 1995) and bear the characteristics of that class more than anyone else (Sorokin, 1959: 509–510). We also improve upon past research by including several control variables to ensure that the association between mobility and distress is not influenced by spurious and recent stressful life events (Holmes & Rahe, 1967). Following Sorokin's predictions, we present the following hypothesis:

Hypothesis 1. Mobile individuals will experience significantly more distress than their non-mobile counterparts.

2.1. Intergenerational mobility in the "Happy Days" cohort

Men born in the late 1930s and early 1940s came of age during this substantial economic transformation (Duncan, 1965; Featherman & Hauser, 1978; Labao & Meyer, 2001) and, as a result, had high expectations for economic success and upward mobility (Riesman, 1961). The newly created white-collar jobs were seen as the ultimate marker of economic success and prestige (Mills, 1953). Furthermore, the relatively small size of their cohort limited their experience of downward mobility as they faced little school crowding or labor market competition (Easterlin, 1978, 1987). These shifts led to tremendous upward mobility, particularly out of farming. Given that Sorokin's dissociative hypothesis was developed in response to the Industrial Revolution, we explore

¹ Indeed, this sentiment was predated by Durkheim (1951: 248–252), who worried that mobility would weaken society's "moral restraint," allowing the passions and desires of mobile individuals to run wild, resulting in psychological distress, social isolation, and anomic suicide.

² The models are also referred to as the Diagonal Reference Model.

whether the movement out of farming is particularly important for psychological distress within this cohort. Furthermore, given the logic of Sorokin's hypothesis, mobility out of farming may be especially consequential for psychological distress because farming is quite culturally and socially distinct from other social classes (Elder & Conger, 2000). Thus, men who leave their farming origins may have more difficulty adjusting to the class they join than men from other class backgrounds. In sum, given the unique experiences of this cohort, we examine the association between mobility out of farming and men's psychological distress. Our second hypothesis is as follows:

Hypothesis 2. Men mobile out of farming will differ in their psychological distress relative to all other mobile and non-mobile men given the historical and structural context.

2.2. *Competing views*

Prior research offers two competing hypotheses to Sorokin's dissociative hypothesis. First, the "compensatory hypothesis" (Horney, 1937) assumes the opposite causal ordering between psychological distress and mobility. According to this hypothesis, early psychological distress leads to social mobility as people seek to escape their early environments. Instead of testing this hypothesis, we seek to minimize the challenges it poses to our test of Sorokin's arguments. Specifically, we control for sons' adolescent psychological distress, cognitive ability, parents' family structure, father's education, and whether the son married at an early age.

The second competing hypothesis in the literature, which we do test, is termed the "acculturation hypothesis" (Blau, 1956) and argues that mobility is neither a cause nor consequence of psychological distress. Instead, socially mobile individuals come to experience similar levels of mental health as those who share their destination social class. In contrast to Sorokin's dissociative hypothesis, it posits that mobile individuals easily cope with the transition from one social class to another and have little trouble assimilating into their destination social class. Under the acculturation hypothesis, social mobility is unrelated to psychological distress.

The acculturation hypothesis has found support in previous research (Bean, Bonjean, & Burton, 1973; Blau, 1956; Jackson & Curtis, 1972; Wegner, 1973).³ Yet these conclusions are tentative because these studies could not

disentangle the effects of mobility from the effects of origin and destination social class. This linear dependence problem and its consequences for model identification undermines the empirical support for the acculturation hypothesis (Hope, 1975; Sobel, 1981). Thus more research is needed with a method that can separately identify these effects, as we can with the Diagonal Mobility Model. Our third hypothesis restates the acculturation hypothesis.

Hypothesis 3. Mobile individuals' psychological distress more closely resembles the distress of those in their destination social class, rather than their origin social class.

This study revisits and updates a classic sociological question regarding the effects of social mobility on psychological distress. We improve on past work and provide an identified test of Sorokin's classic hypothesis for a cohort who came of age during the structural transition away from farming in the United States.

3. Data and methods

Data are drawn from the Wisconsin Longitudinal Study (WLS), a prospective cohort study of 10,317 randomly selected men and women who graduated high school in Wisconsin in 1957. We utilize data from the 1957, 1975, and 1992 follow-up surveys. Respondents were approximately 18 years of age in 1957, and 52 years of age during the 1992–93 wave of data collection. We make several restrictions to arrive at our final sample. Akin to classic mobility studies (e.g. Blau & Duncan, 1967; Featherman & Hauser, 1978), we restrict our analysis to the intergenerational mobility of men.⁴ We also exclude men whose fathers were not the head of household in 1957 ($n=415$). The final analytic sample is 4577 men.

To address missing data, we use multiple imputation, which replaces missing values with predictions based on associations observed in the sample and generates several imputed data sets (Acock, 2005; Rubin, 1987). We impute six data sets using all waves of the WLS data

³ Some studies find an association between mobility and mental health (see Ellis and Lane, 1967; Hollingshead et al., 1954; Kessin,

1971; Turner, 1968). These results, however, are undermined by the same identification problems.

