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UNOBSERVABLE FAMILY AND INDIVIDUAL CONTRIBUTIONS TO THE DISTRIBUTIONS OF INCOME AND WEALTH

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ABSTRACT

This paper uses a data set composed of combinations of full brothers, half brothers as well as fathers and sons to measure the effect of common family background on households' income and wealth. While the data is drawn from a nineteenth century population, the intra-class correlation (after the effects of age, occupation, nativity, residence and duration in the economy have been removed) for income ranges from .13 to .18 which is similar to that found in modern samples. Intra-class correlations for wealth are significantly higher (.18 to .35) than those for income. The addition of fathers' observed characteristics to the sweeping regressions reduces the unobserved common background effect shared by brothers by about twenty percent.

The intra-class correlations of half brothers were lower than those observed for full brothers though the small differences between the two groups suggest that fathers played a dominant role in the transmission of the common family effect. Unobserved background was decomposed into individual and family effects by a variance components procedure. The individual effect was dominant for income while the family effect was dominant for wealth.

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Family members, except perhaps spouses, are certainly genetically and highly likely to be environmentally more similar than unrelated individuals. This unobserved common background may very well make family members more similar in measured socioeconomic position than would be expected for unrelated individuals with comparable observable individual characteristics. In addition, if parents are egalitarian within the family, they may make compensatory transfers in response to differences among siblings. Parental choices of this sort would also make siblings more similar than comparable unrelated individuals in terms of socioeconomic outcomes. In the first instance, family members are more socioeconomically alike because of similarities in backgrounds and characteristics. In the second instance family members are more socioeconomically alike because dissimilarities in sibling characteristics trigger compensatory activities by parents.

On the other hand, efficient parental human capital transfers to children would not ameliorate the economic effects of ability differences among siblings assuming ability enhances human capital acquisition. The effect of the family on the distribution of socioeconomic rewards depends, then, on the variation in individual characteristics within and between families, market rewards for those characteristics and the rules of family allocation of parental resources among children (see Becker and Tomes; Behrman, Pollak and Taubman; Ishikawa; Loury; and Sheshinski and Weiss). Behrman, Pollak and Taubman distinguish two allocational models: the wealth model and the separable earnings-bequest model. If there are positive material wealth transfers, the former predicts that such transfers fully compensate for earnings differences. The separable earnings-bequest model predicts equal transfers. Children may, in either

case, have different expected earnings if they have different abilities even if parents have equal concern for their children.

Failure to account for common family background effects may bias estimates of the effects of measured individual characteristics (e.g. the return to education). Considerable effort has been devoted to this problem using sibling data although Sheshinski and Weiss argue that the importance of the bias depends upon the family resource allocation rule. Moreover, whether the use of sibling data lessens or amplifies bias problems depends on whether the common family effect fully accounts for all ommitted effects and on the possibility of measurement error and simultaneity problems. (See Griliches, 1979.) Common family background effects are, however, interesting in their own right precisely because of the importance of the family resource allocation rule and its embedded parental preferences. In addition, failure to account for such effects would lead one to overestimate the degree to which the variance in observable socioeconomic indicators is truly stochastic, unless common family background is completely reflected in the observable characteristics that individuals have or choose to acquire. If the potential effects of family background are not completely reflected in observable individual characteristics, ignoring family background may cause one to overlook important aspects of the creation and perpetuation of economic differences among individuals and across generations. Even where the effects are fully or partially reflected in observable individual characteristics, we may view these individual characteristics differently knowing that, in part, they embody a family background shared with other individuals. Finally, if common family background effects are substantial, they may affect greatly policy development aimed at changing the distribution of socioeconomic rewards among individuals since the family then becomes an important

social institution affecting the distribution of socioeconomic rewards in addition to the government.

In this paper we explore the degree to which family background, whose source may be genetic, environmental and/or behavioral, explains the variance in indicators of socioeconomic position for individuals from an economy that would appear to be quite different from the economy from which modern data are drawn -- 19th century Utah. Our data allow us to consider two different kinds of family relationships, that between fathers and their sons and that between brothers. For the latter, we have samples of full brothers raised in the same home sharing a common father and mother and half brothers raised in separate homes sharing only a common father. We use two indicators of socioeconomic position, wealth holdings and income.

We focus on those aspects of common family background that are not measured directly but whose presence can be inferred from correlations between the observed socioeconomic positions of family members when the effects of individual characteristics have been factored out. We also consider the differences between measured and unmeasured common background by accounting for the observed individual characteristics of a common father, including the father's income or wealth, and for the characteristics of the common family such as family size.

Families can, of course, influence individual choices about individually acquired characteristics. However, in a series of studies over the past several years, it has been found that when the effects of individual characteristics have been accounted for there remains an unmeasured component of the variance in measures of socioeconomic position that can be attributed to membership in a common family by siblings. That is, residuals are correlated when individuals

are ordered by family membership. For example, Table 1, combined from the summary work of Jencks and his associates and from a survey by Griliches, provides the intraclass correlation coefficients for eight recent studies using sibling data. The intraclass correlation coefficient, which measures the degree of association between individuals who share the attribute of belonging to the same family, also measures the percentage of the variance in the socio-economic indicator that can be attributed to the common characteristic, in this case family membership. The indicator in these studies is the logarithm of income or earnings although many of the studies also use occupational status as an indicator.

For each of the samples of brothers, there is a residual correlation that is significant. That is, brothers are unlike randomly paired individuals in their economic position as measured by income. In addition, the variance that can be explained by sibling membership in a common family exceeds that which can be explained by observable individual characteristics -- common family background dominates other measured determinants of a brother's income. Jencks argues that the NORC sample provides the best estimate of the intraclass correlation (r=.129) and that the range of raw estimates of r is likely to be .12 to .28. That is, family background explains 12 to 28 percent of the variance in the logarithm of income. When suitable adjustments are made for sample and measurement bias, Jencks et al. argue that family background probably explains between 15 and 35 percent of the variance of log income -- a significant addition to the variance explained by observable individual characteristics.

Brittain, using a small sample of brothers from Cleveland, finds a much higher intraclass correlation for log income than any of the studies summarized by Jencks et al. He estimates an intraclass correlation in the .35-.45 range

but his is the only study with estimates this high. The intraclass correlation for occupational status measured by the Duncan scale is still higher, around .48. This may be attributable, in part, to the way that the status measure is created. But in any event, the correlation attributable to family background again exceeds that explainable by individual characteristics (R^2 is usually in the .20 to .35 range for occupational status).

The substantial difference that Taubman finds between monozygote and dizygote twins has led him and his associates to explore models that separate the common family background effect into genetic and environmental components. Goldberger has been skeptical of the assumptions necessary to pursue this approach but potential problems in modelling the nature of the family background effect do not call into question the presence of the family effect itself.

Chamberlain, Griliches and others have explored the possibilites that there is a common factor accounting for the family effect in a structural model of ability, schooling, occupational status and log income, taking advantage of the identifiability properties of multiple indicators for latent variable models. Chamberlain and Taubman et al. have extended the latent variable model so that the unobserved factor has a variance components structure. These efforts have been quite successful in changing the estimates of the returns to schooling but less successful in pushing the various estimates toward a common point. Chamberlain and Griliches have also explored extensions of these models to include the possibility that there are two factors that account for the family effect.

Our aim is initially more modest: Using single equation models, we estimate the variance component or the intraclass correlation attributable to individuals sharing a common family background and explore how the estimates differ with

the nature of the socioeconomic indicator, the nature of the family relationship and the nature of family background measures available. We also consider differences between unobserved individual and family effects.

II THE DATA

Our data are drawn from some or all of the following sources: census manuscripts of 1850, 1860, 1870, 1880 and 1900; tax assessment records of 1870, 1880, 1890, and 1900; financial records of the LDS Church for 1855, 1857, 1859, 1861, 1866, 1870, 1875, 1880, 1885, 1890, 1895, 1900; and family vital records from the Genealogical Library of the LDS Church.

Estimates of wealth were obtained from the Census manuscripts of 1850, 1860 and 1870 and from tax assessment records for 1870, 1880, 1890 and 1900. We sampled from both records in 1870 in order to splice the wealth series from 1850 to 1900 at decade intervals. Both tax assessment and census records provide estimates of gross rather than net wealth.

Income estimates are obtained from the financial records of the LDS Church for the 12 years noted earlier. Essentially we cover five year intervals from 1855 to 1900. LDS financial records indicate the contribution an individual made to the Church. Church members accepted the moral obligation to contribute a tithe--ten percent of one's income. In eight of the twelve sample years we have a record of the percentage that an individual's contribution was relative to this full tithe. These assessments of tithing paid versus tithing owed were made by local Church leaders who would personally know the individual contributor. The individual would also be consulted as to the percentage of a full tithe that he or she paid. Families usually made their contribution under the name of the male spouse if there was one although some young men

contributed independently to the Church. The combination of the amount contributed with the percentage of this amount relative to a full tithe yields an estimate of income. We made adjustments for who those reported income in a particular year but for whom we did not have percentages by averaging the percentage paid from other years.

Occupational data have been collected from each census manuscript, available from 1850 to 1900. Occupations were transcribed into a three-digit code that combined occupations that were essentially the same, e.g. lawyer and attorney. We did not create an occupational status scale. Rather, for purposes of analysis, these codes were aggregated into four categories: white collar workers, managers, and proprietors (W); farmers, ranchers, dairy owners, etc. (F); craft workers (C); laborers, farm laborers and other unskilled occupations (L). This left a heterogeneous mixture of occupations that were largely service oriented, such as hotel clerks, policemen, lower level clerks, etc. which we classified in a fifth group as service workers (S).

Both census and genealogical records provide place of birth and age. When these sources disagreed, the genealogical record was used. From these two records we could obtain most of the vital statistics of interest, including birth, death and marriage information as well as the implied information about household location at particular times, family size and family structure. These records also provide sibling names (linking brothers) and multiple marriage information (linking half brothers).

We used place information to provide a record of residence and internal migration and to provide an estimate of the length of time a household had been within the economy (T). For analysis purposes, we consider only rural (R) and urban (U) residence where urban is defined as Salt Lake County.

We have linked individuals through time and across records and we have linked these individual histories by family relationship. The core of the sample was created by linking census wealth records using name, location, age and birth place data. We then added a random sample of the households from each census year that did not appear in more than one of these censuses. We separately coded links that were "certain" from those for which there were some discrepancies in name spellings or age estimates between census years, "uncertains". We were, however, conservative in our efforts and subsequent analysis has shown no statistically significant differences between "certains" and "uncertains" and hence we no longer carry the coding distinguishing the two. To this core of linked and randomly sampled individuals, we added as many LDS financial records as we could, linked by name across the records and through the years from 1855 to 1900. We then reversed the procedure: first linking households in the Church financial records and then adding as much census information as was possible.

We added to this sample, now linked through time and between census and church financial records, records from either the censuses or financial records that were potentially fathers and sons. We verified these father-son links using the family vital statistic records from the Genealogical Library. We then searched the family vital statistic records for those in the core sample creating pointers linking those within the sample who were either fathers and sons or brothers. In addition, we added any records from the population data for those we could identify as sons or brothers of those in the sample by using the family vital statistic information.

Not all family links between brothers occur with a link to a father. Since we searched the family vital statistic records for those in our sample, we

would often find brothers without finding fathers, who might have been dead or who might not have migrated to Utah with their sons. This particular aspect of the sample means that the sibling connections cover the full age range in each year of the sample and are not restricted to be young in the early years. We also found a number of new households that were formed over the fifty year period where we observed the father for a some years and then observed the father and son. Because of the extended period over which we sampled we also observe fathers and sometimes sons who die and a small group of three generation links.

We added to this linked data additional wealth data from the tax assessments and probates as well as occupational data from the 1880 and 1900 censuses. For these records we have neither population data nor random samples from population data. Rather we sought out only those records for individuals already in our sample. Otherwise, however, we have population data for wealth from 1850 to 1870 and income from 1855 to 1900.

When we added data, anomolies would appear. At each point we purged from the data those links that became questionable with the new information. Obvious checks included: records past death or for an individual who was "too old"; records prior to birth or for an individual who was "too young"; the same name on multiple records from the same source in the same year; substantial age inconsistencies.

We believe that we have been fairly conservative at each point but we should note that all linking is by names with the attendant problems of mispelling and same names for different individuals. We tried to avoid both problems by not selecting or subsequently eliminating those with common names where the probability was high that there would be several individuals with the

same name (e.g. John Jones, James Green). We have differentially coded "certain" family links from those that were "less certain".

The completed data set is essentially a panel, although an individual need not appear in each year either because the individual migrated in or formed a household later in the period; because the individual migrated out or died during the period; or because we could not make a link in a particular year. It is a panel with the unique characteristic that it is drawn from a fifty year history of an economy and that it has immediate family links. Tables 2 and 3 provide means and variances by year for fathers, sons and brothers.

