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FIRST, SECOND, AND THIRD GENERATION  
AMERICAN MALES

by

Geoffrey Carliner

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GENERATION AMERICAN MALES

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ACCULTURATION AND MOTIVATION: EARNINGS OF FIRST, SECOND, AND THIRD  
GENERATION AMERICAN MALES

The traditional view of the economic status of immigrants has been that new arrivals entered the American economy with a severe disadvantage. Their children, the second generation, moved up the social ladder somewhat, but still lagged behind natives whose parents were also natives. This process of gradual catching up was thought to continue for one or two generations more before the gap between descendants of immigrants and the descendants of earlier immigrants was completely eliminated.

However, not all the evidence supports this view. Using 1950 Census data, Nam (1959) analyzed the occupational attainment of first and second generation European men identified by country of origin, and compared them with all third generation whites. After controlling for age and location, he found the expected substantial increases in status from the first to the second generation for most ethnic groups, and small increases for the others. However, he also found that second generation men from most of his ethnic groups had higher status occupations than his third generation. In fact, two first generation groups also had higher occupation status than the third generation.

Using the same data, Leiberson (1963) did not even find a clear pattern of improvement in occupational achievement from the first to the second generation among European ethnic groups. He controlled for age and location by presenting group averages by generation and ethnic group for men 25 to 44 in ten large cities. Although men from Italy, Russia, Ireland, and Sweden generally improved, English, German, and

Polish men declined. Duncan and Duncan (1968), however, found lower occupational achievement among the second generation than among the third.

More recently, Kalacheck and Raines (1976) were surprised to find that immigrants earned more than natives in 1969, after a host of personal characteristics and labor market conditions were held constant. Chiswick (1977) reported that the earnings of the second generation exceeded the earnings of the third in 1970, once education, experience, and location were held constant.

Similar patterns have been reported for migrants within the U.S. Although Lansing and Morgan (1967) found that migrants have lower incomes than nonmigrants in the same community, Masters (1972) found that black migrants from the South to Northern cities earned more than Northern black nonmigrants in 1960. However, black men who had migrated during the five years preceding the survey did worse. Similarly, Wertheimer (1970) found that migrants from the South to the North earned more than Northern nonmigrants five years or more after their move, but not before then.

This paper will use 1970 Census data to examine the relative earnings of recent male immigrants, immigrants who came here before 1965, the second generation, and the third generation. Comparing four nativity groups instead of the two or three available to earlier researchers will give us a more complete picture of the pattern of acculturation, and hopefully will shed some light on the factors which explain it. Furthermore, extending the analysis to immigrants from Latin America and Asia is also better than a study restricted to Europeans alone.

## II. Hypotheses

Human capital theory provides a model which fits the standard picture of the acculturation of an immigrant and his children over time. Just as workers acquire productive skills both from formal education and from work experience, immigrants gain useful knowledge the longer they live here. By making investments in themselves, they can increase their market productivity and their attractiveness to employers. The longer they are here, the greater the level of these investments will be, and the higher the level of earnings.

This process of acculturation--increasing levels of investments-- need not end with the immigrant himself, but may continue for some generations more. Learning to speak English may be the largest investment in time and effort for an adult immigrant. Other aspects of acculturation that must wait till the next generation may include learning to speak fluent English without an accent, making wide contact with natives who can provide information about job possibilities, or increasing investments in formal education.

The analogy between the changes in human capital over the lifetime of an individual and several generations of immigrants and their descendants is not perfect, however. The human capital of an individual depreciates through increasing ill health, obsolescence of the individual's stock of knowledge, or declining physical strength. This results in the typical concave age-earning hill. In looking at the accumulation of human capital over several generations, on the other hand, no such depreciation will occur.

Moreover, there is no counterpart to the incentive which an individual has to make investments early in his life in order to have as long

a time as possible to earn a return on them. Second and third generation workers can expect to live just as long, and to work for as many years, as immigrants. Thus, investments in acculturation may not be concentrated in the first generation, but may actually increase over time. If so, the rate of increase in earnings between generations may actually increase, instead of decreasing as with individuals in their middle years, and the generation-earning curve may be convex. Whatever the sign of the second derivative of this curve, the first derivative should always be non-negative if human capital theory adequately explains the process of acculturation. If earnings are lower for later generations, then some other explanation is also required.<sup>1</sup>

Factors associated with acculturation and human capital theories all tend to produce increasing earnings with successive generations, but several other forces tend to operate in the opposite direction. First, several studies have shown that differences among labor markets as well as differences between individuals in personal characteristics can be an important source of earnings differences.<sup>2</sup> Since immigrants, and for that matter native migrants, are likely to move to relatively high wage, booming labor markets, they are likely to have higher wage rates and earnings than nonmigrants, other things equal.

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1. Another way in which acculturation may be different from human capital models (in which human capital models may not describe the process of acculturation accurately) is that much of the knowledge and skills helpful in US labor markets may be acquired effortlessly. Human capital theory assumes that increases in productivity involve some sacrifice, either of leisure, or foregone earnings. An immigrant who takes time off from work, or gives up leisure in the evening to attend English classes fits the human capital picture, but a child who learns English on the block while playing does not. Most acculturation is probably of the latter type. See Blaug (1976) for further comments on this weakness of human capital theory with respect to other forms of experience.