⁴ Though 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. Mothers in the late 1950s were much less likely to be employed, such that their social status of women was largely determined by their marital status, relative to mothers today (see Goldthorpe, 1983 for further discussion).

and the “ICE” program in Stata 9.0 (Royston, 2005). We appropriately combine the empirical results across all imputed data samples, accounting for variation within and between imputed data sets to arrive at unbiased standard errors of the coefficients’ estimates (Rubin, 1987). In supplementary analyses based on a listwise deletion sample, the results are not substantively different from those presented here.⁵

3.1. Measures

Psychological distress. We assess psychological distress using the WLS-modified 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 (Roberts & Vernon, 1983; Weissman, Sholomskas, Pottenger, Prusoff, & Locke, 1977). It assesses four key dimensions of psychological distress, including depressive affect, positive affect, somatic symptoms, and interpersonal problems. In the 1992–93 mail survey, respondents were asked how many days in the past week (0–7 days) they experienced any of 20 depressive symptoms (for list see WLS Handbook, 2006: 137–138). The responses to all of the items are summed to create the CES-D scale ($\alpha = .88$; range = 0–110). Due to the scale’s right skewness, we transform it using a started log (i.e. $\ln(\text{CES-D}) + k$, where k is a constant) (MacLean & Hauser, 2000; Miech & Shanahan, 2000) with the “lnskew0” command in STATA. With a constant (k) of 4.59, the started log of the CES-D scale has an approximately normal distribution, ranging from 1.52 to 4.74 with a mean of 2.75 and a standard deviation of 0.66.

In preliminary research, we also modeled whether social mobility predicted son’s neuroticism and self-acceptance. We do not present those results here because we cannot guard against problems of reverse causality (or the “compensatory hypothesis”), whereby neuroticism or self-acceptance predicts later social mobility. The WLS does not have adolescent measures of neuroticism or self-acceptance. In addition, neuroticism is conceptualized and measured in the WLS as an immovable personality trait (versus a changeable state) (Ardelt, 2000: 393; Gelissen & de Graaf, 2006). Despite these

limitations, we find the substantive conclusions for these additional outcomes to be similar to that found for psychological distress (results available upon request).

Origin and destination social class. Origin class is based on the son’s 1975 retrospective report of his father’s occupation when the son was a senior in high school (1957). Destination class is based on the son’s primary occupation (or last held job) in 1992–93, when he was approximately 52 years old. Thus, we measure destination class when sons are relatively close in age to their fathers’ age when the father’s occupation was measured ($\bar{x} = 49.3$). The WLS classify fathers’ and sons’ occupations using the 1970 Major Census Occupational Groups (U.S. Bureau of the Census, 1984; Featherman & Stevens, 1982). To create origin and destination classes, we use a collapsed, six-class version of the Erikson–Goldthorpe–Portocarero (EGP) class schema (Erikson & Goldthorpe, 1992: Appendix Table 2; Erikson, Goldthorpe, & Portocarero, 1979). The six classes are Service (labeled as class I), Routine Nonmanual (II), Petty Bourgeoisie (III), Farm (IV), Skilled Manual (V), and Unskilled Manual (VI).

Intergenerational mobility. We construct seven mobility measures to characterize a variety of forms of mobility. First, “any mobility” is coded 1 for those who were mobile (i.e. their occupation differed from their father’s) and 0 for those who were not. We also distinguish different types of mobility and create dummy variables indicating upward mobility, downward mobility, or horizontal (i.e., other) mobility. We characterize 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 Service Class. Similarly, we classify individuals as downwardly mobile if they fall from nonmanual to manual occupations or from positions with greater authority or autonomy to positions with less (i.e. Service Class to Routine Nonmanual). Horizontal mobility occurs when sons are mobile but it is not clear whether the move is an upward or downward shift (i.e. Service Class to Petty Bourgeoisie). We also construct two dummy variables to characterize mobility out of farming: one for movement into a nonmanual occupation and the second for movement into manual occupations. Finally, we create a variable to capture any mobility that does not involve men from farming backgrounds to better isolate and test the differences for men who leave farming.

Control variables. To better test Sorokin’s dissociative hypothesis (i.e., mobility causes distress) and guard against reverse causality as described by the compensatory hypothesis (i.e., early life distress causes

⁵ Much of our missingness is MCAR (Missing Completely At Random). The WLS randomly sampled 80% of respondents to ask about their depression history in the 1992–1993 survey wave. Psychological distress, origin social class, and destination social class are imputed for 30%, 8.6%, and 1% of cases, respectively. Missing data on other covariates ranged from 0% to 30%.

mobility), we control for adolescent depression, measured as a dummy variable equal to 1 if the son reports having had a bout of depression lasting two weeks or more during his teen years in the 1992–93 survey wave (Carr, 1997). We also control for other early life characteristics that could influence the son's likelihood of social mobility: high school cognitive ability, teen marriage, parents' family structure, and fathers' education. High school cognitive ability is measured using the Henmon–Nelson test, which the WLS mapped onto IQ scores (WLS Handbook, 2006). Teen marriage is a dummy variable equal to 1 if the son reported getting married before his 20th birthday. Parents' family structure is measured with a dummy variable indicating whether the son lived with both his mother and father during childhood (1 = yes), while father's education is measured as years of schooling when the son was a teen.