III FAMILY EFFECTS AND INDIVIDUAL INCOME

We test for unobserved family background effects by first estimating several variations of the now standard human capital specification for individual income,

$$(1)\quad \ln(y_{ij}) = X_{ij}B + e_{ij}$$

where i indexes sibs and j indexes families and

$$(2)\quad e_{ij} = u_j + w_{ij}.$$

u_j is the family component of the variance. For some specifications, we pool the data over all or part of the 50 year period and in these instances impose a fixed effects model on the aggregate yearly effects. The complete set of regressions that serve as a basis for our analysis is found in the appendix. The general properties of the regression results can be seen in the following pooled regression for brothers taken from Table A1 in the appendix:

(3) $\ln(y) = 4.50 + .062\,A - .00068\,A^2 + .009\,T - .23\,R + .043\,FB$
(.121)(.005) (.00006) (.002) (.029) (.025)

$+ .56\,W - .06\,C + .02\,S - .19\,L + .58\,D55 + .57\,D57 + .47\,D59$
(.039) (.037) (.06) (.04) (.08) (.05) (.06)

$+ .55\,D61 + .48\,D66 + .27\,D70 + .28\,D75 + .24\,D80 + .27\,D85$
(.04) (.05) (.05) (.05) (.05) (.04)

$+ .16\,D90 + .002\,D95$
(.04) (.05)

$R^2 = .11$
#OBS=5580

The regressions are normalized on farmers living in Salt Lake County in 1900 who are U.S. born. Elsewhere we have discussed the properties of these regressions at length, focusing on the effects of time within the economy (T), life cycle patterns (A and A^2) and changes in residence (R) and occupation (W,C,S,L,F) in separate papers. (Kearl, Pope and Wimmer, 1980; Kearl and Pope, 1983a; Kearl and Pope, 1983b.) We note here that virtually all of the individual characteristics that we measure have the expected statistically significant effects on ln(y) but that like comparable analysis on modern data these individual characteristics do not explain a large percentage of the variance in log income.

Briefly, we find a pronounced concave life cycle in income with the peak occurring around age 45. Time within the economy (T) has a positive effect on a household's income while those living in the rural areas (R) have lower incomes, ceteris paribus. Whitecollar workers (W) have higher incomes than do farmers while craft (C) and service (S) workers have incomes that are not significantly different from those of farmers. Laborers (L) have incomes substantially lower than farmers and those in other occupational categories. We find that foreign born have incomes a bit higher than comparable US born households. Finally, the pattern of year effects for income essentially accounts

for price changes and growth and parallels the price decline over the 50 year period in the rest of the United States. While the relative magnitudes and significance of the coefficients change somewhat with specification and sample, the patterns are essentially the same for all the regressions reported in the appendix.

We used these estimates to sweep from individual incomes the effects of measured individual characteristics. Rather than estimating the variance component directly, we then estimated the intraclass correlation for related pairs using the resulting residuals. The residuals were stacked so that a member of the related pair appears as both a dependent and independent variable in a simple regression of residuals on residuals. This is equivalent to randomly ordering the observations. The resulting coefficient (the intercept should be zero since it is the expected value of the residuals) is an estimate of the intraclass correlation coefficient. A nonzero coefficient indicates that a common omitted effect links the paired observations that does not link observations of individuals who are not related. It therefore provides evidence that there is a "family" effect on individual income that is shared by the related individuals.

We find a significant unobserved family background effect for brothers, Table 4. Sharing a common family background explains around 20 percent of the variance in the logarithm of income. Brothers incomes are simply unlike those of randomly selected unrelated paris of individuals even when we account for similarities between brothers that are observable, including age, nativity and occupational choices. Part of the correlation between the economic position of brothers could be explained by the correlation in the ages (compare specifications 1 and 2, Table 4) reflecting "closer" positions on the income life

cycle than those shared by randomly paired unrelated individuals. In fact, this effect is unimportant.

While age, residence and birthplace correlations between brothers affect the intraclass correlation estimate very little (compare specifications 1 or 2 with 3), it is clear that part of the influence of family is reflected in occupational choices that brothers make. The intraclass correlation falls about 10 precent when the effect of occupational choice is swept out, implying that brothers' occupational choices are correlated. This is, of course, consistent with the considerable contemporary evidence on unobserved family effects and occupational choices.

The size of the estimated family background effect for brothers' incomes is at the midpoint of the Jencks' range. The importance of the unobserved family background variable(s) relative to that of the observable individual characteristics is also consistent with modern data. Hence, in terms of the size of the estimated family background effect, the importance of this effect relative to observed individual characteristics and the partial transmission of the family effect through occupational choices made by siblings, our data reveal similar patterns to those in modern data even though our sample was created differently and drawn from a dissimilar economy--one that is poor, agrarian with little emphasis on formal education. Differences among families appear to be an important and robust determinant of the variance in the distribution of income among individuals.

In the following sections we consider evidence from our data about the nature of the unobserved family background effect that is not available in contemporary data. We first consider the effect for wealth holdings for essentially the same households for which we have estimated the family effect on

income. Using both income and wealth as indicators of socioeconomic position, we then consider differences between full and half brothers. This is followed by a section where we use a subsample of the data to explore family effects for brothers and half brothers when we observe the socioeconomic position of their father. Using a different subsample with multiple observations for each sib, we then differentiate between unobserved family and unobserved individual effects.

IV FAMILY EFFECTS AND WEALTH HOLDINGS

We begin with an econometric specification for the logarithm of wealth holdings comparable to specification (1) for log income:

$$
\begin{aligned}
(4)\ \ln(w) = {} & 4.62 + .089\,A - .0008\,A^2 + .014\,T - .147\,FB - .368\,R \\
& (.16)\ (.007)\ (.00008)\ (.0024)\ (.034)\ (.038) \\
& + .24\,W - .39\,C - .17\,S - .53\,L + .43\,D60 + .40\,D70 \\
& (.06)\ (.05)\ (.08)\ (.05)\ (.05)\ (.05) \\
& + .07\,DD70 - .05\,D80 + .48\,D90 \\
& (.06)\ (.05)\ (.04)
\end{aligned}
$$

$R^2 = .22$
#OBS=3944

Again, the full set of equations used in the estimation of the intraclass correlation coefficient is found in the appendix. While the relative magnitudes change somewhat with specification and sample, specification (4) provides a general qualitative summary of the results for the wealth specifications and the relationship between the estimates for wealth and those for income.

There is a pronounced concave lifecycle pattern to wealth holdings in our sample with a peak at age 58 (the comparable age-income peak is at age 45). Duration within the economy (T) substantially increases wealth holdings and those who are foreign born or living in the rural area have wealth positions substantially below US born or those residing in the urban area. For income we also found a large positive effect for duration and a substantial negative effect for rural residence. However the effect of foreign birth was positive for income while it is negative for wealth. White collar workers have wealth holdings substantially above those for farmers, an effect also seen in income. However, while service and craft workers have incomes that are not significantly different from those of farmers, they have wealth holdings that are significantly lower than those of farmers. Common laborers have substantially lower wealth holdings and incomes than farmers.

The pattern of year dummies for wealth is more difficult to interpret since we essentially use them to splice the wealth series in 1870. Hence they reflect both economic growth and changes in the measured variable between census and tax assessment records.

Table 5 provides estimates for the intraclass correlation coefficient using the logarithm of wealth as an indicator of socioeconomic position and when the effects of the observed individual characteristics have been swept from ln(W). We find that unobserved family background explains about 30 percent of the variance in the log of wealth compared to 20 percent of the variance in the log of income.

The larger intraclass correlation for wealth is consistent with what would be expected if individual consumption behavior were determined by permanent rather than observed income. Transitory elements should be a relatively larger

component of income than of wealth and hence more of the variance in income should be truly stochastic. If individual consumption were determined by permanent income, savings would fluctuate with transitory income as would wealth holdings but the differences in the means between wealth and income would imply that these fluctuations contributed relatively less to the variance of wealth. Put differently, differences in family backgrounds are relatively more important in determining the variance in a more permanent measure of economic position, wealth, than they are in explaining a measure with a larger transitory component, income. This suggests that family differences tend to be associated more closely with permanent differences rather than transitory differences in the distribution of economic outcomes.

In addition, however, if parents make efficient investment decisions relative to the human capital accumulation of their children, thereby differentially investing in siblings in response to differing individual abilities, but want to be egalitarian within the family, they would compensate those with lesser ability by engaging in differential intra vivos wealth transfers or provide compensatory bequests. This compensatory behavior would imply a larger family background effect on wealth than on income. Indeed, if there were no important constraints on parental ability to differentially invest according to sib ability, the intraclass correlation for earnings would be nonzero only if sibling <u>ability</u> had an unobserved common family component. However, the transitory elements noted earlier, the likely constraints on parental compensatory behavior as well as income from capital, do not allow us to interpret the intraclass correlation for income as measuring only the unobserved family element of individual ability (See Behrman, Pollack and Taubman or Sheshinski and Weiss). We note that recent attempts to test for efficient human capital

intergenerational transfers suggest that bequests do not appear to compensate for differences in ability (Menchik; Tomes).

For both income and wealth, we used a Chow test for differences in the intraclass correlation by wealth and household size. In neither case did we find significant evidence which would indicate that, for example, the intraclass correlation was higher for brothers with wealthy fathers than for brothers with poor fathers or that family background effects differed systematically and substantially between "large" families and "small" families. The latter is a little surprising since, while common backgrounds differ among families, it would seem that the differences might be correlated with family size. When we examine these results in a slightly different way below we do find some family size effect. We also considered systematic variation in the intraclass correlation with birth order but also failed to find evidence that birth order systematically affected the intraclass correlation. In this area, however, our data present some problems since we have a large number of half brothers which make sib ordering problematic.

These results are based on data pooled from the full fifty year period covered by our sample. It is possible that the estimates change with time as, for example, the economy matures, or that our results reflect a compositional effect. We have estimated comparable intraclass correlations using only cross sections of sib pairs and, while the estimates vary somewhat, there are no systematic patterns different from those of the pooled data set. Another area of concern about reported intraclass correlations is the possiblity of correlation between observed characteristics and errors such that $E(U_i|X_{ij}) \neq 0$ so that a random effects specification would involve mismeasurement. Hausman (1978) proposed a specification test which we have applied to some

of our equations. While the overall X^2 test based on the decrease in residual sums of squares with augmented transformed variables (p. 1269, Hausman, 1978) is failed with a random effects specification; the problems seem to be centered on the age variables and the life cycle. Further work will be needed to gauge the importance of the relationship between U_i and some of the X_i.

Perhaps the most serious concern, at present, is the omission of education from the sweeping regressions. If formal education has a positive influence on income and wealth as expected, the lack of educational data reduces the variance explained by the regression and increases the measured common background effect if the education of siblings is correlated. The mismeasurement of the intraclass correlation in the sweeping regressions such as occupation, nativity and place of residence proxy for part of the effect of education. While virtually all of the Utah population was classified as literate on the census manuscript, formal education was relatively limited in the nineteenth century Utah. Nevertheless, further work is needed to bound the effect of omission of education from the sweeping regressions on the measurement of the family background effect.

V HALF VERSUS FULL BROTHERS

We can separate the contribution of the father to the unobserved family effect from that of being raised in a common home by considering the differences between full brothers raised in the same home and half brothers who share a common father but who, in our sample, would not have been raised in a common home. Table 6 provides estimates when the sample is split this way.

Half brothers, on average, share fewer genes than do full brothers. (Expected excess homozygosity would be 50% for full brothers and 25% for half brothers.)

They also, in our sample, do not share a common home since polygynous families were usually maintained in separate houses or living areas for each wife. Therefore, half and full brothers would only have similar intraclass correlations if the dominant component of the family background effect was the contribution of the father to his children. That is, if the intraclass correlations for brothers do not differ from those for half brothers, the unobserved family effects must be primarily non-genetic and primarily attributable to the father's role in creating a common environment for his sons. Conversely, if half brothers are no more similar than randomly selected unrelated individuals, then neither genetics nor the father's role matter and the common family effect would be attributed solely to the environment shared within a common home. However, if there are unobserved family background effects for both half and full brothers, the source of the differences could be both genetic and environmental since brothers and half brothers differ on both dimensions in our sample.

We clearly do not find that half brothers raised in separate homes are like randomly selected unrelated individuals. Rather, we find significant unobserved family background effects for half brothers for both wealth holdings and for income. Sharing a common father explains about 26 percent of the variance in log wealth and about 19 percent of the variance in log income (we continue to find that the common family effect is larger for log wealth than it is for log income by about 50 percent). Sharing both a common father and a common mother explains about 30 percent of the variance in log wealth and about 19 percent of the variance in log income. There is surprisingly little difference between full brothers and half brothers in this respect suggesting that in this economy, the father's contribution to the economic

success of his children dominates other aspects of the unobserved family variable. The results cast some doubt on a simple genetic explanation.

We note that a relatively larger share of the family effect appears to be transmitted through correlated occupational choices for half brothers than for brothers. That is, when individual occupational choices are accounted for (specification 4), the intraclass correlation for half brothers, still significant and maintaining the spread between income and wealth, is relatively smaller than the comparable intraclass correlations for full brothers. That is, when we account for occupational choices, sharing a common father explains 15 percent of the variance in log income and 23 percent of the variance in log wealth. This compares with 29 percent and 18 percent, respectively, for those who share a common father and a common mother. It makes sense, of course, that an important element in the environment shared by half brothers is the occupational choice of their common father which may very well influence their occupational choices. However, there remains a substantial correlation in the economic position of those raised in separate homes even when we account for this element of their common environment.

VI OBSERVED AND UNOBSERVED COMMON FAMILY BACKGROUNDS

Brothers share attributes of their common father, including those that are observable such as father's age, occupation, income or wealth. We now consider the degree to which the common family background effect present in our data is adequately accounted for by the observed characteristics of the sibs' father. The observed socioeconomic position of the father might directly affect sibs because of the advantages or disadvantages the socioeconomic position

allowed the father to confer on his children. Usually interest in this area centers on income or wealth transfers but there may be more general direct effects such as access, information or nepotism. Of course there may be indirect effects for which the observed socioeconomic position of the father proxies. These might include home environments if such environments differ systematically with father's socioeconomic status. Finally, to the degree that there are capital market imperfections that impede intergenerational human capital transfers, it would be expected that higher income or wealthier parents would be able to transfer "more" human capital to all sibs and, of course, having made efficient investment decisions be more capable of providing differential material wealth transfers.

