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ABSTRACT

Data from the National Longitudinal Study of the High School Class of 1972 (NLS) including the 1976 follow-up were used to examine the effects of interrupting or delaying school attendance on the eventual educational attainment of white male students. Background variables include socioeconomic and other family characteristics. Achievement test scores, grade point average, and age-grade retardation were also included in the study. The criterion for the study was projected educational attainment at four and a half years after high school graduation. Path analysis was used to study the relationships among the 18 variables. The best predictors of educational attainment were educational aspiration, ability as indicated by test scores, occupational aspiration, and high school grade point average in that order. In this sample of 3300 students, 76 percent obtained some post-high school education. Of this group, 16 percent delayed their entry into post high school education, 15 percent interrupted their post high school education, and 16 percent attended other than two or four year colleges. It was concluded that delaying or interrupting post-secondary education did not handicap eventual educational attainment, and neither did delayed high school graduation. (CTM)

DISCONTINUITIES IN SCHOOLING AND EDUCATIONAL ATTAINMENT

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DISCONTINUITIES IN SCHOOLING AND EDUCATIONAL ATTAINMENT

The process of status attainment in the United States is by now well understood. The seminal work of Blau and Duncan (1967) showed that about one-third of the variation in occupational status could be explained by a small set of predictor variables, the most important effect coming from respondent's educational attainment. The decade since Blau and Duncan's (1967) report has seen a large number of similar analyses extending and modifying the basic model of the process of achievement. The most important of these include Duncan, Featherman and Duncan (1972), Sewell and Hauser (1975), Hauser and Featherman (1977), and Featherman and Hauser (1978).

While a great deal of attention has been given to occupational achievement, educational attainment has also been a major focus of inquiry. Education is not only an important event in the process of occupational placement, it is equally one of the more important outcomes of the process of achievement. Major inquiries into the process of educational attainment, such as Hauser (1971), Sewell and Hauser (1975), Sewell, Hauser and Featherman (1976), and others, reveal that nearly half of the variation in educational attainment can be explained by such variables as parental education, father's occupation, respondent's intelligence, grades, curricular placement, educational and occupational aspirations, and the like.

Analyses such as those referenced above measure the influence of events, but Beverly Duncan (Duncan, Featherman and Duncan, 1972: 224) has proposed that the timing of events in the life cycle can be as critical for the individual as the events themselves. Demographers have long recognized the

importance of cohorts, and it is to Beverly Duncan's credit that she recognized the implications not only of achieving educational advantages, but achieving them in concert with the rest of the members of an individual's cohort. Prompted by this proposition, Featherman and Carter (1976) included measures of discontinuity in a model of socioeconomic achievement, and undertook to identify causal antecedents of discontinuities in schooling, and their impact on educational and socioeconomic achievements. They identified three kinds of discontinuities in schooling: age-grade retardation, delaying entry into college following high school graduation, and once college was attended, interrupting college for a period of at least six months.

The findings of Featherman and Carter (1976) did not support Beverly Duncan's conclusion that "elements of the family's structure and status which are conducive to high educational attainment are also conducive to continuity in schooling" (Duncan, Featherman and Duncan, 1972: 219). The Featherman and Carter sample, however, unlike the OCG data, eliminated those who had dropped out of high school prior to age 17. The finding by Duncan, Featherman and Duncan (1972) that there was a moderate association between discontinuity and diminished occupational status attainment was supported. Featherman and Carter (1976: 158) concluded that discontinuities in schooling produce attenuated attainments because our society normally processes age-specific cohorts; failure to retain membership in a cohort as it is processed into the labor market handicaps men vis-a-vis their former associates.

There have been several other examinations of educational discontinuities. Eckland (1964; 1965) analyzed male enrollees in the early 1950s at two universities, and concluded that college dropouts who return to graduate

do not differ significantly on family background variables from those who graduate after continuous enrollment. Karweit (1977) analyzed a national sample of black and white men from the Retrospective Life History (RLS) data collected in 1968. She concluded that there was no association between family background and resumption of schooling after labor force entry for either black or white men.

Other studies (Coleman, et al., 1972; Ornstein, 1976) have dealt with the consequences of discontinuities and socioeconomic returns for investments in education after labor force entry. Both Coleman, et al. (1972) and Ornstein (1976) analyzed data from the RLS. Coleman, et al. (1972) concluded that educational activity between first job and later job was the most important intervening event in explaining increased job status. Other intervening variables were household changes, migration, and occupational ability (i.e., part time jobs, unemployment, military experience, and the like). Ornstein (1976) assessed the effects of actual educational attainment rather than educational activity, and concluded that attainment levels increased very little with resumption of educational activity. He found further that changes in educational attainment after labor force entry were inconsequential for wage and status change.

In an in-depth study of variables important to college access, Bowers, et al. (1977) identified delayed access as one of three types (immediate, delayed, and retained), thus providing some information on what has been referred to above as delayed entry. The Bowers study used a national sample from the National Longitudinal Study of the High School Class of 1972 (NLS) conducted by the National Center for Education Statistics. Using entry information from the first followup survey conducted in late 1973, the

Bowers study conducted separate analyses for the three types of access using no post-secondary education as the reference category. They concluded that the most important predictors of delayed entry were also the most important predictors of immediate entry.