We also control for several characteristics that may render the mobility–distress association spurious. First, we control for whether the respondent is unemployed in 1992–93 given that unemployment is associated with psychological distress (Kessler, Turner, & House, 1989). We also control for four major stressful life events experienced within the past five years to ensure that the association between mobility and distress is not influenced by other recent events: divorce or separation, death of a spouse, death of a child, and illness or injury. These events were selected because they require the highest degree of social readjustment (Holmes & Rahe, 1967).

3.2. Analytic strategy

We utilize Sobel's (1981, 1985) Diagonal Mobility Model because other approaches (i.e. linear additive (Blalock, 1967) and square additive (Duncan, 1966) models) cannot simultaneously estimate the effects of origin status, destination status, and mobility (Hope, 1975; Sobel, 1981). Further, the Diagonal Mobility Model is the only method used in modern mobility effects research (e.g. Breen, 2001; Marshall & Firth, 1999; Nieuwebeerta, De Graaf, & Ultee, 2000). The models are estimated using the Diagonal Reference (DREF) subcommand of the General Nonlinear Models (GNM) package in R (Turner & Firth, 2007).

The Diagonal Mobility Model derives estimates of the effects of origin and destination social class from the observed differences in mean levels of psychological distress across social classes among those who are non-mobile (represented in the diagonal of the mobility table). Specifically, the model generates a parameter called the “destination weight” (q) that ranges from 0 to 1; higher values indicate that mobile individuals' psy-

chological well-being resembles their destination social class, whereas smaller values indicate greater resemblance to their origin social class (Sobel, 1981, 1985). For example, if the destination weight equals 0.8, we would conclude that mobile individuals resemble those in their destination class more than those in their origin class. The reverse (i.e., $1 - q$) is referred to as the “origin weight.” Mobility effects are then estimated as the systematic, independent effects of the class change itself, after accounting for relative importance of their destination social class (versus origin class) and the average levels of distress for each social class.

The functional form of Diagonal Mobility Models is shown below:

$$Y_{ij} = q\mu_i + (1 - q)\mu_j + \beta_m MOB + \beta_k X_k + e_{ij} \quad (1)$$

$$q + (1 - q) = 1 \quad (2)$$

where Y is psychological distress, q is the point estimate of the destination weight, μ_i is the estimated mean psychological distress for non-mobile members of their destination class i , $(1 - q)$ is a point estimate of the origin weight, μ_j is the estimated mean distress for non-mobile members of their origin class j ,⁶ MOB is a dummy variable indicating a type of mobility, β_m is the estimated effect of mobility on psychological distress, X_k is a vector of k control variables, β_k is a vector of k coefficients for the control variables' estimated effects on psychological distress, and e_{ij} is the error term. As noted above and in Eq. (2), q and $1 - q$ are bounded between 0 and 1.

We estimate four models to test our hypotheses. Model 1 examines the association between any mobility and psychological distress. Model 2 examines the associations between detailed measures of mobility -upward, downward, other, and mobility from farming- and psychological distress. Model 3 is identical to Model 2, but changes the reference group to the upwardly mobile instead of the non-mobile. Finally, Model 4 collapses all non-farm mobility together and includes indicators for mobility out of farming to further test whether those who left farming are unique. We include all control variables in all models⁷ and use Bayesian Information Criterion (BIC) (Raftery, 1995) and Akaike Information Criterion (AIC) (Akaike, 1974) to assess model fit.

⁶ It is important to note that μ_j and μ_k are estimated means, *not* sample means. For more discussion see Sobel (1981: 899).

⁷ The results are substantively similar in models run without control variables, but the significant mobility effects found in Models 1–3 were slightly larger in the models without controls (results are not shown, but available upon request).

Table 1
Variable descriptive statistics.

	Mean	SD
<i>Parent's (origin) occupational status (1957)</i>		
Service Class (Professionals)	.13	
Routine Non-Manual Workers	.08	
Petty Bourgeoisie	.11	
Farmers	.19	
Skilled Laborers	.40	
Unskilled Laborers	.09	
<i>Respondent's (destination) occupational status (1992–1993)</i>		
Service Class (Professionals)	.36	
Routine Non-Manual Workers	.13	
Petty Bourgeoisie	.10	
Farmers	.03	
Skilled Laborers	.28	
Unskilled Laborers	.10	
<i>Outcome variables</i>		
Started Log of CES-D scale	2.69	.72
<i>Mobility variables (27% nonmobile)</i>		
Any Mobility	.73	
Upward Mobility	.34	
Downward Mobility	.16	
Horizontal (other) Mobility	.06	
Mobility from Farm to Nonmanual	.08	
Mobility from Farm to Manual	.09	
Nonfarm Mobility (Mobility where origins are not Farm)	.56	
<i>Controls</i>		
Early Marriage (≤ 20 years old) (1 = married)	.10	
Cognitive Ability	100.82	15.30
Depressive Symptoms prior to 1960 (1 = yes)	.00	
Lived in intact family in childhood (1 = yes)	.98	
Father's Education in 1957 (in years, 0–24 years)	9.74	3.41
Currently Unemployed (1 = yes)	.08	
<i>Recent life events (past 5 years)</i>		
Death of Spouse	.01	
Death of Child	.01	
Divorce or Separation	.03	
Major Illness or Injury	.31	

N = 4557. Source: Wisconsin Longitudinal Study.