2. See for an example, Kalacheck and Raines (1976).

Because labor and capital are not completely mobile, labor markets can remain out of equilibrium for extended periods of time. The most recent migrants, especially those immigrants who entered the country during the previous five years, are most likely to be in the best labor markets, but earlier immigrants and even second generation workers may also benefit from very long run disequilibrium conditions. If third generation Americans are disproportionately in rural or small town areas, while the second generation is in older cities, and recent immigrants tend to be in the fastest growing cities, there will tend to be an inverse correlation between earnings and generation. The higher the generation, the lower the earnings, other things equal.<sup>3</sup>

Another source of disadvantage to natives, at least black natives, may be a heritage of discrimination, or a culture of poverty. It has often been suggested that part of the differences between blacks and whites is due not to current discrimination in labor markets and elsewhere, but to discrimination in the past. If discrimination exists at present, both immigrants and natives will suffer. But past discrimination which has produced a culture of poverty will affect only natives. This past discrimination against blacks may have created patterns of behavior that reduce productivity and wage rates among current workers, in addition to whatever current labor market discrimination they face. Therefore, if second or third generation workers earn less than immigrants among ethnic groups who suffer or have suffered from discrimination, then the culture of poverty hypothesis receives some support. If

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3. To some extent this phenomenon can be controlled by using location variables, but some of it is likely to be picked up by generation variables unless the sample is restricted to one labor market. Since controls are also needed for other factors, doing this would reduce the sample to a small number.



this pattern does not exist, or if it exists for all ethnic and racial groups, including those who have not suffered discrimination, then we can conclude that the evidence of this study does not indicate any culture of poverty.

The final, and probably most important, advantage that immigrants have over natives, is greater motivation.<sup>4</sup> They are clearly more motivated than people from their homelands who did not emigrate, as evidenced by their having left. Presumably they are also more motivated than nonmigrants in the communities to which they come. The same personality characteristics which resulted in their uprooting themselves from their childhood homes, moving to a foreign country with a strange language and perhaps strange customs, should also result in greater work effort in American labor markets.

Whatever the source of these differences in motivation, the advantage to immigrants is likely to decrease with succeeding generations. Both genetic and environmental influences may persist for the lifetime of the immigrant, and even be passed on to his children to some extent, but after two generations, it seems likely that no differences between grandchildren of immigrants and longer established natives would continue. The regression to the mean should be complete within three generations.<sup>5</sup>

Another test of the human capital and screening hypotheses depends on generational differences in occupational achievement. If credentialing is important, then immigrants should have difficulty gaining entrance to high status occupations. Thus differences in occupational status between immigrants and natives should be even larger than earnings

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4. See Fogel (1974), Piore (1974), and North (1974) for comments by employers and others on this.

5. See Li (1974) for evidence on the speed of a regression to the mean for genetic factors.

differences, and differences in the effect of education between immigrants and natives should be even larger using occupational status as the measure of achievement than using earnings. Comparing two sets of regressions, one using Duncan scores as the dependent variable and the other using earnings or wage rates, should thus shed light on whether education serves primarily to increase the human capital and productivity of immigrants and natives, or whether it is simply a credentialling or screening mechanism.

To summarize different hypotheses explaining patterns of earnings by generation, a human capital theory would suggest increasing achievement with succeeding generations. Disequilibrium conditions in labor markets should increase the earnings of immigrants, other things equal, since they will have moved more recently than most natives. This factor can be partially controlled for by using location variables in earnings regressions, but some of it may still be picked up by the generation variables. Among racial groups who suffer from discrimination, a culture of poverty theory might predict lower achievement among natives than among immigrants, since both may suffer from discrimination currently, but only the natives will have suffered from it in the past. Higher motivation may be likely for immigrants of all races, however, so if immigrants earn more than second and third generation workers of all races, we can infer that the pattern is caused by a regression to the mean rather than a culture of poverty among natives:

### III. Data

Data for this study come from the one in a hundred sample of the 1970 Census of Population. Information recorded by the Census Bureau allows

classification of people into four nativity categories, or "generations." Recent immigrants are those who came to the United States during the five years preceding the Census survey date, i.e., between 1965 and 1970. Earlier immigrants came before 1965. The second generation consists of men who were born in the U.S. but who had at least one immigrant parent. The third generation includes all natives whose parents were also natives. Since no information was available on the place of birth of grandparents, it was not possible to distinguish between third generation Americans and men whose families have been here for much longer. In any event, it seems likely that most changes due to nativity will have worked themselves out after three generations.

Separate Census questions also identify whites, blacks, Japanese, Chinese, and Filipinos, regardless of their generation. Three additional groups, Puerto Ricans, Chicanos, and Cubans, are also included separately in this study, even though they could only be identified if they or their parents were immigrants. If they were third generation, there was no way to distinguish them from other third generation whites, blacks, or Indians, and it was not possible to trace the pattern of achievement beyond the second generation for the three Latin groups.<sup>6</sup>

In the following analysis and discussion, these eight groups will be treated separately for several reasons. The first is the need to separate racial discrimination from problems of acculturation and discrimination against immigrants. Immigrants of different races may receive quite different treatment in labor markets because of racial discrimination. Certainly natives differ systematically in what deter-

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6. For the first two generations, the category white includes only nonLatin men, and should perhaps be called Anglo instead of white. Therefore a small number of men from these three groups were incorrectly classified, usually with whites.

mines the level of their earnings. It would be possible to allow for a full set of race-generation interactions, but it seems preferable to allow the other independent variables in the earnings functions to be unconstrained as well. Substantial research on education has indicated that the effect of years of schooling can vary substantially among ethnic groups.<sup>7</sup>

The different groups tend to be concentrated in only a few labor markets. It was argued above that differences in labor market conditions might not be held entirely constant by the limited location variables, but might be picked up instead by generation variables. This will be less of a problem if each regression includes only one ethnic group, since natives as well as immigrants of several of the ethnic groups tend to be concentrated in only two or three labor markets. Since there are good reasons for expecting interactions between race and generation, education, and location, it seemed sensible to allow for full interactions for the remaining independent variables as well.