Although Bowers's (1977) study provides in-depth information on the discontinuity of delay, it does not answer the questions posed by Featherman and Carter (1976). The NLS data used by Bowers does, however, lend itself to a comprehensive analysis of discontinuities. Although Bowers was able only to follow high school seniors through the first followup, subsequent followups in October 1974 and October 1976 allow the identification of those who interrupt as well as delay. These followups also allow a more thorough analysis of age-grade retardation. There is, however, one major limitation of the NLS study. Because the NLS followups span only 4½ years, the major dependent variable is limited to projected educational attainment, a variable which includes education obtained 4½ years after high school graduation plus any additional education expected.

The research reported in this paper provides a comprehensive study of discontinuities through the use of all NLS data now available. Using the achievement model of Featherman and Carter (1976: 139) this research extends Featherman and Carter's results to a national sample of U.S. white males. Slight modifications in the NLS sampling procedures and variable definitions prevent us from calling our analysis a replication of Featherman and Carter. It is, however, a restudy of the same basic process of educational attainment.

The model we are estimating is shown in Figure 1, which shows the variables of interest in their assumed order of causal priority (from left

to right). In this block-recursive model (see Wolfle, forthcoming), there are six major blocks of variables: socioeconomic background, educability and age-grade retardation, aspirations for achievement, post-secondary attendance, post-high school discontinuities and duration of education, and educational attainment. All variables in one block are assumed to have causal effects on all variables in subsequent blocks. Within each block, the straight arrows represent an assumed causal ordering from one variable to another. Curved arrows denote correlations between variables; correlations imply no causal priorities.

THE DATA

The data for this analysis came from the National Longitudinal Study of the High School Class of 1972 (NLS). In order to increase the comparability of our results to those of Featherman and Carter (1976), we restricted our analysis to approximately 3300 white males. (We are also analyzing the causes and effects of educational discontinuities for blacks and women, but the results reported here are restricted to white males.) The NLS data were gathered on students sampled within selected schools; the complex design is described in detail in Levinsohn, et al. (1978).

The correlations among the variables used in our analysis are shown in Table 1. The values of these correlations are within the range of values reported in previous research, although in some instances they differ slightly from those reported by Featherman and Carter (1976). Among the background variables, for example, the correlation between father's occupation and father's education was found to be higher in our study (.55) than in Featherman and Carter's (.46); however, those between father's education and mother's education, and between father's occupation and

mother's education were much closer in value (.37 versus .32, and .53 versus .55, respectively). As in the Featherman and Carter study, all three of these status indicators were negatively related to the number of siblings, rural residence, and farm background, and these latter three variables were positively related to each other. While 64 percent of the Featherman and Carter sample of 17 year old white male 1957 high school students from Lenawee, Michigan, were from rural backgrounds, only 25 percent of the NLS sample reported backgrounds characterized as rural. Nineteen percent of the Featherman and Carter sample had fathers in farming occupations, while only seven percent of our sample reported farm backgrounds. The correlation between rural residence and farm background was .36, compared to a value of .35 in the Featherman and Carter study.

Description of Variables

Whenever possible, we have defined the variables in the same manner as in the Featherman and Carter (1976) study. In our study, father's occupation (FAOCP) was measured by the Duncan (1961) socioeconomic index as revised by Hauser and Featherman (1977) to correspond to the 1970 census occupation code. Father's education (FAED) and mother's education (MAED) were scaled in actual years of schooling. Rural residence (RURES) was coded "1" if the respondent's description of his home location was rural or farming; otherwise the variable was coded "0". Farm background (FRMBKG) was also dichotomously coded "1" if the father's occupation was identified as farmer, farm manager, farm foreman, or farm laborer; but was coded "0" otherwise. The number of siblings (SIBS) was recorded as the actual number of brothers and sisters.

Three variables were included in the block measuring educability and age-grade retardation. Mental ability (ABILITY) was calculated from a battery

of tests administered to the respondents in the spring of 1972. The variable was operationally defined as the sum of the subscale scores for reading, letter groups, vocabulary, and mathematics. Grade point average (GPA) was scored on a scale from 1 to 15, representing GPA's from F(1) to A(15). Age-grade retardation (AGRTD) measures the first educational discontinuity in our analysis. Our definition differs slightly from that of Featherman and Carter (1976: 138). Their sample was composed of a birth cohort; if by the age of 17 their responcents had not attained grades 11 or 12, they were coded "1" on a dichotomous scale. The NLS sample is composed of a cohort of high school seniors in 1972. Thus, we have coded respondents "1" on our dichotomous scale who were seniors in 1972 but who were born between 1950 and 1952; if they were born after 1952, they were coded "0".

Two aspiration variables were included. Educational aspirations (EASP) was based on the respondents' plans for post-secondary education. They received a "0" if they planned no further education; a "1" for two or fewer years planned; a "2" for four years; and a "3" if they planned to attend graduate school. Occupational aspirations (OASP) was measured on the Duncan socioeconomic index scale. The respondents were asked in their senior year to indicate the kind of work they would like to do.