4. Results

We begin with the descriptive statistics for our sample. As shown in Table 1, the respondents' fathers were most likely to be skilled manual laborers (40%) or farmers (19.4%) in 1957. In contrast, only 3.5% of respondents (i.e., the sons) reported farming as their primary occupation, while over 50% of respondents were employed in nonmanual occupations.

Seventy-three percent of the sons are in a different social class than their fathers, and nearly half of all mobile individuals (47%) are upwardly mobile. As expected, downward mobility in this sample is much

less prevalent (at 21% of mobile individuals). Mobility out of farming for this sample is high with only 13% of the sons of farmers themselves becoming farmers. Of sons with farm origins, 42% were mobile into nonmanual occupations, while 44% were mobile into manual occupations. Mobility out of farming accounts for 23% of the intergenerational mobility in the sample.

4.1. Bivariate results

Table 2 shows the mean values of logged psychological distress for each cell of the mobility table. The shaded boxes in the table show the mean value of psychological distress for non-mobile members in each class. Among the non-mobile, farmers report the highest distress (2.79), followed by Petty Bourgeoisie (2.76), Skilled Manual laborers (2.74), Unskilled Manual Laborers (2.67), Service Class (2.64) and Routine Nonmanual workers (2.56). Interestingly, men who leave farming tend to report lower levels of psychological distress than their non-mobile counterparts. For example, the sons of farmers who are mobile into the Service Class report lower distress than non-mobile farmers and non-mobile members of the Service Class. Furthermore, sons of farmers who are mobile into Skilled Manual positions report lower distress than non-mobile members in both Farm and Skilled Manual classes. These results provide preliminary evidence of salutary effects of leaving farming.

4.2. Multivariate results

Table 3 shows four Diagonal Mobility Models predicting logged psychological distress. Model 1 provides a simple, initial test of Sorokin's dissociative hypothesis (Hypothesis 1) that any mobility is associated with higher psychological distress. Yet the evidence does not support his argument. After accounting for origin, destination, and the control variables, mobile men were no more likely to report distress than their non-mobile counterparts.

We next test whether particular forms of mobility matter, including whether mobility out of farming is unique or if the direction of mobility is important. Model 2 includes detailed mobility variables and finds that, after accounting for origin and destination class and the control variables, the sons of farmers who move to nonmanual positions report significantly lower psychological distress than non-mobile men ($\beta = -.167$, $SE = .074$). The estimated effect is large and comparable in magnitude to the effect of unemployment, divorce or separation, and injury. No other forms of mobility

Table 2
Mean CES-D scores (logged) by father's (1957) and respondent's occupational (1993) status.

Father's occupation	Respondent's occupation						Row Means
	Service Class (I)	Routine Nonmanual (II)	Petty Bourgeoisie (III)	Farm (IV)	Skilled Manual (V)	Unskilled Manual (VI)	
Service Class (I)	2.64 (304)	2.64 (72)	2.58 (79)	2.89 (10)	2.79 (68)	2.60 (49)	2.65 (581)
Routine Nonmanual (II)	2.68 (143)	2.56 (52)	2.62 (44)	3.11 (02)	2.65 (73)	2.55 (53)	2.63 (366)
Petty Bourgeoisie (III)	2.78 (198)	2.75 (68)	2.76 (103)	3.23 (06)	2.77 (95)	2.69 (41)	2.77 (511)
Farm (IV)	2.49 (223)	2.62 (89)	2.63 (63)	2.79 (118)	2.67 (316)	2.69 (80)	2.63 (889)
Skilled Manual (V)	2.68 (639)	2.72 (251)	2.65 (156)	2.96 (13)	2.74 (600)	2.71 (179)	2.71 (1838)
Unskilled Manual (VI)	2.58 (120)	2.57 (50)	2.94 (26)	2.89 (10)	2.74 (122)	2.67 (65)	2.67 (392)
Column Means	2.65 (1627)	2.67 (582)	2.67 (470)	2.84 (159)	2.72 (1274)	2.67 (466)	

N = 4577

Numbers in Parentheses indicate number of respondents in each cell of the mobility table. *Source*: Wisconsin Longitudinal Study.

are associated with psychological distress.⁸ For an additional comparison, Model 3 changes the reference group to men who are upwardly mobile. Though identical to Model 2, these findings show that the sons of farmers who are mobile into nonmanual occupations are also less distressed than other upwardly mobile men ($\beta = -.163$, $SE = .068$) when origin, destination, and the control variables are accounted for. Therefore, the upwardly mobile sons of farmers report less distress than non-mobile men and other upwardly mobile men. Together, the simple and detailed mobility results lead us to reject **Hypothesis 1**; social mobility is not detrimental for men's psychological distress. In fact, there appears to be a beneficial effect of mobility out of farming.