A second reason for treating different ethnic groups separately, both in regressions and in discussion, is that the problem of illegal aliens is much greater for certain groups than for others. Since the data used in this study were collected by the U.S. government, it seems very likely that illegal aliens refused to answer the survey questions, and thus are underrepresented in the sample. If illegal immigrants have different characteristics than legal immigrants, or if they have different experiences in this country because they are here illegally, then conclusions based on a sample unrepresentative of the total pop-

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7. See, for example, Weiss (1967), Welch (1971), Wong (1974) and Carliner (1976).

ulation of immigrants are subject to serious reservations. If all ethnic groups were treated together, this problem would contaminate the results of all.

Treating the eight ethnic groups separately, however, allows us to avoid some of these difficulties. For instance, there are no illegal immigrants from Puerto Rico, since all Puerto Ricans are American citizens with unrestricted migration rights whether they are born in New York or San Juan. Similarly, virtually all Cubans are here legally, because the normal barriers to immigration from Latin America were dropped for them because of their special political situation. Furthermore, North and Houston (1976) present evidence that the overwhelming majority of illegal aliens are either from Mexico or some other Western Hemisphere country. The latter immigrants are not included in this study, but admittedly, the problem of underrepresentation of illegals is likely to be serious for Chicanos. However, it seems to infer that the percentage of illegal immigrants is not large for the Eastern hemisphere racial groups included in this study. One final piece of encouraging evidence is Piore's (1974) suggestion that in 1970, when the Census data were collected, there were many fewer illegal aliens than today, so that our sample may not be unrepresentative of the immigrant population in that year.

The final reason for analyzing the nine racial and ethnic groups separately is social and political interest in them. Concern for the economic welfare of minorities focusses on racial and ethnic minorities, not on immigrants per se. If newcomers need help in adjusting to American society, it is as Puerto Rican, Chicano, or Chinese newcomers, not simply as immigrants. Their experiences are most useful in understanding the experiences of Puerto Rican, Chicano, or Chinese natives,

not the economic achievement of natives of all ethnic and racial groups. And if different groups of immigrants, or natives, require help in adjusting to American society and succeeding in labor markets, this help must be tailored to fit the needs of the different ethnic communities. Ignoring race and concentrating only on generation implicitly assumes that the acculturation process is the same for all groups, when in fact it is likely to vary widely. Therefore, all tables, regressions, and analysis present results separately for the eight racial or ethnic groups.

#### IV. Earnings by Generation

Figure 1 (based on Appendix Table A1) shows average annual earnings by race for the four nativity groups, for nonstudent men between 18 and 64 who had positive earnings in 1969. In spite of their very different levels of earnings, patterns of immigration, discrimination, and education, all eight groups have similar generation-earnings curves. Recent immigrants earn relatively little. Earlier immigrants earn a great deal more. The change in earnings between earlier immigrants and the second generation is relatively small, and for whites it is in fact negative. And for the five groups with an identifiable third generation, there is a sharp decline from the second to the third generation.<sup>8</sup> Indeed third generation Japanese and Filipino men earn

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8. t tests of the differences between generations within an ethnic group were significant in almost all cases. Earnings were used as the measure of economic achievement rather than wage rates because a large part of the cost of immigration may result from higher unemployment or

less than recent immigrants of those groups. All the ethnic groups have the concave pattern remarkably similar to the familiar age-earning hill. Aside from the very different levels, the primary differences