Post-secondary education (POST HS) was codec "1" if the respondent obtained any post-high school education between June 1972 and October 1976, and was coded "0" otherwise. This variable was not included in Featherman and Carter's (1976) analysis, but its exclusion was, we believe, a mistake. Featherman and Carter included in their analysis not only people who went on to post-secondary institutions, but also those who did not. Thus, their measures of the effects of discontinuities were measured against those who

ended their educations with high school graduation. By including a dichotomous variable measuring post-secondary school attendance, we have been able to measure the effects of discontinuities between those who delayed and interrupted their post-secondary educations, and those who attended such institutions without either delays or interruptions. This is, we believe, the comparison of primary substantive interest. As a result of including this variable, the analyses performed on variables in subsequent blocks in the model were restricted to those people coded "1" on the variable, post-secondary education.

Four variables were included in the block measuring discontinuities and duration of education. Delay (DELAY) was coded "1" if the respondent had not entered a post-secondary program in October 1972, but had entered one by October of 1973, 1974, 1975, or 1976; otherwise the respondent received a code of "0". Because the analysis at this point includes only those attending a post-secondary institution, "1" indicates a delayed entry, and "0" indicates an immediate entry. Interruption (INTERRUPT) was coded "1" if the student was entered in a post-secondary program in October of one of the years following high school graduation, was not entered in October of at least one subsequent year, but had re-entered in at least one subsequent October. (To determine if the effects of these discontinuity variables were additive or interactive, an interaction term was computed as the product of DELAY and INTERRUPT. The resultant variable (D & I) has the value "1" if the respondent both delayed and interrupted; "0" otherwise. The variable, duration of education (DURED), was measured as the number of years elapsed between high school graduation (1972) and the last year enrolled in any kind of post-secondary program.

Both here and in Featherman and Carter's (1976: 148) analysis, the purpose of including this variable was to discover what affects the extension of education; then to estimate the efficiency of schooling; that is, the effect of duration of education on level of educational achievement. Obviously, duration of education and educational attainment will be confounded (the correlation is .53), but it is also clear that how long someone attends school is not the same as the level they attain. The fourth variable in this block was the type of post-secondary institution (TYPE) which the respondent attended; it was coded "1" if the type of post-secondary school was a two or four year college or university, and was coded "0" if it was a vocational, trade, or business program.

Finally, educational attainment, or more accurately, projected educational attainment (PEDATTN), was measured in actual years of post-secondary education expected by the respondent approximately 4½ years after high school graduation.

RESULTS

Educability

Our results of the regressions of block two variables on block one variables, and where appropriate on other variables within block two, are shown in Table 2. The standardized, or path, coefficients are shown in the upper panel of the table, while the metric coefficients, intercepts, coefficients of determination, and in parentheses the standard errors, are shown in the lower panel. Coefficients whose absolute values exceed about 2½ times their standard errors are asterisked as statistically significant ($\alpha = .01$). Following Alwin and Hauser (1975), we report both

the final, fully specified regression equations, as well as the reduced-form equations. Comparison of the coefficients from one equation to another shows the magnitude of indirect causal effects.

We need not dwell on interpretations of all of the coefficients. When we regressed mental ability on the block one variables, all of them proved to be statistically significant. In Featherman and Carter's (1976: 142) analysis only mother's education and the number of siblings were significant, but in making this comparison it should be noted that our sample size was ten times that of theirs. Examining the size of the metric regression coefficients, nearly all of them approach in magnitude those of the previous analysis. There is, however, one exception. The effect of farm background in our analysis was positive and significant, while Featherman and Carter (1976: 142) report a negative effect, albeit statistically indistinguishable from zero. Except to note the different proportions of our respondents with farm backgrounds, we can shed no light on this difference.

Also like Featherman and Carter (1976: 142), we find the most important influence on grade point average to be mental ability. However, we find that the block one, socioeconomic variables have practically no influence on grade point average once mental ability is controlled; this result more nearly approaches the previous findings of Sewell and Hauser (1975: 97) than Featherman and Carter.

Age-Grade Retardation

Featherman and Carter (1976: 143) reported that the explanation of age-grade retardation was unresponsive to the factors included in their model. The same is true of our data; the coefficient of determination is

a mere .05. The most important predictor of age-grade retardation in our analysis was low mental ability, which contrasts to Featherman and Carter's finding that age-grade retardation was determined primarily by the effect of poor academic performance. Moreover, the effect of mental ability was almost entirely a direct causal effect; only ten percent of the effect of mental ability could be said to occur indirectly through the intervening variable, grade point average. Both sets of data, however, show no direct effects of block one variables on age-grade retardation, once mental ability and grade point average are controlled.

Aspirations for Achievement

Featherman and Carter (1976: 143) hypothesized that age-grade retardation would have a negative effect upon goals for education and occupational status. In the event they found these effects to be negative but statistically insignificant. In consideration of their findings, we hypothesized that the effects of age-grade retardation would be negative and significant, albeit small in absolute value. As much as anything, we based this expectation on the larger sample size incorporated into our analysis. We were wrong. Examination of the regression results shown in Table 3 reveal that the effects of age-grade retardation on goals for education and occupational status were negligibly small. We must conclude age-grade retardation is not a factor in the development of achievement aspirations.

In most other cases, the coefficients in Table 3 are enough like those of Featherman and Carter (1976: 145) not to warrant a prolonged comparison Substantive conclusions would hardly change. Yet the effects of mental ability and grade point average vary between our data and their's. They found the net effects of grade point average to be more important than

mental ability; we find the opposite. We hasten to point out, however, that the ways in which these variables were measured varies between the two studies, and that both studies found both mental ability and grade point average to be significant causal effects of the two aspiration variables.