To better test that the experiences of those mobile out of farming are unique (**Hypothesis 2**), Model 4 simplifies the model by collapsing all forms of non-farm mobility together and including indicators for mobility from farming into nonmanual occupations and mobility from farming into manual occupations. It is the best fitting model according to the AIC fit statistic and supports **Hypothesis 2**. After accounting for origin and destination effects, the sons of farmers who join nonmanual occupations report significantly lower levels of psychological distress than their non-mobile counterparts

($\beta = -.176$; $SE = .075$). Again, the magnitude of this significant effect is large and comparable to the effects of divorce or separation, unemployment, and major illness or injury. The coefficient for mobility from farming into manual occupations is nonsignificant but in the expected direction ($\beta = -.093$; $SE = .075$).

Finally, we evaluate the acculturation hypothesis (**Hypothesis 3**) by examining the origin and destination weights in our best fitting model, Model 4. The origin and destination weights provide weak to no support for the acculturation hypothesis. In Model 4 the origin weight (.580) is marginally larger than the destination weight (.420), but neither the origin nor the destination coefficient is significantly different from .5. This suggests that origin and destination contribute equally to psychological distress.⁹

5. Discussion

As social mobility became more common during the Industrial Revolution (Lipset & Bendix, 1964), Sorokin (1959) predicted that mobility would lead to perma-

⁸ Even when mobility out of farming is collapsed into the measures of upward and downward mobility, we find no significant differences in psychological distress according to the direction of mobility (results not shown, but available upon request).

⁹ As noted in Table 3, significance tests are calculated to denote differences from 0 to .5. Both origin and destination weights are different from zero, but we think the statistical comparison of each weight to .5 is more compelling because it provides us with a clear test of the relative effect of origin versus destination status. A value of .5 indicates equal origin and destination weight. The *t* statistic for the significance test was calculated with the following equation: $(\beta - .5)/\sigma$.

Table 3

Diagonal reference coefficients estimating the association of mobility and logged CES-D score.

	Model 1	Model 2	Model 3	Model 4
<i>Origin and destination weights</i>				
Destination (Occupational Status in 1993) (<i>q</i>)	.282 (.272)	.467 [†] (.278)	.467 [†] (.278)	.420 [†] (.257)
Origin (Father's Occupational Status in 1957) ($1 - q$)	.718 ^{**} (.272)	.533 [*] (.278)	.533 [*] (.278)	.580 [*] (.257)
<i>Mobility variables</i>				
Any Mobility (1 = yes)	-.028 (.035)	–	–	–
Nonmobile (1 = yes)	(ref)	(ref)	.000 (.040)	(ref)
Upward Mobility	–	.000 (.040)	(ref)	–
Downward Mobility	–	.001 (.055)	.004 (.040)	–
Mobility from Farm to Nonmanual	–	-.167 [*] (.074)	-.163 ^{**} (.068)	-.176 ^{**} (.075)
Mobility from Farm to Manual	–	-.088 (.072)	-.085 (.073)	-.093 (.074)
Horizontal (Other) Mobility	–	.044 (.074)	.047 (.063)	–
Nonfarm Mobility	–	–	–	.003 (.041)
<i>Early life controls</i>				
Depressive Symptoms when Young (1 = yes)	.540 [*] (.232)	.534 [*] (.234)	.534 [*] (.234)	.537 [*] (.233)
Cognitive Ability	-.002 ^{**} (.001)	-.002 ^{**} (.001)	-.002 ^{**} (.001)	-.002 ^{**} (.001)
Father's Education in 1957	.001 (.004)	.001 (.004)	.001 (.004)	.001 (.004)
Grew up in Intact Family (1 = yes)	.053 (.109)	.054 (.109)	.054 (.109)	.054 (.110)
Early Marriage	-.023 (.050)	-.025 (.051)	-.025 (.051)	-.026 (.051)
<i>Later life controls</i>				
Child death in past 5 years	.107 (.128)	.110 (.127)	.110 (.127)	.110 (.128)
Spousal death in past 5 years	.425 ^{**} (.155)	.423 ^{**} (.154)	.423 ^{**} (.154)	.422 ^{**} (.155)
Divorce or Separation in past 5 years	.178 [*] (.085)	.174 [*] (.084)	.174 [*] (.084)	.175 [*] (.084)
Major Injury/Illness in past 5 years	.161 ^{***} (.028)	.160 ^{***} (.028)	.160 ^{***} (.028)	.160 ^{***} (.028)
Unemployed in 1992–93	.182 ^{***} (.057)	.186 ^{***} (.057)	.186 ^{***} (.057)	.185 ^{***} (.057)
AIC	9896	9891	9891	9888
BIC	-2156	-2114	-2114	-2132
Degrees of Freedom	20	23	23	21

Note: Standard errors in parentheses; Sample Size = 4557.