Tables A.9 and A.10 provide a summary of regressions with log income and log wealth as dependent variables using the subsample of brothers for whom we observe the relevant data for their fathers. The parameter estimates for the individuals own characteristics do not differ much from the regressions we discussed earlier and the qualitative properties of the regressions do not change with the extended specification. To these own characteristics we have appended those noted in the table for the individual's father and family.

With the exception of white collar for wealth and white collar and craft for income, father's occupational choice does not directly affect a son's income or wealth. A son's income and wealth are also statistically unaffected by the father's age, time within the economy, birth place or place of residence. Each of these, as we noted earlier, affect a person's own income or wealth position and hence each indirectly affects the son's position to the degree that there is a relationship between a father's income or wealth and his son's

income or wealth. However, even when we account for the substantial effect of being a white collar worker on an individual's income or wealth, there is an additional substantial advantage conferred on the sons of white collar workers in this economy. This cannot be skill transmittal or else we would expect also to see significant positive effects from fathers who were craftsmen and perhaps significant negative effects from fathers who were unskilled, common laborers. We observe neither of these, rather there is no significant relationship between fathers who are unskilled and their son's income or wealth and the relationship between fathers who are craftsmen and their sons is negative for income but not significant for wealth.

A father's income positively affects his son's income as does a father's wealth his son's wealth. A ten percent increase in wealth would yield a 1.5 percent increase in a son's wealth. Put differently, a ten percent deviation between fathers' wealth would cause a 1.5 percent deviation between the wealth of sons. The corresponding elasticity for income is about .1. Both of these, while statistically significant, would indicate substantial regression toward the mean if there were no other avenues through which fathers affected sons.

For household size, we find that a son in a larger family will have lower wealth, ceteris paribus. The sign is also negative for income but the coefficient is not significant. If the family resource allocational rule first allocated parental resources for human capital accumulation and then compensated with differentially allocated material wealth among sibs, family size would be expected to have negative effects on both income and wealth but a larger effect on wealth so long as families have different material resources.

We used these regressions to once again purge from the dependent variable the effects of those individual and family characteristics that were observable

and then estimated the intraclass correlation for brothers as shown in Table 7. We continue to find a significant unobserved family effect, with unobserved family background explaining 10 percent of the variation in log income and 19 percent of the variation in log wealth. These compare with 13 and 23 percent when the observable common background effects are not directly estimated but are treated as part of the unobservable. Hence, observable common background characteristics account for only a little over 20 percent of the family effect. The remaining family affect is not effectively proxied by the father's own socioeconomic position as measured by income, wealth or occupation. This finding is also consistent with much contemporary work (see Taubman, et al. for a survey) but most contemporary studies do not have the rich set of characteristics that we have for fathers and hence this finding strengthens somewhat those drawn from contemporary data. While, as noted above, these results are roughly consistent with an efficient investment -cum-compensatory transfer allocational rule, the substantial unobserved family background effect when observed parental income and wealth are accounted for, suggests that resources other than material wealth or income are important in intergenerational links.

We can look at the common family effect in a slightly different way by treating fathers and sons as we have brothers, purging the effects of own characteristics and then considering the possibilities of correlated residuals when the individuals are paired by family relationship. Table 8 provides estimates of the intraclass correlation for log income and wealth of fathers and sons. It should be noted that the fathers were quite old at the time the income or wealth was observed contemporaneously with their son's income or wealth.

The low intraclass correlation in specification 1 is to be expected given the pronounced life cycle pattern in both income and wealth holdings since the life cycle will explain a substantial amount of the variance for individuals whose ages are separated by a substantial number of years as would be true for fathers and sons. This result, in a sense, indirectly confirms the presence of an age-income or age-wealth profile. When the contribution of age to the economic position of an individual is accounted for, the intraclass correlations for income are very close to those estimated from brothers. For wealth holdings, however, we find about 20 percent of the variance is explained by the unobserved common background shared by fathers and sons. The unobserved background shared by brothers explains about 30 percent of the variance for brothers.

Considering fathers and sons rather than brothers indicates the ambiguity in the notion of "unobserved family background". For brothers, family background is that unobservable that is common to brothers; for fathers and sons, family background is that unobservable that is common to fathers and sons. Sons share one half of the genes of their father. Brothers may share from virtually 0 to 100 percent but on average would also share 50 percent of the genes of their common father. However, fathers and sons are not raised in the same homes and hence not in the same home environments. Conversely, brothers, who have a wider variance in shared genes, are raised in a common home by a common mother.

While we cannot estimate the relative contributions of genes and environment, we can jointly estimate the two family effects, father-son and brother-brother. We assume an error-components model where the error is partitioned into a brother-brother family component, a father-son family component and a stochastic component. By construction, the brother-brother component includes only those

things common to brothers that are not common to fathers and sons while the father-son component includes only those things common to fathers and sons that are not common to brothers. We jointly estimate the components using a maximum likelihood extimator (LISREL). Table 9 summarizes the results.

The estimated brother-brother variance component is significantly above the estimated father-son variance component. For log wealth, that unobservable common to brothers alone explains about 20 to 23 percent of the variance while that unobservable common to fathers and sons explains about 8 to 10 percent of the variance. For log income, the percentages are about 10 percent and 15 percent respectively.

VIII INDIVIDUAL VERSUS FAMILY EFFECTS

The panel nature of our data allow us to consider unobserved individual effects as well as unobserved family effects since we can use observations on the same individual at different points in time. Unobserved individual effects would include those aspects of individual ability that do not change with time and which are not shared with a sibling. Those aspects of ability that might change with time are not considered in our analysis. Some, however, will be captured by the changes in observed individual characteristics such as occupation that occur with time. We estimate, then, a variance or error components model using paired brothers with paired observations on each individual (since we have more than pairs of observations on each individual, our data allow for potentially richer and more complex specifications than that estimated here. We intend to pursue such models later.) We assume that the error is generated by a process that includes a family effect, an individual effect and a stochastic element,

(5) $e_{ijk} = u_i + v_j + w_{ijk}$,

where i indexes the family, j indexes the individual and k indexes time. While we use a maximum likelihood estimator (LISREL), loosely, the covariances between years for the same individual estimate the sum of an individual variance component and a family variance component while the covariances between sibs estimate the family component. The family variance component is, thus, directly estimated while that for the individual is easily recoverable. The observed error variances for individuals estimate the sum of the family, individual and stochastic components. Table 10 provides estimates for log income and log wealth for brothers.

Adjusting for the differences in the variances of log income and log wealth we find that the percentage of the variance attributable to the unobserved family effect continues to be in the .22-.28 range for wealth and the .15-.19 range for income. The interesting aspect of this model of the covariance structure for brothers is the relative importance of individual effects for wealth and income. For wealth, we find that the unobserved individual variance component is about one half that of the unobserved family variance component. For income, however, the unobserved individual effect dominates, being over twice that for the family effect. Moreover, while observable characteristics explain over 20 percent of the variance in wealth and about 10 percent of the variance in log income, the total variance explained by observable and unobservable family and individual characteristics is about 50 percent of the variance of wealth but around 65 percent of the variance of income.

Again, if ability differences are enhanced by efficient human capital transfers from parents to children but these transfers are then offset by

wealth transfers that are compensatory, the pattern we observe of relatively larger individual effects and smaller family effects for income and relatively smaller individual effects and larger family effects for wealth would be produced. Nothing in this explanation would suggest, of course, that the combined effects would explain a large or small amount of the variance. It is simply the case for our data, that the explained variance from the regression analysis on observed characteristics alone gives a much distorted picture of the nature of the stochastic contribution to the distributions of income and wealth.

IX CONCLUDING COMMENTS

The variance in family backgrounds appears to be an important contributor to the dispersion of individual income and wealth. We conclude, based on the differences between the effect of unobserved family background on income and wealth, that these effects are more likely related to permanent differences than transitory differences in the distribution. While we find that part of this effect is reflected in occupational choices made by related individuals and another part is explained by the observed socioeconomic position of the father, most of the effect cannot be explained by either of these two avenues of intergenerational transmission.

We also find that unobserved individual differences are important contributors to the variance in socioeconomic positions. Observable individual characteristics, unobservable individual characteristics and unobservable family effects explain over one half of the variance in income and in wealth. This poses a problem for policy arguments that are based on stochastic elements dominating the distributions or on providing greater equality of opportunity within which individuals can make choices. Models of family allocational

rules, ability, and socioeconomic rewards should accommodate two important empirical results. First, we found that while unobservable individual effects were important determinants of both income and wealth distributions, they are relatively more important determinants of the distribution of income. Second, while we also found that unobservable family effects were important determinants of both income and wealth distributions, they are relatively more important in determining the distribution of wealth.

We have suggested at various points, that much of what we observe seems to us to be consistent with an efficient investment-cum-compensatory transfer allocational rule but our efforts do not provide a direct test of an allocational model since none of our specifications are specifically constrained by such a rule. Thus, the relatively more important family effect for wealth could reflect either equal transfers within family where resources differed (including time) between families or else compensating transfers such that sibling wealth positions looked more alike than would be predicted from incomes.

We do suggest that permanent/transitory differences between wealth and income may explain the larger family effect on wealth. This cannot be a complete explanation, however, or we would expect that unobserved individual differences, also presumed to be more permanent, would also explain proportionally more of the distribution of wealth than the distribution of income. Since this is not the case, a more complex phenomenon is presumably generating the data we have collected and analyzed.

TABLES

Table 1

Recent Measures of Intraclass Correlation

	OSG*	NORC	Project Talent	Kalamazoo	Taubman DZ	Taubman MZ	Cleveland	Gorseline	NLS	NLS
Year	1973	1973-74	1971-72	1973-74	1974	1974	1965-66	1927	1969	1973
Age	25-64	25-64	28-29	35-59	47-57	47-57	25-64	--	--	--
N	15817	300	198	692	1814	2038	104	312	584	494
ln y	9.17	9.19	1.48 (ln wage)	9.63	9.64	9.67	9.10	--	--	--
S.D. ln y	.774	.870	.406	.446	.567	.528	.485	.688	.404	.441
R^2 (without background measure)	.089	.045	.080	.080	.11	.11	.12	--	--	--
Intraclass correlation (r)	--	.13	.221	.22	.30	.54	.446	.37	.11	.31

*National sample without family relationships

Source: Jencks, Who Gets Ahead? The Determinants of Economic Success.
Griliches, "Sibling Models and Data in Econometrics," Journal of Political Economy, (October, 1979), p. 543.

Table 2A

Structure of the Father-Son Data Sets for Income

1.	Year.....	1855	1861	1866	1870	1875	1880	1885	1890	1895	1900
2.	Father's Mean Age...	55	59	62	64	64	64	65	66	70	70
3.	Son's Mean Age.....	26	29	32	33	33	33	33	34	39	39
4.	Mean Ln of Father's Income.....	6.31	6.45	6.39	6.14	6.25	6.24	6.09	6.06	5.77	5.95
5.	Mean Ln of Son's Income.....	6.17	6.07	6.13	5.90	5.99	5.86	5.86	5.84	5.75	5.80
6.	Variance of Ln Income of Father	.54	.72	.66	.89	.95	.72	.87	.90	.91	1.04
7.	Variance of Ln Income of Son.....	.33	.59	.80	.92	.69	.61	.51	.60	.76	.65
8.	Simple Correlation of Father's and Son's Income.....	.06	.14	.12	.00	.09	.12	.07	.12	.05	.31
9.	Number of Father-Son Pairs...	80	260	191	161	163	216	330	248	121	245

Table 2B

Structure of the Father-Son Data Sets for Wealth

1.	Year.....	1860 Census	1870 Census	1870 Tax Assess-ment	1880 Tax Assess-ment	1890 Tax Assess-ment	1900 Tax Assess-ment
2.	Father's Mean Age...	59	64	65	67	67	71
3.	Son's Mean Age.....	31	34	34	37	38	41
4.	Mean Ln of Father's Wealth.....	7.12	7.30	7.03	7.01	7.58	7.31
5.	Mean Ln of Son's Wealth.....	6.56	6.78	6.56	6.42	7.06	6.64
6.	Variance of Ln Wealth of Father..	.73	1.09	.82	1.07	1.09	1.36
7.	Variance of Ln Wealth of Son.....	.66	.93	.52	.67	.84	1.23
8.	Simple Correlation of Father's and Son's Wealth.....	.22	.29	.29	.17	.23	.02
9.	Number of Father-Son pairs	264	359	131	160	217	252

Table 3A

Structure of the Brother Data Sets for Income

1.	Year.....	1855	1861	1866	1870	1875	1880	1885	1890	1895	1900
2.	Mean of First Brother's Age.....	31	34	37	40	41	43	40	43	49	48
3.	Mean of Second Brother's Age.....	31	33	36	39	41	43	41	44	50	48
4.	Mean Ln of First Brother's Income.....	6.13	6.21	6.20	6.10	6.20	6.07	6.05	5.98	5.96	5.93
5.	Mean Ln of Second Brother's Income.....	6.12	6.19	6.26	5.97	.599	6.07	6.08	5.96	5.82	5.91
6.	Variance of Ln Income of First Brother....	.33	.67	.78	.65	.72	.61	.54	.72	.75	.75
7.	Variance of Ln Income of Second Brother....	.29	.52	.75	.83	.65	.65	.62	.67	1.00	.93
8.	Simple Correlation of Brothers Income.....	.13	.36	.12	.06	.07	.09	.13	.20	.29	.29
9.	Number of Brother Pairs.....	59	265	195	173	188	235	401	361	192	410

Table 3B

Structure of the Brother Data Sets for Wealth

1.	Year.....	1860 Census	1870 Census	1870 Tax Assess-ment	1880 Tax Assess-ment	1890 Tax Assess-ment	1900 Tax Assess-ment
2.	Mean of First Brother's Age.....	34	39	38	41	39	45
3.	Mean of Second Brother's Age.....	34	39	38	41	41	47
4.	Mean Ln of First Brother's Wealth.....	6.77	6.87	6.51	6.58	7.13	6.86
5.	Mean Ln of Second Brother's Wealth.....	6.80	.699	6.64	6.59	7.13	6.95
6.	Variance of Ln Wealth of First Brother....	.79	.79	.59	.77	1.01	1.57
7.	Variance of Ln Wealth of Second Brother....	.95	.93	.56	.64	.86	1.44
8.	Simple Correlation of Brothers Wealth.....	.43	.43	.37	.34	.33	.20
9.	Number of Brother Pairs.....	280	399	169	246	443	435

Table 4

Intraclass Correlation of LnIncome for Brothers

Specification	r of lnIncome	t
1	.196	14.9
2	.205	15.6
3	.192	14.6
4	.174	13.2

Specification 1: Sweeping Regression includes constant and year dummies.