Post-Secondary Attendance

When the dichotomous variable measuring the simple fact of post-secondary attendance was regressed on variables in the preceding three blocks, our hypothesized effects were generally confirmed. All the coefficients (which are not shown here) were statistically significant, save those for father's occupation and mother's education (whose zero-order effects were mediated largely through mental ability and the two aspiration variables). The effect of age-grade retardation was negative and significant, but small. Students who were twenty years of age or over when they graduated from high school in 1972 were about ten percent less likely to attend a post-secondary institution than were those who graduated on time from high school.

Post-High School Discontinuities and Duration of Education

The analysis now considers only those respondents who actually attended post-secondary institutions. The respondents in this analysis numbered approximately 2700.

First, let us consider the two post-high school discontinuities, delay of entry, and interruption of attendance. Based on expectations from Beverly Duncan's analysis of the OCG data, Featherman and Carter (1976: 146) hypothesized that the sibling variable would have a positive effect upon the discontinuity variables, while all the other socioeconomic variables in block one would negatively affect discontinuity. In fact, they found no statistically

significant relationships between block one variables and delay; and for interruption, while the regression was significant, the only significant regression coefficient (mother's education) was in the opposite direction than hypothesized. Based on these results, we continue to hypothesize negative effects (except for siblings) from block one variables to the delay and interruption discontinuities. However, while we expect these effects to be statistically significant, we do not expect them to be very large in magnitude.

The results for delaying entry into post-secondary institutions are shown in Table 4. When the delay variable was regressed on block one variables only four percent of the variation in delay was explained. However, because of the large sample size, this value is statistically significant. The effects of father's occupation, mother's education, farm background, and the number of siblings were all significant and in the direction hypothesized. The effects of these background variables are mediated somewhat by mental ability and grade point average, both of which have negative effects on delay. That is, higher levels of ability and grades are more conducive to immediate entry into post-secondary institutions. Most of the influence of mental ability on delay occurs indirectly through grades. When all of the antecedent variables are included in the regression the results show that respondents from farm background, with fewer siblings, with higher grades, and especially with higher levels of aspirations for education, were more likely to enter into post-secondary institutions without delay.

The regression results for the interruption variable are shown in Table 5. These clearly show that whatever it is that explains why people

interrupt their post-secondary educations, we have not captured it with these variables. These results contradict those of Featherman and Carter (1976: 147), who reported coefficients of determination several times as large as ours. We believe that these different results are most likely due to the foreshortened time frame within which our respondents have experienced interruptions.

Educational Achievement

We adopt as our hypotheses the same set of expectations used by Featherman and Carter:

> From earlier research on the status attainment process . . . we expect educability to be a major impetus to higher education, mainly GPA and aspirations, especially [educational aspirations]. We hypothesize that maternal and paternal education will not affect [educational attainment] directly but only through GPA and aspirations. A small, positive socioeconomic effect from [father's occupation] is expected. We argue that farm origins and rural residence ought not affect [educational attainment] directly, after controls for siblings (Featherman, 1971) and aspirations and educability (Haller, 1968) are imposed. Our three discontinuity variables are hypothesized to affect [educational attainment] negatively, controlling for DURED and the other variables (Featherman and Carter, 1976: 150).

The results of the regressions of educational attainment (as projected 4½ years after high school) are shown in Table 6. The effects of block one variables correspond to those found by Featherman and Carter (1976: 152): father's occupation, father's education, and mother's education have positive (and significant) effects on education; rural residence and the number of siblings have negative effects; farm background has no effect one way or the other.

Both mental ability and higher grades in high school lead to greater amounts of education; but age-grade retardation has no effect at all. As

expected, aspirations for education and occupational status have positive effects on education; and educational aspirations have more influence than aspirations for occupational status.

Both delaying entry into post-secondary institutions and interruptions of attendance were expected to have negative effects on educational attainment. But in the reduced form, neither of these variables was significant; nor was there an interactive effect of the two variables.

With reference to the fully specified model, which includes the effects of delay and interruption net of the type of post-secondary institution attended, and the duration of education, it is clear that delay and interruption have attenuating effects on educational attainment. Either delaying entry into, or interrupting, one's post-secondary education will cost one about one-half year of education (as projected at the end of a 4½ year period).

All other effects more or less confirm our a priori hypotheses. The effects of the block one, socioeconomic variables have been mediated by the intervening variables. The effect of mental ability is positive, but the net effect of high school grades is negligible once duration of education is controlled. The effect of type of post-secondary institution is positive; if one attended a two or four year college or university, their projected educational attainment was nearly 1.5 years greater than those who attended technical or vocational schools. Finally, those who spent greater amounts of time in school were also those who had achieved higher levels of expected education.

CONCLUSION

Like Featherman and Carter (1976: 153), we conclude that delaying entry into a post-secondary educational institution, or interrupting one's attendance, does in fact handicap one vis-a-vis those who neither delay nor interrupt. After a 4½ year time span, those who delay or interrupt may be expected to have lost a half year of education, ceteris paribus. However, age-grade retardation does not affect the ultimate level of one's educational attainment.