*** $p \leq .001$.

** $p \leq .01$.

* $p \leq .05$.

† $p \leq 10$.

nent psychological distress. Unfortunately, research on Sorokin's dissociative hypothesis has been stunted due to a methodological puzzle that has prevented scholars from simultaneously identifying the effects of origin social class, destination social class, and mobility. This study uses a method that solves this puzzle and provides a formal test of Sorokin's classic hypothesis.

We find no evidence that mobility increases psychological distress. One might speculate, however, that this is because the predicted distress fades over time.¹⁰ To assess this potential explanation, we estimate two types of supplemental models using a listwise deletion sample. First we re-estimate our basic model (Model 1) and our best-fitting model (Model 4), adding an additional control variable indicating the number of years spent in the destination social class. With this addition, however, the coefficients for any social mobility (Model 1) and mobility out of farming (Model 4) are unchanged – both in terms of their magnitude and statistical significance. Second, we add an interaction term between social mobility and years in their destination class to our basic and best-fitting models. Again, the results do not change our substantive conclusions. The interaction term is never statistically significant and its inclusion leads to a loss in model fit (results not shown but available upon request). Therefore, we do not find support for Sorokin's dissociative hypothesis regardless of whether social mobility effects are modeled as permanent or diminishing over time.

We are left to speculate about why we do not find evidence for Sorokin's prediction. One possibility is that the growth of individualism during the Industrial Revolution made undertaking a personal career search normative and, thus, less distressing than Sorokin predicted. Another possibility is that social mobility itself could have induced changes that minimize distress. The increased rates of social mobility could have blurred and weakened the cultural boundaries between social classes (Kingston, 2000) as each class became more populated with people from diverse backgrounds (De Graaf et al., 1995). This would have, thus, eliminated the very distinctions and discomforts that Sorokin expected to be distressing.

We also find limited evidence for the acculturation hypothesis that asserts that mobile individuals come to resemble those in their destination class. Instead, our results suggest that origin and destination class influence psychological distress equally. This finding dovetails with recent research demonstrating that both past and

present social class shapes mental health (Luo & Waite, 2005).

Although we find no support for the two classic hypotheses, our findings indicate that the effect of mobility can be particular to the types of changes involved and associated with lower psychological distress. The upwardly mobile sons of farmers experience significantly less psychological distress than their non-mobile counterparts in farming and higher-status destination social classes. We see two potential explanations.

First, this finding could capture real differences in the social experiences of the sons of farmers, reflective of the historical period in which their mobility occurred. Not only were the sons who left farming upwardly mobile, they also avoided significant late-20th century changes that made farming an extremely arduous occupation. These changes and challenges culminated in the Farm Crisis of the 1980s, wherein farmers experienced tremendous financial pressure and, as a result, psychological distress as they struggled to make ends meet (Armstrong & Schulman, 1990; Conger & Elder, 1994). In this historical context, the non-mobile sons of farmers had significantly higher levels of psychological distress than the sons of farmers who left farming. Furthermore, the Farm Crisis may have poignantly revealed what life could have been like for the sons who left farming. The importance of such salutary comparisons is confirmed by recent research showing that one's relative income (versus absolute income) is associated with greater happiness (Firebaugh & Schroeder, 2009; Firebaugh & Tach, *in press*) and research showing that farmers' psychological well-being is higher upon making social comparisons to those who are worse off (Swisher, Elder, & Conger, 1998). The non-mobile sons in the upper classes probably did not make self-appraisals relative to the struggling farmers and, thus, likely took for granted the better conditions of their social class. In sum, the socially mobile sons of farmers escaped the hardships experienced by their childhood peers and the gulf between farming and the idealized, coveted white collar professions likely made this type of mobility so positive.¹¹ Future research is needed to confirm whether these observed patterns hold in other social and historical contexts: Is the effect of mobility on psychological distress contingent upon the social and historical context and does mobility out of dwindling occupations consistently advantage those who escape them?

The alternative explanation is that unmeasured differences between those who were mobile out of farming and

¹⁰ We thank an anonymous reviewer for this suggestion.

¹¹ We thank an anonymous reviewer for making this point.

those who remained in farming may underlie the results. In other words, social selection into social mobility may explain this pattern. Although we try to control for numerous factors predictive of social mobility, including whether they were depressed during adolescence, we cannot rule out this possibility.

This study is not without limitations. Findings are limited to white Wisconsin men who graduated high school in 1957. Findings are also limited by our measures of mental health. Although results are similar when we use alternative indicators of the “mental strain” or “mental disease” that approximate Sorokin’s descriptions (see Sorokin, 1959: 510–515), we do not fully pursue them because we lack parallel early life measures to rule out the “compensatory hypothesis” whereby poor mental health predicts mobility. Future research utilizing other data sources should explore how mobility affects other dimensions of mental health to provide a more complete test of the dissociative hypothesis. Additionally, our measure of adolescent depression is a retrospective report. This may, however, actually lead to more conservative estimates of the association between mobility and current psychological distress if respondents incorrectly remember past depression in light of more recent experiences (Schacter, 2001).