Specification 2: Sweeping Regression includes constant, year dummies, age and age^2.

Specification 3: Sweeping Regression includes constant, year dummies, age, age^2, T, R, and FB.

Specification 4: Sweeping Regression includes constant, year dummies, age, age^2, T, R, FB, W, C, L, and S.

See Table A.1 for estimates.

Table 5

Intraclass Correlation of LnWealth for Brothers

Specification	r of LnWealth	t
1	.314	20.7
2	.303	20.0
3	.295	19.4
4	.278	18.2

Specification 1: Sweeping Regression includes constant and year dummies.

Specification 2: Sweeping Regression includes constant, year dummies, age and age^2.

Specification 3: Sweeping Regression includes constant, year dummies, age, age^2, T, R, and FB.

Specification 4: Sweeping Regression includes constant, year dummies, age, age^2, T, R, FB, W, C, L, and S.

See Table A.2 for estimates.

Table 6

Comparison of Intraclass Correlations for
Full and Half Brothers

Specification	Full Brothers Ln(Y) r	t	Full Brothers Ln(W) r	t	Half Brothers Ln(Y) r	t	Half Brothers Ln(W) r	t
1	.194	(13.1)	.350	(20.4)	.198	(7.0)	.212	(6.5)
2	.201	(13.6)	.313	(18.2)	.205	(10.3)	.271	(8.4)
3	.191	(12.9)	.302	(17.5)	.189	(6.7)	.260	(7.9)
4	.178	(12.0)	.290	(16.7)	.146	(5.1)	.225	(6.9)

Specification 1: Sweeping Regression includes constant and year dummies.

Specification 2: Sweeping Regression includes constant, year dummies, age and age^2.

Specification 3: Sweeping Regression includes constant, year dummies, age, age^2, T, R, and FB.

Specification 4: Sweeping Regression includes constant, year dummies, age, age^2, T, R, FB, W, C, L, and S.

See Tables A.3 and A.4 for estimates for full brothers and Tables A.5 and A.6 for half brothers.

Table 7

Intraclass Correlation of Brothers with
Measured Common Family Attributes

Specification	r of lnWealth	t	r of lnIncome	t
1	.307	(20.1)	.12	(5.0)
2	.272	(20.4)	.16	(6.7)
3	.255	(9.7)	.14	(6.0)
4	.223	(8.7)	.13	(5.8)
5	.208	(7.8)	.11	(4.7)
6	.188	(7.0)	.10	(4.2)

See Table 4 and Tables A.9 and A.10.

For specification 5 we add, for each brother, the father's characteristics except wealth to the sweeping regression.

For specification 6 we add, for each brother, the father's characteristics and father's wealth or income to the sweeping regression.

Table 8

Intraclass Correlations of Fathers and Sons

	Income		Wealth	
	r	t	r	t
Specification 1	.09	5.92	.10	5.15
Specification 2	.18	12.57	.22	11.69
Specification 3	.17	11.98	.20	10.96
Specification 4	.15	10.48	.18	9.70

Specification 1: Sweeping Regression includes constant and year dummies.

Specification 2: Sweeping Regression includes constant, year dummies, age and age^2.

Specification 3: Sweeping Regression includes constant, year dummies, age, age^2, T, R, and FB.

Specification 4: Sweeping Regression includes constant, year dummies, age, age^2, T, R, FB, W, C, L, and S.

See Table A.7 and A.8 for estimates.

Table 9

Different Aspects of Common Family Background

	All Brothers				Full Brothers			
	Ln Wealth		Ln Income		Ln Wealth		Ln Income	
	Variance	t	Variance	t	Variance	t	Variance	t
$\hat{\sigma}^2$ Fathers/Sons	.08	3.30	.07	4.22	.09	3.65	.08	4.09
$\hat{\sigma}^2$ Brothers	.20	6.84	.10	4.66	.20	6.56	.11	4.84
$\hat{\sigma}_\epsilon^2$	.48	30.29	.44	34.39	.41	26.40	.40	29.93
σ^2 wealth or income	.98		.73		.88		.71	

Table 10

Measurement of Individual and Family Effects for Brothers

	Ln Income		Ln Wealth	
	σ^2	% of total variance	σ^2	% of total variance
Mean Total Variance.....	.68	100	.95	100
Estimated Variance Accounted for by:				
Observed Characteristitcs (Occupation, age, etc).....	.09	13	.17	18
Unobserved Individual Effect	.22	32	.08	8
Unobserved Family Efect.....	.11	16	.18	19

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APPENDIX

TABLE A. 1

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
INCOME OF BROTHERS

EQUATION 1

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 5568 DF
LNINCOME	6.0546	0.82302			
D55	0.02115	0.14389	0.21339	0.08044	2.6528
D57	0.07169	0.25799	0.24428	0.04983	4.9027
D59	0.03979	0.1954	0.21469	0.06181	3.4733
D61	0.09498	0.2932	0.28737	0.04553	6.3112
D66	0.06989	0.25499	0.31450	0.05025	6.2583
D70	0.06201	0.24119	0.11698	0.05237	2.2335
D75	0.06738	0.25071	0.18016	0.05088	3.5407
D80	0.08423	0.27776	0.15762	0.04727	3.3346
D85	0.14373	0.35084	0.14936	0.04057	3.6812
D90	0.12939	0.33566	0.05193	0.04170	1.2454
D95	0.06882	0.25317	-0.02376	0.05052	-0.47035
D00	0.14695	0.35409			
AGE	40.552	12.233			
AGE2	1794.1	1083.4			
FBE	0.24498	0.43012			
T	14.965	11.680			
R	0.82204	0.38251			
W	0.08298	0.27587			
C	0.09462	0.29272			
S	0.03154	0.17479			
L	0.08190	0.27424			
INTERCEPT			5.9155	0.02853	207.34
R2	0.0146				
N	5580				
r			0.19584	0.01313	14.915

TABLE A. 1 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR INCOME OF BROTHERS

EQUATION 2

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 5568 DF
LNINCOME	6.0546	0.82302			
D55	0.02115	0.14389	0.40729	0.08081	5.0401
D57	0.07169	0.25799	0.45265	0.05205	8.6970
D59	0.03979	0.19547	0.39291	0.06275	6.2613
D61	0.09498	0.29322	0.44133	0.04716	9.3585
D66	0.06989	0.25499	0.39509	0.05074	7.7859
D70	0.06201	0.24119	0.16500	0.05225	3.1579
D75	0.06738	0.25071	0.21766	0.05043	4.3159
D80	0.08423	0.27776	0.19284	0.04670	4.1292
D85	0.14373	0.35084	0.21051	0.04051	5.1966
D90	0.12939	0.33566	0.10090	0.04123	2.4472
D95	0.06882	0.25317	-0.02234	0.04962	-0.45015
D00	0.14695	0.35409			
AGE	40.552	12.233	0.06810	0.00525	12.960
AGE2	1794.1	1083.4	-0.00067	0.00006	-11.472
FBE	0.24498	0.43012			
T	14.965	11.680			
R	0.82204	0.38251			
W	0.08298	0.27587			
C	0.09462	0.29272			
S	0.03154	0.17479			
L	0.08190	0.27424			
INTERCEPT			4.2930	0.11790	36.411
R2	0.0504				
N	5580				
r			0.20451	0.01311	15.604

TABLE A. 1 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR INCOME OF BROTHERS

EQUATION 3

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 5568 DF
LNINCOME	6.0546	0.82302			
D55	0.02115	0.14389	0.46352	0.08132	5.7002
D57	0.07169	0.25799	0.46447	0.05311	8.7459
D59	0.03979	0.19547	0.38059	0.06358	5.9864
D61	0.09498	0.29322	0.44987	0.04796	9.3796
D66	0.06989	0.25499	0.40855	0.05090	8.0271
D70	0.06201	0.24119	0.19781	0.05239	3.7757
D75	0.06738	0.25071	0.23600	0.05035	4.6869
D80	0.08423	0.27776	0.19086	0.04697	4.0639
D85	0.14373	0.35084	0.23631	0.04067	5.8106
D90	0.12939	0.33566	0.13538	0.04111	3.2936
D95	0.06882	0.25317	-0.02125	0.04930	-0.43104
D00	0.14695	0.35409			
AGE	40.552	12.233	0.06261	0.00530	11.817
AGE2	1794.1	1083.4	-0.00070	0.00006	-11.881
FBE	0.24498	0.43012	0.02583	0.02567	1.0062
T	14.965	11.680	0.00871	0.00190	4.5895
R	0.82204	0.38251	-0.26270	0.02875	-9.1372
W	0.08298	0.27587			
C	0.09462	0.29272			
S	0.03154	0.17479			
L	0.08190	0.27424			
INTERCEPT			4.6168	0.12122	38.088
R2	0.0673				
N	5580				
r			0.19190	0.01314	14.603

TABLE A. 1 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR INCOME OF BROTHERS

EQUATION 4

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 5568 DF
LNINCOME	6.0546	0.82302			
D55	0.02115	0.14389	0.57622	0.08006	7.1975
D57	0.07169	0.25799	0.57465	0.05264	10.917
D59	0.03979	0.19547	0.47046	0.06255	7.5219
D61	0.09498	0.29322	0.54801	0.04747	11.545
D66	0.06989	0.25499	0.48118	0.05012	9.6001
D70	0.06201	0.24119	0.26592	0.05155	5.1583
D75	0.06738	0.25071	0.28322	0.04947	5.7247
D80	0.08423	0.27776	0.23634	0.04617	5.1193
D85	0.14373	0.35084	0.26772	0.03994	6.7031
D90	0.12939	0.33566	0.16400	0.04034	4.0651
D95	0.06882	0.25317	0.00236	0.04830	0.48840
D00	0.14695	0.35409			
AGE	40.552	12.233	0.06184	0.00521	11.875
AGE2	1794.1	1083.4	-0.00068	0.00006	-11.794
FBE	0.24498	0.43012	0.04284	0.02519	1.7005
T	14.965	11.680	0.00933	0.00186	5.0228
R	0.82204	0.38251	-0.23154	0.02878	-8.0464
W	0.08298	0.27587	0.55720	0.03918	14.223
C	0.09462	0.29272	-0.05692	0.03668	-1.5517
S	0.03154	0.17479	0.01913	0.06041	0.31660
L	0.08190	0.27424	-0.18635	0.03882	-4.8009
INTERCEPT			4.5015	0.12068	37.300
R2	0.1069				
N	5580				
r			0.17415	0.01318	13.208

TABLE A. 2

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
WEALTH OF BROTHERS

EQUATION 1

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 3938 DF
LNWEALTH	6.8751	1.0050			
D60	0.14199	0.34908	-0.11358	0.05355	-2.1212
D70	0.20233	0.40179	0.02603	0.04844	0.5374
DD70	0.08570	0.27996	-0.32701	0.06335	-5.1623
D80	0.12475	0.33047	-0.31603	0.05575	-5.6687
D90	0.22465	0.41740	0.22801	0.04717	4.8335
D00	0.22059	0.41470			
AGE	40.182	11.393			
AGE2	1744.4	1014.6			
FBE	0.25685	0.43695			
T	14.137	10.409			
R	0.80857	0.39348			
W	0.07201	0.25853			
C	0.10066	0.30092			
L	0.08316	0.27617			
S	0.03043	0.17178			
INTERCEPT			6.9021	0.03351	205.99
R2	0.0330				
N	3944				
r			0.31378	0.01512	20.749

TABLE A. 2 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
WEALTH OF BROTHERS

EQUATION 2

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 3938 DF
LNWEALTH	6.8751	1.0050			
D60	0.14199	0.34908	0.29638	0.05311	5.5808
D70	0.20233	0.40179	0.24764	0.04648	5.3275
DD70	0.08570	0.27996	-0.06677	0.06038	-1.1057
D80	0.12475	0.33047	-0.13790	0.05271	-2.6162
D90	0.22465	0.41740	0.41713	0.04490	9.2911
D00	0.22059	0.41470			
AGE	40.182	11.393	0.09809	0.00734	13.3670
AGE2	1744.4	1014.6	-0.00078	0.00008	-9.4507
FBE	0.25685	0.43695			
T	14.137	10.409			
R	0.80857	0.39348			
W	0.07201	0.25853			
C	0.10066	0.30092			
L	0.08316	0.27617			
S	0.03043	0.17178			
INTERCEPT			4.1221	0.16369	25.182
R2	0.1538				
N	3944				
r			0.30250	0.01518	19.926

TABLE A. 2 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
WEALTH OF BROTHERS