These findings lend considerable support to the earlier analysis of Featherman and Carter (1976). With a large, national sample of white males, it becomes clear that we have not been able to explain very well why people delay entry into post-high school institutions, or interrupt their educations once enrolled. However, it is clear that if they do either, it costs them about a half year of education, net of their social background, ability, and especially the length of time they have been in school. That is, of course it is true that people not continuously in school in a 4½ year period after high school graduation have lower levels of educational attainment (and even expectations); but after we've controlled for that period of time (DURED), the effects of delaying or interrupting are manifested.

As further followups to the NLS are completed, we will also be able to determine what effects, if any, delaying entry, or interrupting attendance, will have on the levels of occupational status, and earned income. But these analyses will have to wait. It is simply too soon to analyze these socioeconomic outcomes.

In the meantime, we are extending the analysis of educational discontinuities to women and blacks. These analyses have already revealed some interesting contrasts in the process of educational attainment between these groups and white men. Our conclusions are as yet tentative, but apparently the effects of social background on delay are greater for black men than white men, and the most important influence on delay for white women is the level of their aspirations for education.

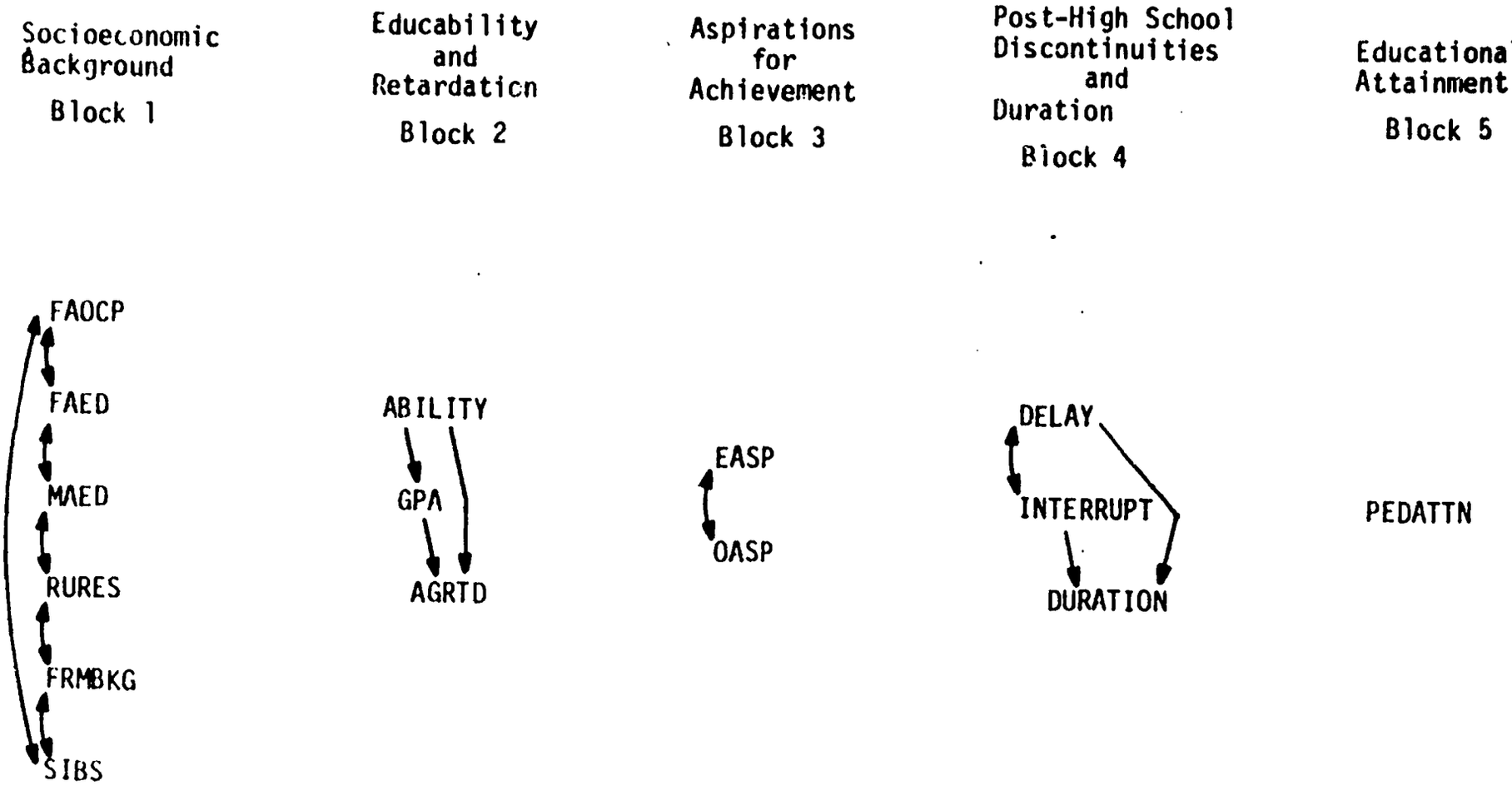

Figure 1. Causal Model Ordering Events within the Socioeconomic Life Cycle.