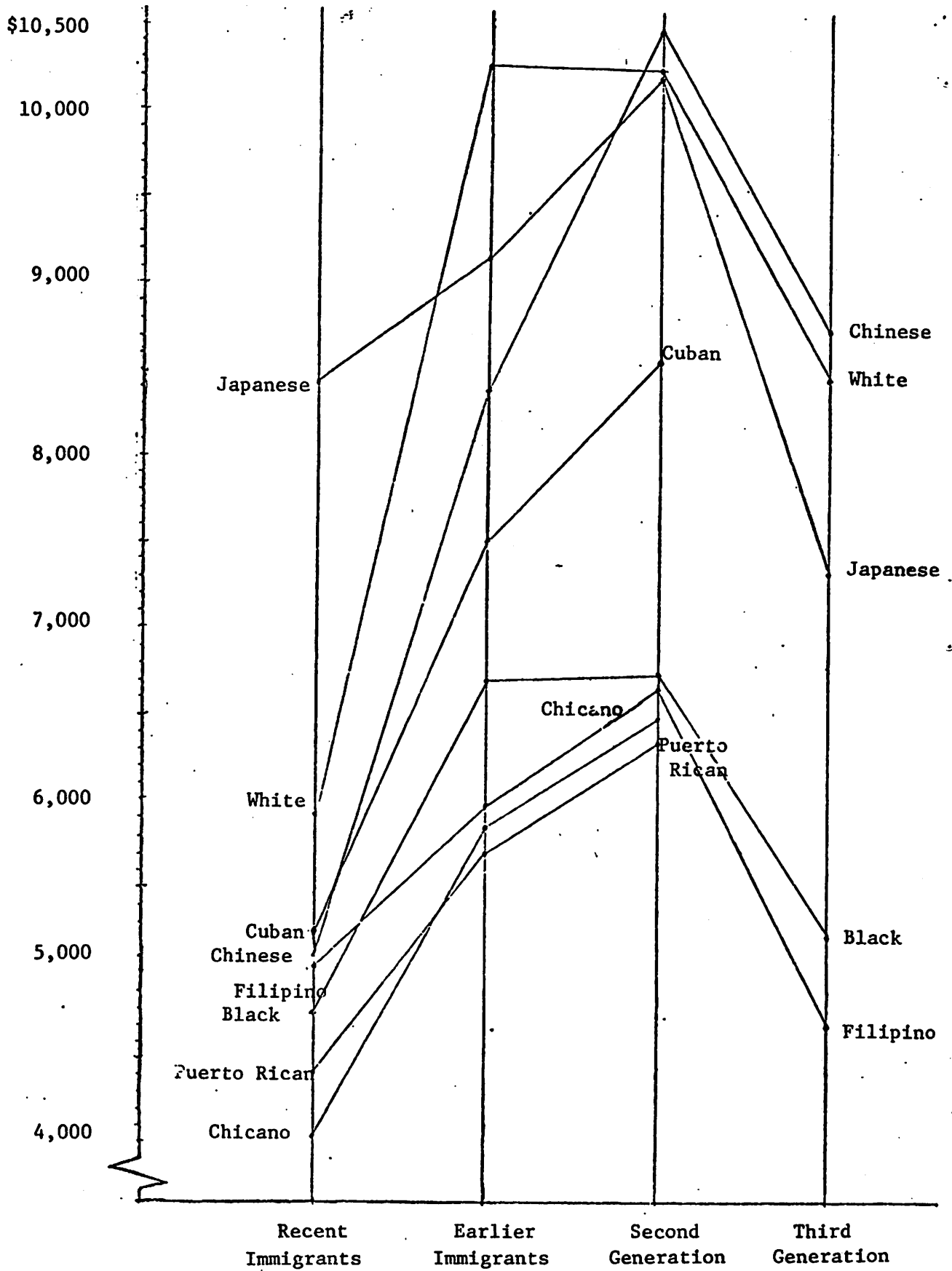
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footnote 8 continued:

underemployment due to lack of familiarity with American labor markets. Data presented in Table A7 on the average number of hours worked during the week prior to the Census survey are consistent with this possibility. They show that recent immigrants worked fewer hours than earlier immigrants among seven of the eight groups, and fewer hours than the second generation among half the groups. However, the third generation worked fewer hours than recent immigrants among four of the five groups with three identifiable generations.

Unfortunately, Census data do not provide information on the reason for part time work. Therefore, it is not possible to distinguish between low hours due to unemployment and low hours due to other causes. The sample for which average hours were calculated excluded students, so a major source of voluntary part time work has been eliminated, but other nonmarket activities, including pure leisure, may still account for the differences. It may be that recent immigrants work less because of the difficulties finding jobs, but that the third generation works less because of a greater taste for leisure. However, the opposite possibility is also consistent with the meager data available. In any event, using wage rates instead of earnings produces the same pattern between generations.

Figure 1  
Earnings by Generation and Ethnicity





among the eight ethnic groups in this pattern is the increase from earlier immigrants to the second generation.

These statistics hardly fit the standard picture of a gradual improvement in achievement of immigrants over several generations. It is true that recent immigrants seem to be at a disadvantage when they first arrive, but earlier immigrants do surprisingly well compared to natives, in several cases earning more. Equally surprising is the finding that the second generation earns more than the third. The speed of acculturation and adaptation to American labor markets implied by these data are thus much faster than studies from earlier decades have found.

However, it is not clear to what extent this pattern is the result of differences in acculturation or motivation, and to what extent it is simply the result of demographic differences in average age among the nativity groups.<sup>9</sup> For all groups but Cubans, recent immigrants not only have the lowest earnings, but also the lowest age. Earlier immigrants and the second generation both tend to be considerably older, with the third generation in between. In the relevant age ranges, the effect on earnings of increased experience generally outweighs the effect of increased sickness or obsolescence of a worker's stock of knowledge. Therefore, groups with higher than average ages would tend to have higher than average earnings, other things equal.

Similar differences among the generations exist in marital status as well.<sup>10</sup> Earlier immigrants and the second generation are most

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9. See Appendix Table A2.

10. See Appendix Table A3.

often married, with the third generation somewhat lower, and recent immigrants most often single. Since married men generally have more motivation than unmarried men, they tend to have higher earnings. Thus the higher earnings of earlier immigrants and the second generation may stem in part from the fact that they are older and more often married. If this were so, then the curves in Figure 1 would indicate little about the human capital, motivation, or speed of acculturation of different generations.