Despite limitations, this study revisits a classic sociological theory and incorporates recent methodological advances to provide new evidence about how intergenerational social mobility shapes psychological distress. By revisiting this classic, but recently ignored topic, we find an interesting twist. For men in this cohort, social mobility is not psychologically distressing; it actually benefits men who left their farming origins.

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References

- Acock, A. C. (2005). Working with missing values. *Journal of Marriage and the Family*, 67, 1012–1028.
- Akaike, H. (1974). A new look at the statistical model identification. *IEEE Transactions on Automatic Control*, 19(6), 716–723.
- Ardelt, M. (2000). Still stable after all these years? Personality stability theory revisited. *Social Psychology Quarterly*, 63(4), 692–405.
- Armstrong, P. S., & Schulman, M. D. (1990). Financial strain and depression among farm operators: The role of perceived economic hardship and personal control. *Rural Sociology*, 55, 475–493.
- Bean, F., Bonjean, C. M., & Burton, M. G. (1973). Intergenerational occupational mobility and alienation. *Social Forces*, 52, 63–73.
- Blalock, H. M. (1967). Status inconsistency, social mobility, status integration and structural effects. *American Sociological Review*, 32(5), 790–801.
- Blau, P. M. (1956). Social mobility and interpersonal relations. *American Sociological Review*, 21, 290–295.
- Blau, P. M., & Duncan, O. D. (1967). *The American occupational structure*. New York: The Free Press.
- Breen, R. (2001). Social mobility and constitutional and political preferences in Northern Ireland. *British Journal of Sociology*, 52(4), 621–645.
- Carr, D. (1997). The fulfillment of career dreams at midlife: Does it matter for women’s mental health? *Journal of Health and Social Behavior*, 38(4), 331–344.
- U.S. Bureau of the Census (U.S.B.O.T.). (1984). Part II. Population census concepts public use samples of basic records from the 1970 census: Description and technical documentation. Washington, DC.
- Conger, R. D., & Elder, G. H. J. (1994). *Families in troubled times: Adapting to change in rural America*. New York: Aldine de Gruyter.
- De Graaf, N. D., Nieuwebeerta, P., & Heath, A. (1995). Class mobility and political preferences—Individual and contextual effects. *American Journal of Sociology*, 100(4), 997–1027.
- Duncan, O. D. (1965). The trend of occupational mobility in the United States. *American Sociological Review*, 30(4), 491–498.
- Duncan, O. D. (1966). Methodological issues in the analysis of social mobility. In N. J. Smelser, & S. M. Lipset (Eds.), *Social structure and mobility in economic development* (2nd ed., pp. 51–96). New Brunswick, NJ: Transaction.
- Durkheim, E. (1951). In J. A. Spaulding, & G. Simpson (Eds.), *Suicide: A study in sociology*. New York: The Free Press.
- Easterlin, R. A. (1978). What will 1984 be like? Socioeconomic implications of recent twists in age structure. *Demography*, 15(4), 397–432.
- Easterlin, R. A. (1987). *Birth and fortune: The impact of numbers on personal welfare*. Chicago: University of Chicago Press.
- Elder, G., & Conger, R. (2000). *Children of the land: Adversity and success in rural America*. Chicago: University of Chicago Press.
- Ellis, R., & Lane, C. (1967). Social mobility and social isolation: A test of Sorokin’s dissociative hypothesis. *American Sociological Review*, 32(2), 237–253.
- Erikson, R., & Goldthorpe, J. H. (1992). *The constant flux: A study of class mobility in industrial societies*. Oxford: Oxford University Press.
- Erikson, R., Goldthorpe, J. H., & Portocarero, L. (1979). Intergenerational class mobility in three western European societies:

- England, France and Sweden. *British Journal of Sociology*, 30(4), 415–441.
- Featherman, D. L., & Hauser, R. M. (1978). *Opportunity and change*. New York: Academic Press.
- Featherman, D. L., & Stevens, G. (1982). A revised socioeconomic index of occupational status: Application in analysis of sex differences in attainment. In M. G. Powers (Ed.), *AAAS Selected Symposium 81 Measures of Socioeconomic Status: Current Issues* Westview, Boulder.
- Firebaugh, G., & Schroeder, M. (2009). Does your neighbor's income affect your happiness? *American Journal of Sociology*, 115(3), 805–831.
- Firebaugh, G., & Tach, L. (in press). Income, age, and happiness in America. In: P. V. Marsden (Ed.), *Social trends in the United States, 1972–2006: Evidence from the general social survey*. Princeton, NJ: Princeton University Press.
- Gelissen, J., & de Graaf, P. M. (2006). Personality, social background, and occupational career success. *Social Science Research*, 35, 702–726.
- Goldthorpe, J. H. (1983). Women and class analysis: In defence of the conventional view. *Sociology*, 17, 465–488.
- Hendrickx, J., De Graaf, N. D., Lammers, J., & Ultee, W. (1993). Models for status-inconsistency and mobility—A comparison of the approaches by hope and Sobel with the mainstream square additive-model. *Quality & Quantity*, 27(4), 335–352.
- Hollingshead, A., Ellis, R., & Kirby, E. (1954). Social mobility and mental illness. *American Sociological Review*, 19, 577–584.
- Holmes, T. H., & Rahe, R. H. (1967). The social readjustment rating scale. *Journal of Psychosomatic Research*, 11, 213–218.
- Hope, K. (1975). Models of status inconsistency and social mobility effects. *American Sociological Review*, 40(3), 322–343.
- Horney, K. (1937). *The neurotic personality of our time*. New York: Norton.
- House, J. S. (1978). Facets and flaws of Hope's diamond model. *American Sociological Review*, 43(3), 439–442.
- Jackson, E. F., & Curtis, R. F. (1972). Effects of vertical mobility and status inconsistency: A body of negative evidence. *American Sociological Review*, 37, 701–713.
- Kessin, K. (1971). Social and psychological consequences of intergenerational occupational mobility. *American Journal of Sociology*, 77, 1–18.
- Kessler, R. C., Turner, J. B., & House, J. S. (1989). Unemployment, reemployment, and emotional functioning in a community sample. *American Sociological Review*, 54(4), 648–657.
- Kingston, P. (2000). *The classless society*. Stanford University Press.
- Labao, L., & Meyer, K. (2001). The great agricultural transition: Crisis, change, and social consequences of twentieth century US Farming. *Annual Review of Sociology*, 27, 103–124.
- Lipset, S. M., & Bendix, R. (1964). *Social mobility in industrial society*. Berkeley: University of California Press.
- Luo, Y., & Waite, L. (2005). The impact of childhood and adult SES on physical, mental, and cognitive well-being in later life. *Journals of Gerontology, Series B*, 60B(2), S93–S101.
- MacLean, A., & Hauser, R. M. (2000). Socioeconomic Status and Depression Among Adult Siblings. Center for Demography and Ecology Working Paper Series (CDE Working Paper No. 2000-04). University of Wisconsin-Madison: Madison.
- Marshall, G., & Firth, D. (1999). Social mobility and personal satisfaction: Evidence from ten countries. *British Journal of Sociology*, 50(1), 28–48.
- Miech, R. A., & Shanahan, M. (2000). Socioeconomic status and depression over the life course. *Journal of Health and Social Behavior*, 41(2), 162–176.
- Mills, C. W. (1953). *White collar: The American middle classes*. New York: Oxford University Press.
- Nieuwebeerta, P., De Graaf, N. D., & Ultee, W. (2000). The effects of class mobility on class voting in post-war western industrialized countries. *European Sociological Review*, 16(4), 327–348.
- Notestein, F. W. (1945). Population—The long view. In T. W. Schultz (Ed.), *Food for the world*. Chicago: Chicago University Press.
- Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*, 1, 385–401.
- Raftery, A. E. (1995). Bayesian model selection in social research. *Sociological Methodology*, 25, 111–163.
- Riesman, D. (1961). *The lonely crowd: A study of the changing American character*. New Haven: Yale University Press.
- Roberts, R. E., & Vernon, S. W. (1983). The center for epidemiologic studies depression scale: Its use in a community sample. *American Journal of Psychiatry*, 140, 41–46.
- Royston, P. (2005). Multiple imputation of missing values: Update. *The Stata Journal*, 5(2), 1–14.
- Rubin, D. (1987). *Multiple imputation for non-response in surveys*. New York: Wiley.
- Schacter, D. (2001). *The seven sins of memory: How the mind forgets and remembers*. Boston: Houghton-Mifflin.
- Sobel, M. E. (1981). Diagonal mobility models: A substantively motivated class of designs for the analysis of mobility effects. *American Sociological Review*, 46(6), 893–906.
- Sobel, M. E. (1985). Social mobility and fertility revisited: Some new models for the analysis of the mobility effects hypothesis. *American Sociological Review*, 50(5), 699–712.
- Sorokin, P. A. (1959). *Social and cultural mobility* (2nd ed.). Glencoe, IL: Free Press.
- Swisher, R. R., Elder, G. H. J., & Conger, R. (1998). The long arm of the farm: How an occupation structures exposure and vulnerability to stressors across role domains. *Journal of Health and Social Behavior*, 39, 72–89.
- Turner, H., & Firth, D. (2007). *GNM package in R, version 0.9-2*. Warwick: University of Warwick.
- Turner, R. J. (1968). Social mobility and schizophrenia. *Journal of Health and Social Behavior*, 9, 194–201.
- WLS Handbook. (2006). *Preliminary Wisconsin Longitudinal Study Handbook*. Madison: University of Wisconsin-Madison.
- Wegner, E. (1973). The effects of upward mobility: A study of working-status college students. *Sociology of Education*, 46, 263–279.
- Weissman, M. M., Sholomskas, D., Pottenger, M., Prusoff, B. A., & Locke, B. Z. (1977). Assessing depressive symptoms in five psychiatric populations: A validation study. *Journal of Epidemiology*, 106, 203–214.

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