EQUATION 3

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 3938 DF
LNWEALTH	6.8751	1.0050			
D60	0.14199	0.34908	0.33829	0.05402	6.2625
D70	0.20233	0.40179	0.33247	0.04684	7.0977
DD70	0.08570	0.27996	0.02164	0.06025	0.3592
D80	0.12475	0.33047	-0.09052	0.05226	-1.7321
D90	0.22465	0.41740	0.47381	0.04451	10.6450
D00	0.22059	0.41470			
AGE	40.182	11.393	0.09326	0.00733	12.7260
AGE2	1744.4	1014.6	-0.00082	0.00008	-10.1390
FBE	0.25685	0.43695	-0.17641	0.03425	-5.1512
T	14.137	10.409	0.01321	0.00240	5.5040
R	0.80857	0.39348	-0.34890	0.03776	-9.2401
W	0.07201	0.25853			
C	0.10066	0.30092			
L	0.08316	0.27617			
S	0.03043	0.17178			
INTERCEPT			4.4869	0.16507	27.182
R2	0.1798				
N	3944				
r			0.29486	0.01522	19.374

TABLE A. 2 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
WEALTH OF BROTHERS

EQUATION 4

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 3938 DF
LNWEALTH	6.8751	1.0050			
D60	0.14199	0.34908	0.42889	0.05345	8.0240
D70	0.20233	0.40179	0.39568	0.04620	8.5655
DD70	0.08570	0.27996	0.07721	0.05921	1.3040
D80	0.12475	0.33047	-0.04709	0.05140	-0.9162
D90	0.22465	0.41740	0.47836	0.04364	10.9610
D00	0.22059	0.41470			
AGE	40.182	11.393	0.08865	0.00721	12.3010
AGE2	1744.4	1014.6	-0.00077	0.00008	-9.7207
FBE	0.25685	0.43695	-0.14751	0.03368	-4.3803
T	14.137	10.409	0.01415	0.00235	6.0210
R	0.80857	0.39348	-0.36804	0.03779	-9.7404
W	0.07201	0.25853	0.23766	0.05687	4.1787
C	0.10066	0.30092	-0.39603	0.04864	-8.1426
L	0.08316	0.27617	-0.52661	0.05251	-10.0290
S	0.03043	0.17178	-0.17041	0.08377	-2.0343
INTERCEPT			4.6179	0.16362	28.224
R2	0.2158				
N	3944				
r			0.27749	0.01530	18.135

TABLE A. 3

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR INCOME OF FULL BROTHERS

EQUATION 1

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 4341 DF
LNINCOME	6.06520	0.81576			
AGE	40.66900	12.33300			
AGE2	1806.00000	1092.30000			
T	14.92700	11.67000			
R	0.80453	0.39661			
FBE	0.24874	0.43233			
W	0.07385	0.26155			
C	0.10357	0.30473			
F	0.70553	0.45586			
S	0.03155	0.17482			
L	0.07842	0.26886			
D55	0.02561	0.15797	0.22369	0.08477	2.6389
D57	0.08642	0.28102	0.26717	0.05543	4.8197
D59	0.04527	0.20791	0.21116	0.06817	3.0976
D61	0.11340	0.31711	0.30976	0.05158	6.0050
D66	0.08093	0.27276	0.35031	0.05648	6.2020
D70	0.07042	0.25588	0.14690	0.05888	2.4950
D75	0.07042	0.25588	0.19951	0.05888	3.3886
D80	0.08962	0.28567	0.18709	0.05487	3.4095
D85	0.13352	0.34017	0.16549	0.04962	3.3352
D90	0.11203	0.31543	0.09852	0.05174	1.9040
D95	0.06081	0.23902	-0.04566	0.06166	-0.7405
D00	0.11157	0.31487			
INTERCEPT			5.8918	0.03662	160.88
R2	0.0164				
N	4347				
r			0.19378	0.01484	13.060

TABLE A. 3 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR INCOME OF FULL BROTHERS

EQUATION 2

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 4341 DF
LNINCOME	6.06520	0.81576			
AGE	40.66900	12.33300	0.06828	0.00590	11.5740
AGE2	1806.00000	1092.30000	-0.00066	0.00007	-10.0630
T	14.92700	11.67000			
R	0.80453	0.39661			
FBE	0.24874	0.43233			
W	0.07385	0.26155			
C	0.10357	0.30473			
F	0.70553	0.45586			
S	0.03155	0.17482			
L	0.07842	0.26886			
D55	0.02561	0.15797	0.44002	0.08572	5.1332
D57	0.08642	0.28102	0.49462	0.05843	8.4658
D59	0.04527	0.20791	0.41315	0.06970	5.9275
D61	0.11340	0.31711	0.48135	0.05386	8.9379
D66	0.08093	0.27276	0.44343	0.05742	7.7227
D70	0.07042	0.25588	0.19464	0.05894	3.3024
D75	0.07042	0.25588	0.22235	0.05837	3.8092
D80	0.08962	0.28567	0.22355	0.05425	4.1207
D85	0.13352	0.34017	0.22800	0.04948	4.6081
D90	0.11203	0.31543	0.14218	0.05097	2.7895
D95	0.06081	0.23902	-0.04625	0.06047	-0.7647
D00	0.11157	0.31487			
INTERCEPT			4.2306	0.13354	31.679
R2	0.0549				
N	4347				
r			0.20139	0.01481	13.594

TABLE A. 3 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
INCOME OF FULL BROTHERS

EQUATION 3

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 4341 DF
LNINCOME	6.06520	0.81576			
AGE	40.66900	12.33300	0.06394	0.00595	10.7480
AGE2	1806.00000	1092.30000	-0.00068	0.00007	-10.3500
T	14.92700	11.67000	0.00665	0.00213	3.1204
R	0.80453	0.39661	-0.24124	0.03101	-7.7803
FBE	0.24874	0.43233	0.04012	0.02840	1.4127
W	0.07385	0.26155			
C	0.10357	0.30473			
F	0.70553	0.45586			
S	0.03155	0.17482			
L	0.07842	0.26886			
D55	0.02561	0.15797	0.48262	0.08678	5.5615
D57	0.08642	0.28102	0.49933	0.06002	8.3198
D59	0.04527	0.20791	0.39610	0.07078	5.5960
D61	0.11340	0.31711	0.48599	0.05494	8.8452
D66	0.08093	0.27276	0.45296	0.05758	7.8664
D70	0.07042	0.25588	0.22070	0.05913	3.7321
D75	0.07042	0.25588	0.23333	0.05822	4.0080
D80	0.08962	0.28567	0.21405	0.05448	3.9292
D85	0.13352	0.34017	0.24592	0.04960	4.9583
D90	0.11203	0.31543	0.16436	0.05074	3.2390
D95	0.06081	0.23902	-0.04924	0.06014	-0.8187
D00	0.11157	0.31487			
INTERCEPT			4.5122	0.13676	32.992
R2	0.0700				
N	4347				
r			0.19109	0.01485	12.873

TABLE A. 3 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
INCOME OF FULL BROTHERS

EQUATION 4

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 4341 DF
LNINCOME	6.06520	0.81576			
AGE	40.66900	12.33300	0.06291	0.00588	10.7020
AGE2	1806.00000	1092.30000	-0.00066	0.00007	-10.2490
T	14.92700	11.67000	0.00714	0.00210	3.4009
R	0.80453	0.39661	-0.22406	0.03128	-7.1624
FBE	0.24874	0.43233	0.05483	0.02807	1.9535
W	0.07385	0.26155	0.46854	0.04624	10.1340
C	0.10357	0.30473	-0.04669	0.03967	-1.1769
F	0.70553	0.45586			
S	0.03155	0.17482	0.04509	0.06811	0.6621
L	0.07842	0.26886	-0.24000	0.04466	-5.3743
D55	0.02561	0.15797	0.56417	0.08590	6.5677
D57	0.08642	0.28102	0.58151	0.05972	9.7374
D59	0.04527	0.20791	0.46550	0.07001	6.6488
D61	0.11340	0.31711	0.56099	0.05456	10.2820
D66	0.08093	0.27276	0.50286	0.05695	8.8306
D70	0.07042	0.25588	0.26343	0.05844	4.5078
D75	0.07042	0.25588	0.26338	0.05745	4.5845
D80	0.08962	0.28567	0.24125	0.05378	4.4860
D85	0.13352	0.34017	0.26010	0.04891	5.3176
D90	0.11203	0.31543	0.18370	0.05005	3.6700
D95	0.06081	0.23902	-0.03234	0.05925	-0.5458
D00	0.11157	0.31407			
INTERCEPT			4.4510	0.13683	32.528
R2	0.0997				
N	4347				
r			0.17855	0.01488	11.991

TABLE A. 4

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
WEALTH OF FULL BROTHERS

EQUATION 1

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 3034 DF
LNWEALTH	6.89570	0.96879			
AGE	40.43600	11.50000			
AGE2	1767.20000	1031.30000			
D60	0.17632	0.38115	-0.19100	0.05849	-3.2655
D70	0.23158	0.42191	-0.03560	0.05494	-0.6480
DD70	0.10263	0.30343	-0.38333	0.06807	-5.631
D80	0.13158	0.33809	-0.34506	0.06321	-5.4591
D90	0.18618	0.38932	0.18446	0.05772	3.1956
D00	0.17171	0.37719			
W	0.06151	0.24031			
C	0.10855	0.31113			
L	0.08322	0.27627			
S	0.03092	0.17313			
FBE	0.28586	0.45190			
R	0.80789	0.39402			
T	14.20500	10.37300			
INTERCEPT			6.9880	0.04163	167.85
R2	0.0360				
N	3040				
r			0.34679	0.01702	20.379

TABLE A. 4 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
WEALTH OF FULL BROTHERS

EQUATION 2

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 3034 DF
LNWEALTH	6.89570	0.96879			
AGE	40.43600	11.50000	0.09754	0.00800	12.1930
AGE2	1767.20000	1031.30000	-0.00080	0.00009	-8.9695
D60	0.17632	0.38115	0.20090	0.05874	3.4201
D70	0.23158	0.42191	0.17763	0.05319	3.3398
DD70	0.10263	0.30343	-0.14731	0.06540	-2.2523
D80	0.13158	0.33809	-0.19784	0.05998	-3.2983
D90	0.18618	0.38932	0.32611	0.05482	5.9484
D00	0.17171	0.37719			
W	0.06151	0.24031			
C	0.10855	0.31113			
L	0.08322	0.27627			
S	0.03092	0.17313			
FBE	0.28586	0.45190			
R	0.80789	0.39402			
T	14.20500	10.37300			
INTERCEPT			4.2625	0.18051	23.614
R2	0.1478				
N	3040				
r			0.31347	0.01723	18.195

TABLE A. 4 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR WEALTH OF FULL BROTHERS

EQUATION 3

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	TANDARD ERROR	T-RATIO 3034 DF
LNWEALTH	6.89570	0.96879			
AGE	40.43600	11.50000	0.09180	0.00797	11.5250
AGE2	1767.20000	1031.30000	-0.00083	0.00009	-9.4886
D60	0.17632	0.38115	0.22976	0.05985	3.8393
D70	0.23158	0.42191	0.24606	0.05303	4.6398
DD70	0.10263	0.30343	-0.07528	0.06488	-1.1604
D80	0.13158	0.33809	-0.15646	0.05923	-2.6418
D90	0.18618	0.38932	0.37057	0.05405	6.8564
D00	0.17171	0.37719			
W	0.06151	0.24031			
C	0.10855	0.31113			
L	0.08322	0.27627			
S	0.03092	0.17313			
FBE	0.28586	0.45190	-0.21721	0.03595	-6.0427
R	0.80789	0.39402	-0.33804	0.04146	-8.1527
T	14.20500	10.37300	0.01285	0.00258	4.9800
INTERCEPT					
R2	0.1783				
N	3040				
r			0.30289	0.01729	17.517

TABLE A. 4 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
WEALTH OF FULL BROTHERS

EQUATION 4

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 3034 DF
LNWEALTH	6.89570	0.96879			
AGE	40.43600	11.50000	0.08659	0.00788	10.989
AGE2	1767.20000	1031.30000	-0.00078	0.00009	-8.9773
D60	0.17632	0.38115	0.30912	0.05933	5.2102
D70	0.23158	0.42191	0.30290	0.05243	5.7769
DD70	0.10263	0.30343	-0.02916	0.06396	-0.45597
D80	0.13158	0.33809	-0.12335	0.05835	-2.1139
D90	0.18618	0.38932	0.37777	0.05318	7.1037
D00	0.17171	0.37719			
W	0.06151	0.24031	0.22547	0.06680	3.3755
C	0.10855	0.31113	-0.33499	0.05195	-6.4478
L	0.08322	0.27627	-0.46928	0.05805	-8.0845
S	0.03092	0.17313	-0.24455	0.09206	-2.6563
FBE	0.28586	0.45190	-0.18481	0.03553	-5.2010
R	0.80789	0.39402	-0.37062	0.04155	-8.9210
T	14.20500	10.37300	0.01377	0.00254	5.4296
INTERCEPT			4.8121	0.18106	26.577
R2	0.2086				
N	3040				
r			0.28975	0.01736	16.686