To isolate the effect of generation from the effect of demographic variables, it is necessary to measure both generation's direct effect on earnings, and its indirect effect through education. A worker's education may depend on his generation, and his earnings may depend on his generation, education, and demographic characteristics. One possible specification is

$$(1) \quad S = \alpha G + u$$

$$(2) \quad E = \beta_0 + \beta_S S + \beta_D D + \beta_3 G + v$$

where  $S$  is years of schooling,  $E$  is the log of annual earnings,  $G$  and  $D$  are vectors of dichotomous and continuous variables measuring the individual's generation and demographic characteristics, and  $u$  and  $v$  are error terms.<sup>11</sup> To estimate the total effect of generation on earnings, (1) and

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11.  $G$  includes dummy variables identifying recent immigrants, the second generation, the third generation, and men who heard no language than English in their childhood home. It was assumed that only the third generation were native English speakers using this definition.  $D$  includes age, age squared, and dummy variables for four marital categories, living in the South, and in a metropolitan area. The reference group was never married earlier immigrants who lived outside the South and outside metropolitan areas. Complete results are available on request from the author.

(2) are estimated, the imputed value of education from (1) is substituted into (2), and earnings by generation are imputed using the entire sample's average values for the demographic characteristics.

$$(3) \quad \hat{E}_g = b_0 + b_s \hat{S}_g + b_d \bar{D} + b_3 G$$

This imputed value for earnings by generation is the value which would be obtained if the different generations were similar with respect to age, marital status, and location, and differed only in education. Holding education constant by allowing  $\hat{E}_g$  to differ only by  $b_2 G$  is inappropriate, since an important part of acculturation may arise through differences in education. Since S is highly correlated with D as well as with G, omitting S from (2) would produce biased coefficients for both other variables. Thus the correct method for measuring both the direct and indirect effects of generation on earnings is the two stage method used here.

V. Human Capital, Culture of Poverty, or Regression to the Mean

Figure 2 (based on Appendix Table A4) presents earnings adjusted in this fashion, calculated from separate regressions for each of the eight ethnic groups. The relative adjusted earnings of the different generations are still concave, but the pattern is less pronounced, than for the unadjusted earnings presented in Table 1 and Figure 1.<sup>12</sup>

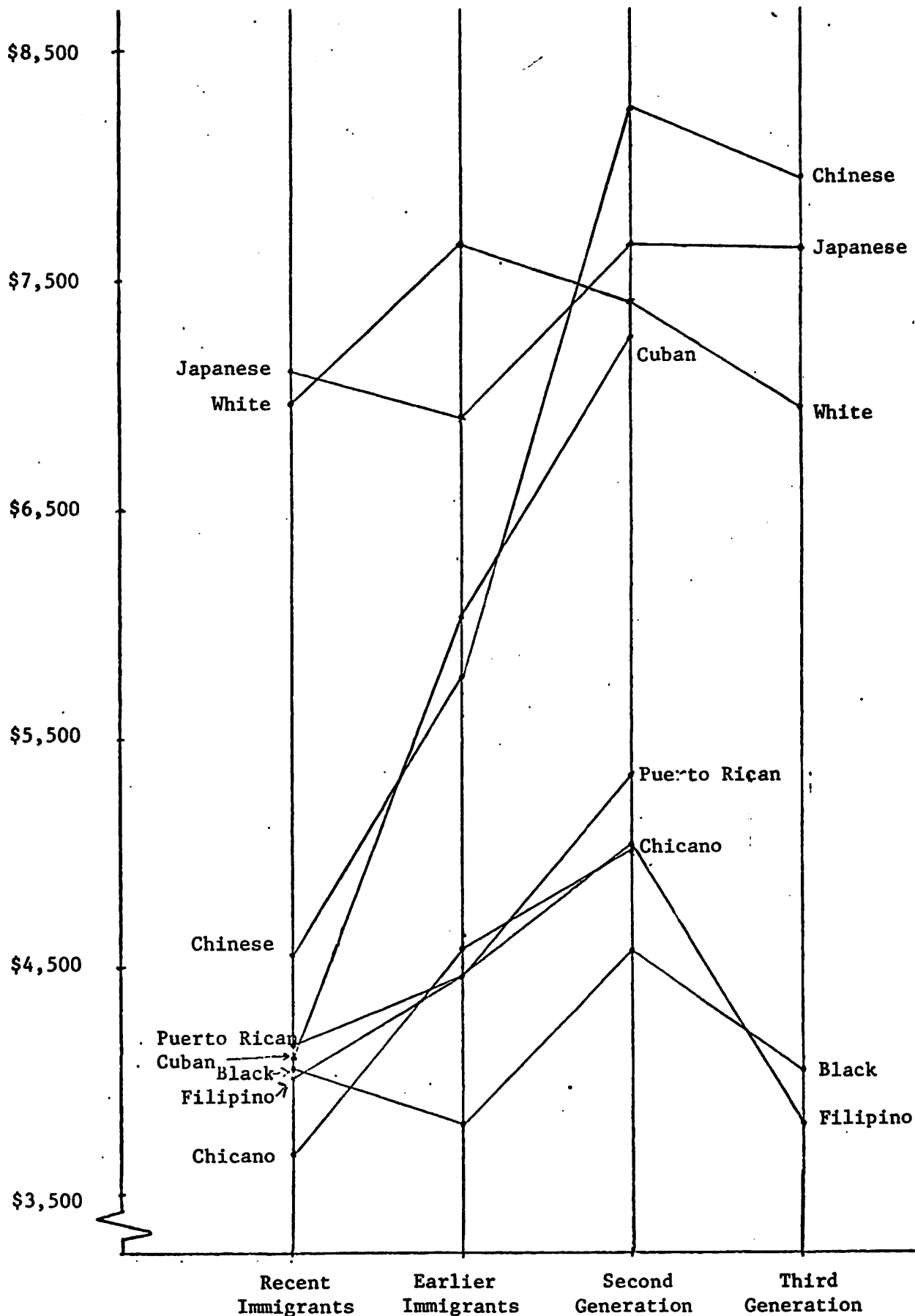
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12. Part of the narrowing of differences between generations is the result of controlling for demographic differences, but part is due to using geometric instead of arithmetic means.