TABLE 1

Correlations, Means, and Standard Deviations From Data on 1972 High School Graduates Followed Through October 1976 From The National Longitudinal Study

Variables	FAOCP	FAED	MAED	RURES	FRMBKG	SIBS	ABILITY	GPA	AGRTD	EASP	OASP	POST HS	DELAY	D&I	INTERRUPT	TYPE	DURED	PEDATTN
FAOCP																		
FAED	.55																	
MAED	.37	.53																
RURES	-.26	-.21	-.13															
FRMBKG	-.31	-.13	-.07	.36														
SIBS	-.08	-.07	-.09	.10	.08													
ABILITY	.26	.32	.29	-.15	-.05	-.11												
GPA	.14	.18	.16	-.03	.02	-.10	.57											
AGRTD	-.06	-.09	-.10	.02	.01	.03	-.21	-.15										
EASP	.30	.36	.31	-.16	-.07	-.15	.52	.46	-.12									
OASP	.25	.25	.20	-.17	-.10	-.13	.40	.32	-.08	.53								
POST HS	.24	.32	.26	-.15	-.00	-.14	.40	.33	-.14	.53	.38							
DELAY	-.11	-.13	-.15	.02	-.03	.12	-.20	-.24	.08	-.34	-.21							
D&I	-.04	-.03	-.03	.01	-.03	.04	.02	-.03	-.01	-.04	-.02		.28					
INTERRUPT	.02	.01	.02	-.01	-.05	.03	.02	-.01	-.03	.01	.03		-.08	.28				
TYPE	.18	.21	.14	-.13	-.11	-.10	.37	.27	-.09	.43	.31		-.21	-.05	-.03			
DURED	.17	.21	.16	-.15	-.10	-.05	.30	.24	-.07	.28	.21		.06	.08	.22	.32		
PEDATTN	.27	.31	.26	-.17	-.09	-.12	.46	.36	-.12	.54	.38		-.22	-.04	-.00	.54	.53	
MEAN	43.61	12.02	11.88	.25	.06	2.86	51.73	7.08	.03	1.57	52.07	.76	.16	.01	.15	.84	3.86	15.11
S.D.	23.03	3.40	2.81	.44	.23	2.05	7.86	3.05	.18	.95	21.43	.43	.36	.12	.36	.37	1.32	2.08

TABLE 2

Multiple Regressions of Educability and School Retardation on Causally Prior Factors

Dependent Variables	Independent Variables: FAOCP	FAED	MAED	KORES	FRMBKG	SIBS	ABILITY	GPA	R^2	a
Path Coefficients (standardized regression coefficients)										
1. ABILITY	.104*	.170*	.144*	-.073*	.043*	-.071*				
2. GPA	.065	.106	.078	.004	.068*	-.084*				
3. GPA	.006	.009	-.004	.045	.043	-.044	.569*			
4. AGRTD	.006	-.051*	-.066*	-.002	.000	.021				
5. AGRTD	.015	-.019	-.017	-.016	.009	.006	-.201*			
6. AGRTD	.015	-.018	-.017	-.015	.011	.005	-.179*	-.017		
Regression Coefficients[a]										
1. ABILITY	.036	.393	.402	-1.32	1.49	-.271			.139	41.700
	(.006)	(.043)	(.047)	(.280)	(.539)	(.055)				
2. GPA	.009	.095	.084	.027	.906	-.125			.050	4.861
	(.002)	(.016)	(.018)	(.105)	(.203)	(.021)				
3. GPA	.001	.008	-.004	.318	.578	-.065	.221		.328	-4.334
	(.002)	(.015)	(.016)	(.096)	(.185)	(.019)	(.005)			
4. AGRTD	-.000	-.003	-.004	-.001	.000	.002			.012	.117
	(.000)	(.001)	(.001)	(.006)	(.012)	(.001)				
5. AGRTD	.000	-.001	-.002	-.007	.007	.001	-.005		.047	.312
	(.000)	(.001)	(.001)	(.007)	(.013)	(.001)	(.000)			
6. AGRTD	.000	-.001	-.002	-.006	.009	.000	-.004	-.002	.048	.302
	(.000)	(.001)	(.001)	(.007)	(.013)	(.001)	(.000)	(.001)		

[a] Standard errors in parentheses.

* Indicates absolute size of coefficient equals or exceeds 2.57 times its standard error.