TABLE A. 5

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR INCOME OF HALF BROTHERS

EQUATION 1

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 1206 DF
LNINCOME	6.0159	0.84808			
AGE	40.12500	11.86000			
AGE2	1750.60000	1049.70000			
T	15.10100	11.72100			
R	0.88557	0.31846			
FBE	0.23134	0.42187			
W	0.11609	0.32046			
C	0.06219	0.24160			
F	0.69486	0.46066			
S	0.03151	0.17476			
L	0.09453	0.29268			
D55	0.00498	0.07039	0.42792	0.34865	1.2274
D57	0.01824	0.13388	0.22270	0.18633	1.1952
D59	0.01990	0.13972	0.40420	0.17890	2.2593
D61	0.02819	0.16559	0.27106	0.15241	1.7785
D66	0.02985	0.17025	0.16022	0.14852	1.0788
D70	0.03151	0.17476	0.03144	0.14495	0.2169
D75	0.05639	0.23076	0.16490	0.11266	1.4637
D80	0.06468	0.24606	0.09360	0.10650	0.8789
D85	0.18076	0.38498	0.13475	0.07378	1.8263
D90	0.19237	0.39433	-0.03128	0.07243	-0.4319
D95	0.09784	0.29723	0.04415	0.09071	0.4867
D00	0.27529	0.44685			
INTERCEPT			5.9503	0.04645	128.10
R2	0.0040				
N	1206				
r			0.19782	0.02825	7.002

TABLE A. 5 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR INCOME OF HALF BROTHERS

EQUATION 2

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 1206 DF
LNINCOME	6.0159	0.84808			
AGE	40.12500	11.86000	0.06909	0.01181	5.8520
AGE2	1750.60000	1049.70000	-0.00071	0.00013	-5.3952
T	15.10100	11.72100			
R	0.88557	0.31846			
FBE	0.23134	0.42187			
W	0.11609	0.32046			
C	0.06219	0.24160			
F	0.69486	0.46066			
S	0.03151	0.17476			
L	0.09453	0.29268			
D55	0.00498	0.07039	0.58815	0.34521	1.7037
D57	0.01824	0.13388	0.45228	0.18886	2.3948
D59	0.01990	0.13972	0.53057	0.17882	2.9671
D61	0.02819	0.16559	0.43192	0.15440	2.7975
D66	0.02985	0.17025	0.26074	0.14880	1.7523
D70	0.03151	0.17476	0.16472	0.14606	1.1278
D75	0.05639	0.23076	0.29045	0.11429	2.5414
D80	0.06468	0.24606	0.15085	0.10621	1.4203
D85	0.18076	0.38498	0.20216	0.07492	2.6983
D90	0.19237	0.39433	0.02579	0.07310	0.3529
D95	0.09784	0.29723	0.04842	0.08939	0.5417
D00	0.27529	0.44685			
INTERCEPT			4.3685	0.26267	16.631
R2	0.0329				
N	1206				
r			0.20453	0.01994	10.258

TABLE A. 5 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
INCOME OF HALF BROTHERS

EQUATION 3

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 1206 DF
LNINCOME	6.0159	0.84808			
AGE	40.12500	11.86000	0.05794	0.01189	4.8738
AGE2	1750.60000	1049.70000	-0.00075	0.00013	-5.7312
T	15.10100	11.72100	0.01871	0.00426	4.3901
R	0.88557	0.31846	-0.38864	0.07779	-4.9961
FBE	0.23134	0.42187	-0.02936	0.06555	-0.4479
D55	0.00498	0.07039	0.82284	0.34279	2.4004
D57	0.01824	0.13388	0.52819	0.18923	2.7913
D59	0.01990	0.13972	0.58858	0.18443	3.1913
D61	0.02819	0.16559	0.46792	0.16030	2.9190
D66	0.02985	0.17025	0.35003	0.15588	2.2456
D70	0.03151	0.17476	0.25452	0.14789	1.7210
D75	0.05639	0.23076	0.37892	0.11604	3.2653
D80	0.06468	0.24606	0.21162	0.10789	1.9615
D85	0.18076	0.38498	0.27265	0.07626	3.5753
D90	0.19237	0.39433	0.12074	0.07387	1.6345
D95	0.09784	0.29723	0.06860	0.08824	0.7774
D00	0.27529	0.44685			
W	0.11609	0.32046			
C	0.06219	0.24160			
F	0.69486	0.46066			
S	0.03151	0.17476			
L	0.09453	0.29268			
INTERCEPT			4.8957	0.27183	18.010
R2	0.0635				
N	1206				
r			0.18889	0.02830	6.675

TABLE A. 5 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
INCOME OF HALF BROTHERS

EQUATION 4

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 1206 DF
LNINCOME	6.0159	0.84808			
AGE	40.12500	11.86000	0.05967	0.01144	5.2179
AGE2	1750.60000	1049.70000	-0.00073	0.00013	-5.8091
T	15.10100	11.72100	0.01846	0.00410	4.5042
R	0.88557	0.31846	-0.32528	0.07536	-4.3166
FBE	0.23134	0.42187	0.01091	0.06300	0.1731
W	0.11609	0.32046	0.76947	0.07448	10.3310
C	0.06219	0.24160	-0.13469	0.09594	-1.4040
F	0.69486	0.46066			
S	0.03151	0.17476	-0.06193	0.13130	-0.4717
L	0.09453	0.29268	-0.03215	0.07991	-0.4023
D55	0.00498	0.07039	0.98734	0.32820	3.0084
D57	0.01824	0.13388	0.72442	0.18179	3.9850
D59	0.01990	0.13972	0.66866	0.17656	3.7873
D61	0.02819	0.16559	0.61956	0.15436	4.0136
D66	0.02985	0.17025	0.44644	0.14942	2.9878
D70	0.03151	0.17476	0.41551	0.14218	2.9224
D75	0.05639	0.23076	0.48327	0.11143	4.3370
D80	0.06468	0.24606	0.33520	0.10394	3.2250
D85	0.18076	0.38498	0.36459	0.07351	4.9599
D90	0.19237	0.39433	0.18194	0.07098	2.5634
D95	0.09784	0.29723	0.11141	0.08456	1.3175
D00	0.27529	0.44685			
INTERCEPT			4.5878	0.26472	17.331
R2	0.1454				
N	1206				
r			0.14554	0.02851	5.105

TABLE A. 6

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
WEALTH OF HALF BROTHERS

EQUATION 1

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 889 DF
LNWEALTH	6.80570	1.11620			
AGE	39.33100	10.99100			
AGE2	1667.60000	953.01000			
D60	0.02655	0.16085	-0.17295	0.23085	-0.7492
D70	0.10398	0.30541	-0.02652	0.12715	-0.2086
DD70	0.02876	0.16723	-0.55253	0.22239	-2.4845
D80	0.10177	0.30251	-0.43433	0.12823	-3.3871
D90	0.35398	0.47847	0.28198	0.08472	3.3284
D00	0.38496	0.48685			
W	0.10730	0.30967			
C	0.07412	0.26210			
L	0.08297	0.27598			
S	0.02876	0.16723			
FBE	0.15929	0.36615			
R	0.81084	0.39185			
T	13.91000	10.53300			
INTERCEPT			6.7734	0.059	115.52
R2	0.0396				
N	904				
r			0.21203	0.03254	6.516

TABLE A. 6 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
WEALTH OF HALF BROTHERS

EQUATION 2

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 889 DF
LNWEALTH	6.80570	1.11620			
AGE	39.33100	10.99100	0.09393	0.01796	5.2311
AGE2	1667.60000	953.01000	-0.00063	0.00021	-3.0934
D60	0.02655	0.16085	0.48980	0.22126	2.2137
D70	0.10398	0.30541	0.29903	0.12109	2.4694
DD70	0.02876	0.16723	0.06763	0.21281	0.3178
D80	0.10177	0.30251	-0.05056	0.12317	-0.4105
D90	0.35398	0.47847	0.59826	0.08290	7.2170
D00	0.38496	0.48685			
W	0.10730	0.30967			
C	0.07412	0.26210			
L	0.08297	0.27598			
S	0.02876	0.16723			
FBE	0.15929	0.36615			
R	0.81084	0.39185			
T	13.91000	10.53300			
INTERCEPT			3.9150	0.390	10.031
R2	0.1729				
N	904				
r			0.27051	0.03205	8.439

TABLE A. 6 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
WEALTH OF HALF BROTHERS

EQUATION 3

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 889 DF
LNWEALTH	6.80570	1.11620			
AGE	39.33100	10.99100	0.09619	0.01794	5.3604
AGE2	1667.60000	953.01000	-0.00074	0.00021	-3.6162
D60	0.02655	0.16085	0.37469	0.23087	1.6229
D70	0.10398	0.30541	0.38589	0.12997	2.9691
DD70	0.02876	0.16723	0.21007	0.21556	0.9745
D80	0.10177	0.30251	-0.00771	0.12266	-0.6283
D90	0.35398	0.47847	0.67350	0.08375	8.0419
D00	0.38496	0.48685			
FBE	0.15929	0.36615	-0.00473	0.10347	-0.4575
R	0.81084	0.39185	-0.43687	0.08952	-4.8802
T	13.91000	10.53300	0.00952	0.00627	1.5174
W	0.10730	0.30967			
C	0.07412	0.26210			
L	0.08297	0.27598			
S	0.02876	0.16723			
INTERCEPT			4.1889	0.39289	10.662
R2	0.1926				
N	904				
r			0.25524	0.03219	7.928

TABLE A. 6 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
WEALTH OF HALF BROTHERS

EQUATION 4

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 889 DF
LNWEALTH	6.80570	1.11620			
AGE	39.33100	10.99100	0.09332	0.01737	5.3726
AGE2	1667.60000	953.01000	-0.00072	0.00020	-3.6455
D60	0.02655	0.16085	0.49803	0.22616	2.2021
D70	0.10398	0.30541	0.48216	0.12635	3.8161
DD70	0.02876	0.16723	0.33383	0.21014	1.5886
D80	0.10177	0.30251	0.07918	0.12001	0.6597
D90	0.35398	0.47847	0.65758	0.08132	8.0861
D00	0.38496	0.48685			
W	0.10730	0.30967	0.29713	0.11155	2.6635
C	0.07412	0.26210	-0.64779	0.12680	-5.1090
L	0.08297	0.27598	-0.66933	0.12047	-5.5559
S	0.02876	0.16723	0.12237	0.19618	0.6238
FBE	0.15929	0.36615	0.00556	0.10023	0.5545
R	0.81084	0.39185	-0.40310	0.08955	-4.5015
T	13.91000	10.53300	0.01109	0.00607	1.8269
INTERCEPT			4.2667	0.38592	11.056
R2	0.2469				
N	904				
r			0.22467	0.03245	6.925

TABLE A. 7

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
INCOME OF FATHERS AND SONS

EQUATION 1

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 4612 DF
LNINCOME	6.06330	0.86465			
D55	0.03460	0.18279	0.36219	0.07762	4.6664
D57	0.07915	0.27001	0.37080	0.05869	6.2962
D59	0.04931	0.21653	0.23608	0.06834	3.4547
D61	0.11246	0.31596	0.38047	0.05367	7.0892
D66	0.08261	0.27533	0.38507	0.05818	6.6185
D70	0.06964	0.25456	0.14124	0.06115	2.3096
D75	0.07050	0.25602	0.24302	0.06093	3.9888
D80	0.09343	0.29106	0.17199	0.05626	3.0572
D85	0.14273	0.34984	0.09942	0.05083	1.9559
D90	0.10727	0.30949	0.07194	0.05430	1.3250
D95	0.05234	0.22273	-0.11566	0.06697	-1.7269
D00	0.10597	0.30783			
AGE	47.92400	17.99000			
AGE2	2620.3	1797.8			
FBE	0.30255	0.45941			
T	15.76800	13.12600			
R	0.82288	0.38181			
W	0.06856	0.25272			
C	0.12284	0.32829			
S	0.02379	0.15241			
L	0.08715	0.28209			
F	0.69420	0.46079			
INTERCEPT			5.8763	0.03851	152.60
R2	0.0281				
N	4624				
r			0.08672	0.01465	5.918

TABLE A. 7 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
INCOME OF FATHERS AND SONS

EQUATION 2

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 4612 DF
LNINCOME	6.06330	0.86465			
D55	0.03460	0.18279	0.42481	0.07500	5.6639
D57	0.07915	0.27001	0.43003	0.05719	7.5197
D59	0.04931	0.21653	0.28086	0.06605	4.2525
D61	0.11246	0.31596	0.40109	0.05201	7.7114
D66	0.08261	0.27533	0.37150	0.05609	6.6239
D70	0.06964	0.25456	0.13025	0.05880	2.2154
D75	0.07050	0.25602	0.24540	0.05856	4.1909
D80	0.09343	0.29106	0.18901	0.05412	3.4926
D85	0.14273	0.34984	0.12060	0.04888	2.4670
D90	0.10727	0.30949	0.07850	0.05215	1.5054
D95	0.05234	0.22273	-0.11063	0.06419	-1.7234
D00	0.10597	0.30783			
AGE	47.924	17.990	0.07787	0.00398	19.547
AGE2	2620.3	1797.8	-0.00073	0.00004	-18.329
FBE	0.30255	0.45941			
T	15.768	13.126			
R	0.82288	0.38181			
W	0.06856	0.25272			
C	0.12284	0.32829			
S	0.02379	0.15241			
L	0.08715	0.28209			
INTERCEPT			4.0453	0.09757	41.462
R2	0.1073				
N	4624				
r			0.18180	0.01446	12.569

TABLE A. 7 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
INCOME OF FATHERS AND SONS