If  $E_1$  and  $E_2$  are the adjusted earnings for recent and earlier immigrants of the same ethnic group, then a test of the hypothesis that they differ is found by calculating

Figure 2

Earnings by Generation Adjusted for Demographic Factors



Six of the eight groups show substantial increases in adjusted earnings between recent and earlier immigrants, but for blacks and Japanese there is a slight decrease. As with unadjusted earnings, seven of the eight groups show an increase between earlier immigrants and the second generation, though the differences are smaller than before. An again, all five groups with third generations, and three of the five whites, blacks, and Filipinos, show a considerable decline between the second and third generations, and three of the five whites, blacks, and Filipinos, show lower adjusted earnings for the third generation than for recent immigrants.

These adjusted earnings data suggest that for most ethnic groups, a large part of adjustment and acculturation to American labor markets takes place within the lifetime of the immigrant himself. For several of the groups, there is a further improvement in earnings for the sons of immigrants, though this increase is generally smaller than the first.

$$t = \frac{\hat{E}_2 - \hat{E}_1}{\sqrt{\text{var}(\hat{E}_1) + \text{var}(\hat{E}_2) - 2 \text{cov}(\hat{E}_1, \hat{E}_2)}}$$

where  $\text{var}(\hat{E}_1) = \text{var} b_1 + b_s^2 \text{var}(S_i) + b_s \text{cov} b_1 S_i$

Since  $b_s$  is about .05 for all eight ethnic groups, the second and third terms in  $\text{var}(\hat{E}_1)$  are close to zero, so the t statistic can be approximated by

$$t = \frac{\hat{E}_2 - \hat{E}_1}{\sqrt{\text{var} b_1 + \text{var} b_2 - 2 \text{cov} b_1 b_2}}$$

This can be calculated from the variance-covariance matrix of the regression. The difference between recent and earlier immigrants was significant at the five percent level for six of the eight ethnic groups, between earlier immigrants and the second generation for four of the eight groups, and between the second generation and the third for three of the five groups.

Finally, the third generation consistently earns less than the second, in spite of their presumably more advantaged start in life. The next section will discuss the role of education in acculturation and achievement, and will discuss tests of the hypotheses discussed above in Section II.

What implications do these results have for the hypotheses discussed in Section II? First, the large increase in earnings within the lifetimes of immigrants themselves is consistent with human capital theories of achievement. The investment of migrants in their moves has typically been considered to include primarily the monetary cost of the move itself, and the personal costs of leaving one's home. But it is reasonable to assume that foreign migrants especially spend considerable effort in acquiring a new language, in making contacts which will help them find jobs, and in learning American business practices. Although there is no information available on the investments which immigrants make once they come to this country, the sharp rise in earnings between recent immigrants and earlier immigrants may well be the return to such post-immigration investments. It may be somewhat unexpected that most economically important aspects of acculturation take place within the first generation, but it is not contrary to the implications of human capital theory.

However, the decrease in earnings from the second to the third generation cannot be explained within a human capital framework. Taking account of other factors which might affect an individual's human capital, such as age, race, and marital status, or demand side factors like location, does not eliminate this decline. Since men whose families have been in this country for three or more generations should have at least as much human capital, other things equal, as men whose fam-

ilies have only been here for two generations, some other explanations of this phenomenon is required.

The culture of poverty theory does not seem to explain the decline either. We argued above that if blacks or other ethnic groups who have suffered from discrimination in the past were trapped by such a culture, we would expect a decline in earnings from immigrants to natives, or perhaps from the second to the third generation, for those groups. Both immigrants and earlier generations might suffer from current discrimination, but only the earlier generations would bear the legacy of past discrimination as well.

However, all five ethnic groups, including whites, show a decline from the second to third generation. This common decline probably has a common cause. While the present data do not allow us to reject a culture of poverty explanation for the decline among blacks, by Occam's razor we should probably look elsewhere for the explanation of this decline among ethnic groups who did suffer from discrimination as well as among those who did not.

A regression to the mean, both in motivation and in intelligence, seems to be the most plausible source of the decline. Suppose that these personality characteristics can be measured on a scale  $M$  with mean zero, and that they are determined by a random component  $\epsilon$  and by a component which can be passed on by parents, either through heredity or home environment.

$$(4) \quad M_{g+1} = \rho M_g + \epsilon_g$$

where  $M_{g+1}$  is the individual's motivation and intelligence,  $M_g$  is that of his parents,  $\rho$  is the percentage his parents can pass on to him, and  $\epsilon_g$  is the random component with expected value zero.