TABLE 3

Multiple Regressions of Achievement Aspirations on Causally Prior Factors

Dependent Variables	Independent Variables: FAOCP	FAED	MAED	RURES	FRM8KG	SIBS	ABILITY	GPA	AGRTD	R^2	a
Path Coefficients (standardized regression coefficients)											
1. EASP	.128*	.198*	.139*	-.074*	.041	-.104*					
2. EASP	.085*	.127*	.079*	-.043*	.023	-.075*	.417*				
3. EASP	.084*	.125*	.080*	-.054*	.012	-.064*	.280*	.242*			
4. EASP	.084*	.125*	.080*	-.054*	.012	-.064*	.279*	.242*	-.001		
5. OASP	.123*	.123*	.063*	-.098*	.004	-.096*					
6. OASP	.088*	.066*	.015	-.074*	-.010	-.073*	.332*				
7. OASP	.087*	.065*	.016	-.080*	-.016	-.067*	.248*	.148*			
8. OASP	.087*	.065*	.017	-.080*	-.017	-.067*	.250*	.148*	.012		
Regression Coefficients[a]											
1. EASP	.005	.055	.047	-.160	.169	-.048				.178	.283
	(.001)	(.006)	(.006)	(.036)	(.070)	(.007)					
2. EASP	.003	.035	.027	-.094	.095	-.034	.050			.328	-1.816
	(.001)	(.005)	(.006)	(.033)	(.063)	(.006)	.002				
3. EASP	.003	.035	.027	-.118	.051	-.030	.034	.075		.367	-1.489
	(.001)	(.005)	(.005)	(.032)	(.062)	(.006)	(.002)	(.005)			
4. EASP	.003	.035	.027	-.118	.051	-.030	.034	.075	-.006	.367	-1.488
	(.001)	(.005)	(.005)	(.032)	(.062)	(.006)	(.002)	(.005)	(.071)		
5. OASP	.114	.771	.482	-4.824	.416	-1.01				.102	16.161
	(.019)	(.135)	(.146)	(.868)	(1.673)	(.170)					
6. OASP	.082	.417	.118	-3.628	-.932	-.763	.906			.197	-1.623
	(.018)	(.129)	(.140)	(.823)	(1.584)	(.161)	(.045)				
7. OASP	.081	.408	.123	-3.959	-1.534	-.696	.677	1.041		.212	2.888
	(.018)	(.128)	(.138)	(.817)	(1.572)	(.160)	(.053)	(.129)			
8. OASP	.081	.409	.126	-3.950	-1.546	-.697	.682	1.044	1.436	.212	2.454
	(.018)	(.128)	(.138)	(.817)	(1.572)	(.160)	(.053)	(.129)	(1.809)		

[a] Standard errors in parentheses.

* Indicates absolute size of coefficient equals or exceeds 2.57 times its standard error.

TABLE 4

Multiple Regressions of Delayed Entry into a Post-High School Education Program on Causally Prior Factors

Dependent Variables	Independent Variables												R^2	a
	FAOCP	FAED	MAED	RURES	FRMBKG	SIBS	ABILITY	GPA	AGRTD	EASP	OASP	TYPE		
Path Coefficients (standardized regression coefficients)														
1. DELAY	-.071*	-.038	-.097*	-.000	-.069*	.107*								
2. DELAY	.056	.015	-.071*	-.013	-.061*	.096*	-.153*							
3. DELAY	-.056	.015	-.075*	-.005	-.053*	.088*	-.043	-.188*						
4. DELAY	.057	-.015	-.074*	-.005	-.054*	.087*	-.039	-.186*	.027					
5. DELAY	-.033	-.020	-.051	-.020	-.054*	.070*	.048	-.118*	.025	-.273*	-.039			
6. DELAY	-.032	.024	-.057*	-.022	-.058*	.068*	.061	-.116*	.025	-.252*	-.033	-.078*		
Regression Coefficients[a]														
1. DELAY	-.001	-.004	-.011	-.000	-.110	.020							.041	.360
	(.000)	(.002)	(.003)	(.016)	(.031)	(.003)								
2. DELAY	.001	-.002	-.010	-.010	.098	.017	-.007						.062	.665
	(.000)	(.003)	(.003)	(.016)	(.031)	(.003)	(.001)							
3. DELAY	-.001	-.002	-.010	-.004	-.084	.016	-.002	-.022					.085	.565
	(.000)	(.002)	(.003)	(.016)	(.031)	(.003)	(.001)	(.003)						
4. DELAY	-.001	-.002	-.010	-.004	-.085	.016	-.002	-.022	.059				.086	.549
	(.000)	(.002)	(.003)	(.016)	(.031)	(.003)	(.001)	(.003)	(.038)					
5. DELAY	.001	.002	-.007	-.017	-.085	.013	.002	-.014	.054	-.109	-.001		.141	.415
	(.000)	(.003)	(.003)	(.017)	(.032)	(.003)	(.001)	(.003)	(.040	(.010)	(.000)			
6. DELAY	.001	.003	-.007	-.018	-.092	.012	.003	-.014	.053	-.101	-.001	-.078	.146	.427
	(.000)	(.003)	(.003)	(.017)	(.032)	(.003)	(.001)	(.003)	(.040)	(.010)	(.000)	(.020)		

[a] Standard errors in parentheses.

* Indicates absolute size of coefficient equals or exceeds 2.57 times its standard error.

TABLE 5

Multiple Regressions of Interruption of Post-High School Education on Causally Prior Factors