EQUATION 3

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 4612 DF
LNINCOME	6.0633	0.86465			
D55	0.03460	0.18279	0.66891	0.08129	8.2284
D57	0.07915	0.27001	0.64756	0.06503	9.9581
D59	0.04931	0.21653	0.47662	0.07176	6.6419
D61	0.11246	0.31596	0.60825	0.05865	10.371
D66	0.08261	0.27533	0.55628	0.06052	9.1911
D70	0.06964	0.25456	0.29862	0.06156	4.8510
D75	0.07050	0.25602	0.38106	0.06033	6.3165
D80	0.09343	0.29106	0.28702	0.05552	5.1698
D85	0.14273	0.34984	0.22474	0.04982	4.5106
D90	0.10727	0.30949	0.15147	0.05232	2.8954
D95	0.05234	0.22273	-0.07967	0.06365	-1.2517
D00	0.10597	0.30783			
AGE	47.924	17.990	0.07018	0.00408	17.207
AGE2	2620.3	1797.8	-0.00071	0.00004	-18.006
FBE	0.30255	0.45941	-0.02113	0.02662	-0.79378
T	15.768	13.126	0.01354	0.00167	8.0994
R	0.82288	0.38181	-0.16823	0.03212	-5.2368
W	0.06856	0.25272			
C	0.12284	0.32829			
S	0.02379	0.15241			
L	0.08715	0.28209			
INTERCEPT			4.1702	0.10031	41.571
R2	0.1250				
N	4624				
r			0.17357	0.01449	11.982

TABLE A. 7 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
INCOME OF FATHERS AND SONS

EQUATION 4

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 4612 DF
LNINCOME	6.0633	0.86465			
D55	0.03460	0.18279	0.72876	0.08081	9.0187
D57	0.07915	0.27001	0.70863	0.06483	10.930
D59	0.04931	0.21653	0.53168	0.07135	7.4520
D61	0.11246	0.31596	0.67045	0.05848	11.464
D66	0.08261	0.27533	0.61288	0.06014	10.191
D70	0.06964	0.25456	0.34377	0.06107	5.6288
D75	0.07050	0.25602	0.40156	0.05972	6.7238
D80	0.09343	0.29106	0.32834	0.05513	5.9561
D85	0.14273	0.34984	0.23521	0.04930	4.7707
D90	0.10727	0.30949	0.16355	0.05176	3.1597
D95	0.05234	0.22273	-0.07467	0.06294	-1.1863
D00	0.10597	0.30783			
AGE	47.924	17.990	0.06852	0.00405	16.913
AGE2	2620.3	1797.8	-0.00069	0.00004	-17.595
FBE	0.30255	0.45941	-0.00528	0.02647	-0.19959
T	15.768	13.126	0.01365	0.00165	8.2519
R	0.82288	0.38181	-0.16374	0.03198	-5.1207
W	0.06856	0.25272	0.42561	0.04813	8.8433
C	0.12284	0.32829	-0.12843	0.03673	-3.4967
S	0.02379	0.15241	-0.02483	0.07819	-0.31760
L	0.08715	0.28209	-0.16480	0.04274	-3.8563
INTERCEPT			4.1524	0.10159	40.873
R2	0.1460				
N	4624				
r			0.15239	0.01454	10.483

TABLE A. 8

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
WEALTH OF FATHERS AND SONS

EQUATION 1

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 2760 DF
LNWEALTH	6.9730	1.0276			
D60	0.19089	0.39307	-0.12799	0.06301	-2.0312
D70	0.25958	0.43848	0.06790	0.05880	1.1547
DD70	0.09472	0.29288	-0.17577	0.07707	-2.2808
D80	0.11569	0.31991	-0.25849	0.07232	-3.5740
D90	0.15691	0.36378	0.34765	0.06626	5.2468
D00	0.18221	0.38609			
AGE	50.528	17.759			
AGE2	2868.3	1866.3			
FBE	0.33044	0.47046			
T	17.910	12.332			
R	0.82538	0.37971			
W	0.06580	0.24798			
C	0.12473	0.33047			
L	0.09436	0.29238			
S	0.02965	0.16964			
INTERCEPT			6.9718	0.04507	154.69
R2	0.0304				
N	2766				
r			0.09751	0.01893	5.151

TABLE A. 8 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
WEALTH OF FATHERS AND SONS

EQUATION 2

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 2760 DF
LNWEALTH	6.9730	1.0276			
D60	0.19089	0.39307	0.00569	0.06068	0.0938
D70	0.25958	0.43848	0.13504	0.05602	2.4108
DD70	0.09472	0.29288	-0.12495	0.07302	-1.7112
D80	0.11569	0.31991	-0.24061	0.06833	-3.5210
D90	0.15691	0.36378	0.35748	0.06265	5.7064
D00	0.18221	0.38609			
AGE	50.528	17.759	0.09538	0.00651	14.660
AGE2	2868.3	1866.3	-0.00078	0.00006	-12.584
FBE	0.33044	0.47046			
T	17.910	12.332			
R	0.82538	0.37971			
W	0.06580	0.24798			
C	0.12473	0.33047			
L	0.09436	0.29238			
S	0.02965	0.16964			
INTERCEPT			4.3378	0.16130	26.893
R2	0.1397				
N	2766				
r			0.21714	0.01857	11.695

TABLE A. 8 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
WEALTH OF FATHERS AND SONS

EQUATION 3

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 2760 DF
LNWEALTH	6.9730	1.0276			
D60	0.19089	0.39307	0.45449	0.07368	6.1681
D70	0.25958	0.43848	0.47995	0.06212	7.7265
DD70	0.09472	0.29288	0.22281	0.07677	2.9024
D80	0.11569	0.31991	-0.00687	0.06904	-0.0996
D90	0.15691	0.36378	0.47585	0.06098	7.8034
D00	0.18221	0.38609			
AGE	50.528	17.759	0.08541	0.00635	13.443
AGE2	2868.3	1866.3	-0.00078	0.00006	-13.130
FBE	0.33044	0.47046			
T	17.910	12.332	0.02834	0.00247	11.481
R	0.82538	0.37971	-0.35858	0.04656	-7.7021
W	0.06580	0.24798			
C	0.12473	0.33047			
L	0.09436	0.29238			
S	0.02965	0.16964			
INTERCEPT			4.4666	0.16294	27.413
R2	0.2036				
N	2766				
r			0.20402	0.01862	10.957

TABLE A. 8 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
WEALTH OF FATHERS AND SONS

EQUATION 4

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 2760 DF
LNWEALTH	6.9730	1.0276			
D60	0.19089	0.39307	0.49707	0.07271	6.8366
D70	0.25958	0.43848	0.52379	0.06116	8.5642
DD70	0.09472	0.29288	0.26995	0.07555	3.5733
D80	0.11569	0.31991	0.02091	0.06777	0.30847
D90	0.15691	0.36378	0.46673	0.05979	7.8067
D00	0.18221	0.38609			
AGE	50.528	17.759	0.07942	0.00630	12.598
AGE2	2868.3	1866.3	-0.00072	0.00006	-12.109
FBE	0.33044	0.47046	-0.19344	0.03730	-5.1858
T	17.910	12.332	0.02718	0.00242	11.222
R	0.82538	0.37971	-0.36945	0.04613	-8.0087
W	0.06580	0.24798	0.44178	0.07133	6.1939
C	0.12473	0.33047	-0.27043	0.05353	-5.0523
L	0.09436	0.29238	-0.41046	0.06039	-6.7973
S	0.02965	0.16964	-0.03214	0.10192	-0.31536
INTERCEPT			4.6128	0.16319	28.266
R2	0.2351				
N	2766				
r			0.18143	0.01871	9.700

TABLE A. 9

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
INCOME OF BROTHERS
(WITH FATHER'S CHARACTERISTICS)

EQUATION 1

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 1632 DF
LNINCOME	6.04830	0.79167			
AGE	33.80400	9.46890			
AGE2	1232.30000	764.68000			
W	0.09097	0.28765			
C	0.06960	0.25454			
F	0.70269	0.45722			
S	0.03968	0.19527			
L	0.08730	0.28236			
FBE	0.24908	0.43261			
T	9.22410	8.13820			
R	0.84005	0.36667			
D55	0.02198	0.14666	0.12760	0.14616	0.87303
D57	0.07936	0.27039	0.08562	0.09404	0.91048
D59	0.05250	0.22311	0.06189	0.10628	0.58230
D61	0.15140	0.35855	0.07734	0.08100	0.95473
D66	0.08791	0.28325	0.20206	0.09152	2.20770
D70	0.06349	0.24392	0.04404	0.10021	0.43948
D75	0.07082	0.25660	0.11255	0.09707	1.15950
D80	0.08547	0.27967	0.06901	0.09220	0.74855
D85	0.16239	0.36892	-0.10290	0.07995	-1.28720
D90	0.10379	0.30507	-0.03015	0.08783	-0.34330
D95	0.02686	0.16173	-0.05936	0.13496	-0.43982
D00	0.09402	0.29194			
LNFINCOME	6.28860	0.98115			
FAGE	66.31700	8.94610			
FAGE2	4478.00000	1230.30000			
FW	0.06960	0.25454			
FC	0.12332	0.32891			
FF	0.74359	0.43678			
FS	0.01709	0.12966			
FL	0.04640	0.21041			
FFBE	0.32357	0.46798			
FT	23.14200	13.76200			
FR	0.84127	0.36554			
KIDS	14.66900	8.23390			
INF	1.31620	1.91230			
SIB	13.26300	6.98010			
PLURAL	2.67520	1.60620			
WIVES	1.90230	1.19870			
INTERCEPT			6.0107	0.06362	94.476
R2	0.0054				
N	1638				
r			0.11989	0.02402	4.991

TABLE A. 9 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
INCOME OF BROTHERS
(WITH FATHER'S CHARACTERISTICS)

EQUATION 2

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 1632 DF
LNINCOME	6.04830	0.79167			
AGE	33.80400	9.46890	0.05779	0.00950	6.08580
AGE2	1232.30000	764.68000	-0.00044	0.00012	-3.77860
W	0.09097	0.28765			
C	0.06960	0.25454			
F	0.70269	0.45722			
S	0.03968	0.19527			
L	0.08730	0.28236			
FBE	0.24908	0.43261			
T	9.22410	8.13820			
R	0.84005	0.36667			
D55	0.02198	0.14666	0.44293	0.14414	3.07290
D57	0.07936	0.27039	0.42330	0.09601	4.40890
D59	0.05250	0.22311	0.41143	0.10759	3.82410
D61	0.15140	0.35855	0.38441	0.08318	4.62140
D66	0.08791	0.28325	0.35967	0.08977	4.00670
D70	0.06349	0.24392	0.15851	0.09747	1.62620
D75	0.07082	0.25660	0.26195	0.09477	2.76420
D80	0.08547	0.27967	0.15723	0.08961	1.75470
D85	0.16239	0.36892	0.06372	0.07873	0.80933
D90	0.10379	0.30507	0.07284	0.08538	0.85303
D95	0.02686	0.16173	-0.10709	0.13105	-0.81720
D00	0.09402	0.29194			
LNFINCOME	6.28860	0.98115			
FAGE	66.31700	8.94610			
FAGE2	4478.00000	1230.30000			
FW	0.06960	0.25454			
FC	0.12332	0.32891			
FS	0.01709	0.12966			
FL	0.04640	0.21041			
FFBE	0.32357	0.46798			
FT	23.14200	13.76200			
FR	0.84127	0.36554			
KIDS	14.66900	8.23390			
INF	1.31620	1.91230			
SIB	13.26300	6.98010			
PLURAL	2.67520	1.60620			
WIVES	1.90230	1.19870			
FF	0.74359	0.43678			
INTERCEPT			4.4201	0.20681	21.372
R2	0.0718				
N	1638				
r			0.16709	0.02386	7.004

TABLE A. 9 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
INCOME OF BROTHERS
(WITH FATHER'S CHARACTERISTICS)

EQUATION 3

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 1632 DF
LNINCOME	6.04830	0.79167			
AGE	33.80400	9.46890	0.05080	0.01040	4.88620
AGE2	1232.30000	764.68000	-0.00044	0.00012	-3.74870
W	0.09097	0.28765			
C	0.06960	0.25454			
F	0.70269	0.45722			
S	0.03968	0.19527			
L	0.08730	0.28236			
D55	0.02198	0.14666	0.51140	0.14403	3.55060
D57	0.07936	0.27039	0.41025	0.09724	4.21910
D59	0.05250	0.22311	0.41859	0.10840	3.86140
D61	0.15140	0.35855	0.41430	0.08405	4.92930
D66	0.08791	0.28325	0.39044	0.08976	4.34970
D70	0.06349	0.24392	0.21721	0.09842	2.20710
D75	0.07082	0.25660	0.29965	0.09450	3.17100
D80	0.08547	0.27967	0.15905	0.08951	1.77690
D85	0.16239	0.36892	0.14744	0.08012	1.84020
D90	0.10379	0.30507	0.14980	0.08589	1.74410
D95	0.02686	0.16173	-0.08735	0.13015	-0.67114
T	9.22410	8.13820	0.01082	0.00386	2.80000
R	0.84005	0.36667	-0.31549	0.05362	-5.88420
FBE	0.24908	0.43261	0.02468	0.04496	0.54905
D00	0.09402	0.29194			
LNFINCOME	6.28860	0.98115			
FAGE	66.31700	8.94610			
FAGE2	4478.00000	1230.30000			
FW	0.06960	0.25454			
FC	0.12332	0.32891			
FS	0.01709	0.12966			
FL	0.04640	0.21041			
FFBE	0.32357	0.46798			
FT	23.14200	13.76200			
FR	0.84127	0.36554			
KIDS	14.66900	8.23390			
INF	1.31620	1.91230			
SIB	13.26300	6.98010			
PLURAL	2.67520	1.60620			
WIVES	1.90230	1.19870			
FF	0.74359	0.43678			
INTERCEPT			4.7839	0.21995	21.750
R2	0.0931				
N	1638				
r			0.15238	0.02391	6.372

TABLE A. 9 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
INCOME OF BROTHERS
(WITH FATHER'S CHARACTERISTICS)