Because they have migrated, it is plausible to assume that the

average motivation of immigrants ( $M_1$ ) is greater than the average for the entire population ( $\bar{M}$ ). The expected value of the second generation's motivation ( $M_2$ ) will still be greater than  $\bar{M}$ , since  $\rho M_1$  will be greater than  $\bar{M}$ . But for the third generation, the grandchildren of immigrants,

$$(5) \quad M_3 = \rho^2 M_1 + \rho \epsilon_2 + \epsilon_3$$

will be very close to zero. This is especially true in the present sample, since our third generation includes many men whose families came to this country many generations ago. For them  $\rho$  will be raised to a much higher power than the second.

Now the effect of generation (G) on earnings in equation (2) can be separated into human capital (H) and motivational (M) components.

$$(6) \quad E_i = \beta_0 + \beta_1 S_i + \beta_2 D_i + \beta_3 H_i + \beta_4 M_i + v_i$$

H will increase substantially with generation, and will never decrease. But M will start above average for immigrants, and then decline with G. Since these two variables move in opposite directions, the generation-earnings curve is concave. Increases in human capital, in the form of acculturation, outweigh decreases in motivation during the lifetimes of the immigrants, and usually between immigrants and their sons. But decreases in motivation or intelligence outweigh any further increases in acculturation after the second generation.

## VI. Education and Occupation

We have discussed how earnings change with succeeding generations, but several questions remain about the sources of the differences that do exist. Do differences in education cause most of the earnings differences among the generations, or do earnings differences persist,



even after education as well as demographic factors have been held constant? Are immigrants able to benefit from their schooling to the same extent as natives, or is it difficult for them to transfer credentials and knowledge from one country to another? Does lack of knowledge of English or of American labor markets prevent immigrants from entering lucrative occupations? Or do most of the differences between generations occur within occupation?

To see how much of the generational differences in earnings result from differences that occur in labor markets rather than in schools, adjusted earnings were calculated using the regressions discussed above according to

$$(7) \quad E_g^* = b_0 + b_s \bar{S} + b_d \bar{D} + b_3 G$$

where  $\bar{S}$  is the average years of school for the entire ethnic group, not each generation. This statistic is the earnings which each generation would have if it were equal in terms of education as well as age, marital status, and location to the ethnic group's average.<sup>13</sup>

These new adjustments, shown in Table A5, indicate that educational differences between the generations do not explain most of the earnings differences. Comparing Table A5 with Table A4 shows that controlling for education narrows the range between generations somewhat for Puerto

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13. This adjustment also controls for differences in the levels at which immigrants enter the society. Taeuber and Taeuber (1967) have objected to studies of ethnic mobility which compare first and second generation workers because with tightened restrictions, the average skills of the first generation have risen considerably during the last fifty years, even for immigrants from the same country. Therefore, the current population of immigrants may have considerably higher skills than the parents of the current second generation. Comparing the achievement of these two generations would understate the mobility of the second generation. However, if we control for education, the remaining differences in earnings will reflect actual mobility. See Table A6 for data on years of school by generation and ethnic group.

Ricans, Chicanos, Cubans and Chinese, though most of the generational differences remain. Among blacks and Filipinos there is virtually no change, and for whites and Japanese, the differences between generations actually increase when education is held constant. Virtually all of the generational differences that were statistically significant before adjusting for education remain significant after the additional adjustment. Thus differences in the levels of education among generations account for a relatively small part of the differences in earnings.

Generational differences in the effect of education are also not important. For several reasons it was thought that education might have a higher return for natives than for immigrants. Foreign schools might be of lower quality than American schools, or at least less useful in providing skills for American labor markets. Credentials offered by foreign schools might be harder for employers to interpret, and therefore less helpful in gaining employment for their holders. On the other hands, well educated immigrants may have learned English in school, and thus may have a greater advantage over poorly educated immigrants than well educated natives have over poorly educated natives. Education may also be more highly correlated with other useful characteristics among immigrants than among natives, for instance, having grown up in cities.

To see whether the effect of education on earnings differed among generations, additional earnings regressions were run which included two education-generation interaction terms. The first (SM) was equal to years of school if the individual was a recent immigrant, and zero otherwise. The second (SN) was equal to years of school if the individual was native born. Table 1 presents the coefficients of the three education variables from these eight regressions, with t statistics in

Table 1

## Returns to Schooling by Generation

	White	Black	PR	Chic- ano	Cuban	Japa- nese	Chi- nese	Fili- pino
S	.053 (.01)	.026 (.021)	.042 (.004)	.046 (.003)	.048 (.005)	.061 (.014)	.056 (.005)	.025 (.008)
SM	-.030 (.029)	.003 (.027)	-.004 (.005)	-.017 (.005)	-.028 (.004)	-.033 (.024)	.002 (.012)	.001 (.014)
SN	.011 (0.14)	.028 (.021)	.010 (.004)	.0036 (.0023)	.014 (.007)	.000 (.015)	.023 (.012)	.033 (.017)

parentheses.

Two of the SM coefficients are significantly negative, and four of the SN coefficients are significantly positive. Since the reference group is earlier immigrants, we can infer from these results that little difference exists among immigrants in the effect of education. At least among Puerto Ricans, Cubans, Chinese, and Filipinos, however, natives do seem to benefit from schooling significantly more than immigrants. These results are consistent with two interpretations. One is that a foreign education is of lower quality, or at least of less usefulness in American labor markets, than an American education. The other is that foreign credentials are more difficult for American employers to interpret, and therefore of less value than American credentials.