Dependent Variables	Independent Variables													
	FAOCP	FAED	MAED	RURES	FRMBKG	SIBS	ABILITY	GPA	AGRTD	EASP	OASP	TYPE	R^2	a
Path Coefficients (standardized regression coefficients)														
1. INTERRUPT	.003	-.001	.015	.008	-.053*	.034								
2. INTERRUPT	.001	-.003	.013	.009	-.054*	.035	.016							
3. INTERRUPT	.001	-.003	.013	.010	-.053*	.034	.029	-.022						
4. INTERRUPT	.002	-.003	.012	.010	-.053*	.034	.024	-.023	-.026					
5. INTERRUPT	.001	-.005	.011	.012	-.052	.035	.018	-.027	-.026	.001	.023			
6. INTERRUPT	.001	-.003	.009	.011	-.054	.034	.026	-.025	-.026	.014	.027	-.047		
Regression Coefficients[a]														
1. INTERRUPT	.000	-.000	.002	.007	-.084	.006							.004	.113
	(.000)	(.002)	(.003)	(.016)	(.031)	(.003)								
2. INTERRUPT	.000	-.000	.001	.008	-.085	.006	.001						.004	.082
	(.000)	(.001)	(.003)	(.017)	(.032)	(.003)	(.001)							
3. INTERRUPT	.000	-.000	.002	.009	-.083	.006	.001	-.003					.004	.070
	(.000)	(.003)	(.003)	(.017)	(.032)	(.003)	(.001)	(.003)						
4. INTERRUPT	.000	-.000	.001	.008	-.083	.006	.001	-.003	-.054				.005	.085
	(.000)	(.003)	(.003)	(.017)	(.032)	(.003)	(.001)	(.003)	(.039)					
5. INTERRUPT	.000	-.001	.001	.010	-.081	.006	.001	-.003	-.055	.001	.003		.005	.084
	(.000)	(.003)	(.003)	(.018)	(.034)	(.004)	(.001)	(.003)	(.042)	(.010)	(.000)			
6. INTERRUPT	.000	-.000	.001	.009	-.085	.006	.001	-.003	-.056	.006	.000	-.046	.007	.092
	(.000)	(.003)	(.003)	(.018)	(.034)	(.004)	(.001)	(.003)	(.042)	(.010)	(.000)	(.022)		

[a] Standard errors in parentheses.

* Indicates absolute size of coefficient equals or exceeds 2.57 times its standard error.

TABLE 6

Multiple Regressions of Projected Educational Attainment on Causally Prior Factors

Dependent Variables	Independent Variables: FAOCP	FAEI	MAED	RURES	FRMBKG	SIBS	ABILITY	GPA	AGRTD	EASP	OASP	DELAY	INTERRUPT	D&I	TYPE	DURED	R^2	a
Path Coefficients (standardized regression coefficients)																		
1. PEDATTN	.064*	.183*	.116*	-.101*	.013	-.083*												
2. PEDATTN	.027	.127*	.058*	-.071*	-.006	-.054*	.378*											
3. PEDATTN	.027	.127*	.059*	-.077*	-.013	-.047*	.285*	.159*										
4. PEDATTN	.027	.127*	.059*	-.077*	-.013	-.047*	.283*	.158*	-.014									
5. PEDATTN	.005	.084*	.033	-.056*	-.011	-.025	.169*	.071*	-.012	.321*	.092*							
6. PEDATTN	.006	.084*	.032	-.056*	-.013	-.022	.171*	.068*	-.012	.315*	.091*	-.019	-.011	-.013				
7. PEDATTN	.008	.068*	.047*	-.048*	.007	-.016	.112*	.063*	-.009	.230*	.066*	.004	.002	-.008	.340*			
8. PEDATTN	.012	.046	.036	-.026	.009	-.013	.081*	.020	-.008	.188*	.056*	-.083*	-.089*	.004	.259*	.363*		
Regression Coefficients[a]																		
1. PEDATTN	.006	.113	.086	-.495	.117	-.087											.127	12.770
	(.002)	(.012)	(.013)	(.081)	(.153)	(.016)												
2. PEDATTN	.002	.078	.043	-.345	-.055	-.056	.101										.251	8.467
	(.002)	(.012)	(.013)	(.078)	(.148)	(.015)	(.004)											
4. PEDATTN	.002	.078	.044	-.376	-.119	-.050	.076	.109									.268	8.947
	(.002)	(.012)	(.013)	(.077)	(.146)	(.015)	(.005)	(.012)										
5. PEDATTN	.002	.078	.043	-.377	-.116	-.049	.076	.108	-.168								.268	8.993
	(.002)	(.012)	(.013)	(.077)	(.146)	(.015)	(.005)	(.012)	(.180)									
5. PEDATTN	-.000	.051	.024	-.274	-.102	-.026	.045	.049	-.145	.717	.009						.358	9.874
	(.002)	(.012)	(.013)	(.080)	(.151)	(.016)	(.005)	(.013)	(.186)	(.045)	(.002)							
6. PEDATTN	-.001	.051	.023	-.274	-.122	-.024	.046	.047	-.145	.724	.009	-.111	-.065	-.228			.358	9.922
	(.002)	(.013)	(.014)	(.084)	(.160)	(.017)	(.006)	(.014)	(.197)	(.049)	(.002)	(.102)	(.096)	(.306)				
7. PEDATTN	.001	.042	.035	-.233	.061	-.017	.030	.043	-.112	.527	.007	.024	.010	-.134	1.933		.447	9.546
	(.002)	(.012)	(.013)	(.078)	(.149)	(.015)	(.005)	(.013)	(.183)	(.046)	(.002)	(.095)	(.089)	(.284)	(.094)			
8. PEDATTN	.001	.028	.027	-.129	.086	-.014	.022	.014	-.096	.432	.006	-.478	-.515	.065	1.470	.573	.545	8.984
	(.002)	(.011)	(.012)	(.071)	(.135)	(.014)	(.005)	(.012)	(.166)	(.042)	(.002)	(.089)	(.084)	(.258)	(.087)	(.024)		

[a] Standard errors in parentheses.

* Indicates absolute size of coefficient equals or exceeds 2.57 times its standard error.

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