EQUATION 4

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 1632 DF
LNINCOME	6.04830	0.79167			
AGE	33.80400	9.46890	0.05172	0.01015	5.09670
AGE2	1232.30000	764.68000	-0.00041	0.00012	-3.56440
D55	0.02198	0.14666	0.65908	0.14158	4.65500
D57	0.07936	0.27039	0.58946	0.09670	6.09600
D59	0.05250	0.22311	0.59166	0.10721	5.51880
D61	0.15140	0.35855	0.58329	0.08397	6.94640
D66	0.08791	0.28325	0.52915	0.08874	5.96290
D70	0.06349	0.24392	0.29818	0.09642	3.09240
D75	0.07082	0.25660	0.37312	0.09256	4.03130
D80	0.08547	0.27967	0.24988	0.08816	2.83440
D85	0.16239	0.36892	0.18922	0.07806	2.42400
D90	0.10379	0.30507	0.22720	0.08395	2.70650
D95	0.02686	0.16173	-0.02047	0.12703	-0.16117
D00	0.09402	0.29194			
T	9.22410	8.13820	0.00990	0.00375	2.64210
R	0.84005	0.36667	-0.29588	0.05291	-5.59240
FBE	0.24908	0.43261	0.03484	0.04393	0.79307
W	0.09097	0.28765	0.60794	0.06740	9.02000
C	0.06960	0.25454	-0.00213	2 0.0729	-0.29256
F	0.70269	0.45722			
S	0.03968	0.19527	-0.14266	0.09519	-1.49870
L	0.08730	0.28236	-0.24648	0.06585	-3.74300
LNFINCOME	6.28860	0.98115			
FAGE	66.31700	8.94610			
FAGE2	4478.00000	1230.30000			
FT	23.14200	13.76200			
FR	0.84127	0.36554			
FFBE	0.32357	0.46798			
FW	0.06960	0.25454			
FC	0.12332	0.32891			
FF	0.74359	0.43678			
FS	0.01709	0.12966			
FL	0.04640	0.21041			
KIDS	14.66900	8.23390			
INF	1.31620	1.91230			
SIB	13.26300	6.98010			
PLURAL	2.67520	1.60620			
WIVES	1.90230	1.19870			
INTERCEPT			4.5755	0.21968	20.828
R2	0.1488				
N	1638				
r			0.13756	0.02397	5.740

TABLE A. 10

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
WEALTH OF BROTHERS
(WITH FATHER'S CHARACTERISTICS)

EQUATION 1

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 1304 DF
LNWEALTH	6.78630	0.93108			
AGE	36.15700	8.83670			
AGE2	1385.40000	724.30000			
D60	0.17099	0.37665	-0.06644	0.08495	-0.78202
D70	0.21374	0.41010	0.07130	0.08037	0.88718
DD70	0.09466	0.29285	-0.17438	0.10137	-1.7203
D80	0.13740	0.34441	-0.29980	0.09025	-3.3221
D90	0.19389	0.39550	0.14849	0.08228	1.8047
D00	0.18931	0.39191			
W	0.08015	0.27163			
C	0.07786	0.26806			
L	0.08092	0.27281			
S	0.02595	0.15906			
FBE	0.25038	0.43340			
T	11.15400	7.61440			
R	0.73588	0.44103			
LNFWEALTH	7.40460	1.10730			
FAGE	69.38000	8.88040			
FAGE2	4892.40000	1245.40000			
FW	0.06107	0.23955			
FC	0.10840	0.31100			
FL	0.07176	0.25818			
FS	0.02290	0.14964			
FFBE	0.33893	0.47353			
FT	26.46900	14.09100			
FR	0.66718	0.47140			
KIDS	16.31000	10.70600			
INF	1.47630	2.07480			
PLURAL	2.74050	1.65920			
SIB	14.75100	9.19230			
INTERCEPT			6.8113	0.05852	116.38
R2	0.0202				
N	1310				
r			0.26198	0.02615	10.018

TABLE A. 10 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
WEALTH OF BROTHERS
(WITH FATHER'S CHARACTERISTICS)

EQUATION 2

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 1304 DF
LNWEALTH	6.78630	0.93108			
AGE	36.15700	8.83670	0.09118	0.01427	6.3875
AGE2	1385.40000	724.30000	-0.00067	0.00017	-3.8844
D60	0.17099	0.37665	0.36567	0.08635	4.2348
D70	0.21374	0.41010	0.33500	0.07827	4.2803
DD70	0.09466	0.29285	0.14864	0.09845	1.5099
D80	0.13740	0.34441	-0.05492	0.08716	-0.6301
D90	0.19389	0.39550	0.39620	0.07968	4.9724
D00	0.18931	0.39191			
W	0.08015	0.27163			
C	0.07786	0.26806			
L	0.08092	0.27281			
S	0.02595	0.15906			
FBE	0.25038	0.43340			
T	11.15400	7.61440			
R	0.73588	0.44103			
LNFWEALTH	7.40460	1.10730			
FAGE	69.38000	8.88040			
FAGE2	4892.40000	1245.40000			
FW	0.06107	0.23955			
FC	0.10840	0.31100			
FL	0.07176	0.25818			
FS	0.02290	0.14964			
FFBE	0.33893	0.47353			
FT	26.46900	14.09100			
FR	0.66718	0.47140			
KIDS	16.31000	10.70600			
INF	1.47630	2.07480			
PLURAL	2.74050	1.65920			
SIB	14.75100	9.19230			
INTERCEPT			4.2008	0.30266	13.879
R2	0.1340				
N	1310				
r			0.27347	0.02606	10.492

TABLE A. 10 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
WEALTH OF BROTHERS
(WITH FATHER'S CHARACTERISTICS)

EQUATION 3

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 1304 DF
LNWEALTH	6.78630	0.93108			
AGE	36.15700	8.83670	0.08294	0.01461	5.6766
AGE2	1385.40000	724.30000	-0.00061	0.00017	-3.5512
D60	0.17099	0.37665	0.44991	0.08841	5.0890
D70	0.21374	0.41010	0.42220	0.07916	5.3332
DD70	0.09466	0.29285	0.19465	0.09827	1.9809
D80	0.13740	0.34441	-0.03504	0.08653	-0.4050
D90	0.19389	0.39550	0.46787	0.08066	5.8004
D00	0.18931	0.39191			
W	0.08015	0.27163			
C	0.07786	0.26806			
L	0.08092	0.27281			
S	0.02595	0.15906			
FBE	0.25038	0.43340	-0.10222	0.05618	-1.8193
T	11.15400	7.61440	0.01124	0.00383	2.9353
R	0.73588	0.44103	-0.27087	0.05477	-4.9454
LNFWEALTH	7.40460	1.10730			
FAGE	69.38000	8.88040			
FAGE2	4892.40000	1245.40000			
FW	0.06107	0.23955			
FC	0.10840	0.31100			
FL	0.07176	0.25818			
FS	0.02290	0.14964			
FFBE	0.33893	0.47353			
FT	26.46900	14.09100			
FR	0.66718	0.47140			
KIDS	16.31000	10.70600			
INF	1.47630	2.07480			
PLURAL	2.74050	1.65920			
SIB	14.75100	9.19230			
INTERCEPT			4.4658	0.30485	14.649
R2	0.1544				
N	1310				
r					
N1			0.25632	0.02619	9.786

TABLE A. 10 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
WEALTH OF BROTHERS
(WITH FATHER'S CHARACTERISTICS)

EQUATION 4

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 1304 DF
LNWEALTH	6.78630	0.93108			
AGE	36.15700	8.83670	0.08029	0.01408	5.7010
AGE2	1385.40000	724.30000	-0.00057	0.00017	-3.4237
D60	0.17099	0.37665	0.57134	0.08558	6.6757
D70	0.21374	0.41010	0.50236	0.07633	6.5816
DD70	0.09466	0.29285	0.26251	0.09466	2.7732
D80	0.13740	0.34441	0.02812	0.08393	0.3350
D90	0.19389	0.39550	0.46922	0.07738	6.0640
D00	0.18931	0.39191			
W	0.08015	0.27163	0.61590	0.08802	6.9976
C	0.07786	0.26806	-0.45886	0.08636	-5.3130
L	0.08092	0.27281	-0.46300	0.08456	-5.4757
S	0.02595	0.15906	-0.34295	0.14635	-2.3434
FBE	0.25038	0.43340	-0.05669	0.05444	-1.0412
T	11.15400	7.61440	0.01224	0.00367	3.3352
R	0.73588	0.44103	-0.23618	0.05367	-4.4004
LNFWEALTH	7.40460	1.10730			
FAGE	69.38000	8.88040			
FAGE2	4892.40000	1245.40000			
FW	0.06107	0.23955			
FC	0.10840	0.31100			
FL	0.07176	0.25818			
FS	0.02290	0.14964			
FFBE	0.33893	0.47353			
FT	26.46900	14.09100			
FR	0.66718	0.47140			
KIDS	16.31000	10.70600			
INF	1.47630	2.07480			
PLURAL	2.74050	1.65920			
SIB	14.75100	9.19230			
INTERCEPT			4.4310	0.29545	14.997
R2	0.2257				
N	1310				
r			0.22653	0.02639	8.583

TABLE A. 10 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
WEALTH OF BROTHERS
(WITH FATHER'S CHARACTERISTICS)

EQUATION 5

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 1304 DF
LNWEALTH	6.78630	0.93108			
AGE	36.15700	8.83670	0.08734	0.01454	6.0069
AGE2	1385.40000	724.30000	-0.00062	0.00017	-3.6649
D60	0.17099	0.37665	0.96979	0.24239	4.0009
D70	0.21374	0.41010	0.79584	0.18474	4.3079
DD70	0.09466	0.29285	0.61668	0.19732	3.1253
D80	0.13740	0.34441	0.26166	0.14437	1.8125
D90	0.19389	0.39550	0.54553	0.09865	5.5297
D00	0.18931	0.39191			
W	0.08015	0.27163	0.45781	0.10013	4.5721
C	0.07786	0.26806	-0.49574	0.08915	-5.5606
L	0.08092	0.27281	-0.47137	0.08468	-5.5666
S	0.02595	0.15906	-0.37704	0.14623	-2.5784
FBE	0.25038	0.43340	-0.14827	0.08262	-1.7945
T	11.15400	7.61440	0.01225	0.00376	3.2550
R	0.73588	0.44103	-0.13078	0.06503	-2.0109
LNFWEALTH	7.40460	1.10730			
FAGE	69.38000	8.88040	-0.00363	0.00351	-1.0327
FAGE2	4892.40000	1245.40000			
FW	0.06107	0.23955	0.31219	0.12144	2.5707
FC	0.10840	0.31100	0.08487	0.08183	1.0371
FL	0.07176	0.25818	0.25060	0.09252	2.7088
FS	0.02290	0.14964	-0.31589	0.15547	-2.0318
FFBE	0.33893	0.47353	0.11379	0.07886	1.4429
FT	26.46900	14.09100	0.01045	0.00603	1.7328
FR	0.66718	0.47140	-0.10890	0.06246	-1.7434
KIDS	16.31000	10.70600			
INF	1.47630	2.07480			
PLURAL	2.74050	1.65920	-0.00287	0.01572	-0.18240
SIB	14.75100	9.19230	-0.00343	0.00346	-0.99154
INTERCEPT			4.0238	0.44917	8.9581
R2	0.2381				
N	1310				
r			0.20694	0.02651	7.806

TABLE A. 10 (Cont'd)

REGRESSIONS AND INTRA-CLASS CORRELATIONS FOR
WEALTH OF BROTHERS
(WITH FATHER'S CHARACTERISTICS)

EQUATION 6

VARIABLE NAME	MEAN	STANDARD DEVIATION	ESTIMATED COEFFICIENT	STANDARD ERROR	T-RATIO 1304 DF
LNWEALTH	6.78630	0.93108			
AGE	36.15700	8.83670	0.08591	0.01436	5.9823
AGE2	1385.40000	724.30000	-0.00060	0.00017	-3.5754
D60	0.17099	0.37665	0.82979	0.24055	3.4496
D70	0.21374	0.41010	0.67389	0.18362	3.6701
DD70	0.09466	0.29285	0.51698	0.19559	2.6432
D80	0.13740	0.34441	0.17613	0.14331	1.2290
D90	0.19389	0.39550	0.46236	0.09846	4.6961
D00	0.18931	0.39191			
W	0.08015	0.27163	0.41233	0.09918	4.1573
C	0.07786	0.26806	-0.50086	0.08804	-5.6893
L	0.08092	0.27281	-0.44551	0.08373	-5.3206
S	0.02595	0.15906	-0.40195	0.14446	-2.7825
FBE	0.25038	0.43340	-0.15560	0.08160	-1.9070
T	11.15400	7.61440	0.00893	0.00376	2.3755
R	0.73588	0.44103	-0.12439	0.06423	-1.9367
LNFWEALTH	7.40460	1.10730	0.15315	0.02630	5.8226
FAGE	69.38000	8.88040	0.00319	0.00366	0.8704
FAGE2	4892.40000	1245.40000			
FW	0.06107	0.23955	0.24407	0.12049	2.0257
FC	0.10840	0.31100	0.05767	0.08094	0.7125
FL	0.07176	0.25818	0.21712	0.09153	2.3720
FS	0.02290	0.14964	-0.31629	0.15352	-2.0602
FFBE	0.33893	0.47353	0.17901	0.07867	2.2755
FT	26.46900	14.09100	0.00578	0.00601	0.9621
FR	0.66718	0.47140	-0.08845	0.06178	-1.4317
SIB	14.75100	9.19230	-0.01122	0.00367	-3.0573
PLURAL	2.74050	1.65920	0.00479	0.01557	0.3078
KIDS	16.31000	10.70600			
INF	1.47630	2.07480			
INTERCEPT			2.7530	0.49432	5.5694
R2	0.2571				
N	1310				
r			0.19393	0.02658	7.296