It was argued above that if education serves primarily as a screening device, then we should expect larger differences between immigrants and natives in occupational status than in earnings. Credentials are probably harder to transfer from foreign countries than skills, so immigrants should have more trouble gaining entry to high status occupations than in earning good incomes. We should also expect generational differences in the effect of education to be larger for occupation than for earnings, if the screening hypothesis is correct.

To examine these possibilities, regressions were run using Duncan scores as dependent variables and the same independent variables as in the earnings regressions discussed above.<sup>14</sup> The results do not support the hypothesis that education increases credentials rather than productivity. Other things, including education, equal, recent immigrants had higher Duncan scores than earlier immigrants and the second generation among four out of the eight groups, but higher earnings only for one group. The

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14. See Blau and Duncan (1967) for a description of this index.

second generation had significantly higher Duncan scores than earlier immigrants among Puerto Ricans alone, but they had significantly larger earnings for four groups. Thus the relative position of immigrants when measured by occupational status is higher than their position when measured by earnings.

To compare differences in the effect of education, a new set of Duncan regressions were run including the two schooling-generation terms, SM and SN. The effect of education on Duncan scores was significantly higher for natives than for immigrants among six ethnic groups, versus four groups for earnings. This difference between the Duncan regressions and earnings regressions does not offer much support to the screening hypothesis.

One final question concerns occupation's role as a mediating factor in explaining earnings differences, a large number of studies have shown that blacks and women receive lower earnings than whites and men partly because they are excluded from high status occupations and partly because they earn less even when they have the same occupation. Differences in occupational status may also account for a large part of generational earnings differences as well. Immigrants may be excluded from good occupations because of language difficulties, lack of proper credentials, or a lack of knowledge of American social graces. Once in an occupation, however, their greater motivation may compensate for other disadvantages.

One way of testing this hypothesis is to hold occupation constant by including a measure such as a Duncan code in regressions similar to the ones discussed above. The generational coefficients from such regressions then indicate the earnings differences that remain among

men similar with respect to occupation, education, age, marital status, location, and race. The coefficients from all eight regressions changed only slightly with the addition of an individual's Duncan score to the list of independent variables. Therefore we can conclude that most generational earnings differences occur within occupations. Whatever handicaps immigrants may have compared to similar natives, persist even for people within the same narrowly defined occupation.

## VII. Conclusion

Results from this study indicate that the speed of acculturation for immigrants is very rapid. Although immigrants earn far less than natives when they first arrive, during their own lifetimes their position improves rapidly. All eight ethnic groups examined show a sharp increase in annual earnings between recent immigrants and those who have been here for more than five years. For six of the eight groups, this difference remains large when age, marital status, and location are held constant, though the increases are somewhat smaller. A further increase in adjusted earnings occurs among seven of the eight groups between earlier immigrants and the second generation, that is, the children of immigrants. However, there is a small to moderate decrease in adjusted earnings from the second to the third generation for all five ethnic groups with an identifiable third generation.

Two offsetting factors probably explain this surprising pattern. At first, earnings improve rapidly as immigrants and their children learn to speak good English and as they learn American social and business practices. With succeeding generations, the rate of acculturation declines. Offsetting the effect of acculturation is the higher motivational or intelligence of immigrants. They are able to pass some of

this on to their children, but over time there is a regression to the mean. During the first two generations, the increase in acculturation is greater than the decrease in motivation, but by the third generation, the reverse is true, and earnings decline.

These findings may explain several earlier studies based on 1950, 1960, and 1969 data. For instance, Lieberman (1963) found an increase between the first and second generation for men from Italy, Russia, Ireland, and Sweden, but not for men from Britain or Germany. A reasonable explanation is that the latter had little trouble adapting to a new country whose language they usually knew from birth, but the former required at least a generation before feeling at home here. Similarly, Master's (1972) and Wertheimer's (1970) findings that the earnings of South to North migrants only exceed those of Northern nonmigrants after five years also suggest that the period needed for acculturation may be very short for native English speakers, so that decreases in motivation outweigh increases in general skills within one generation.

Several alternative sources of immigrants' lower earnings were examined. Controlling for differences in education accounted for only a small part of the differences among generations in earnings. However, immigrants did not benefit as much from additional schooling as did natives, perhaps because their foreign education was of lower quality or at least less useful than American education. Immigrants of most of the groups did not have significantly lower occupational status than natives, but holding occupation constant did little to decrease the differences in earnings. That is, almost all of the differences between generations in earnings occurred within rather than between occupations.

Table A 1

Earnings by Nativity and Ethnicity

	White	Black	PR	Chic- ano	Cuban	Jap- anese	Chi- nese	Fili- pino
Recent Immigrants	\$5906	\$4791	\$4410	\$4022	\$5255	\$8424	\$5109	\$5020
Earlier Immigrants	\$10265	\$6711	\$5706	\$5845	\$7502	\$9143	\$8381	\$5967
Second Generation	\$10265	\$6743	\$6345	\$6500	\$8551	\$10228	\$10463	\$6675
Third Generation	\$8471	\$5238				\$7316	\$8734	\$4700
TOTAL	\$8826	\$5260	\$5620	\$6077	\$6821	\$9250	\$8514	\$5767



Table A 2

Age by Nativity and Ethnicity

	White	Black	PR	Chic- ano	Cuban	Jap- anese	Chi- ese	Fili- pino
Recent Immigrants	32.7	35.9	29.2	30.6	41.6	32.7	36.8	32.6
Earlier Immigrants	48.0	45.2	36.0	40.9	40.8	41.4	43.2	45.9
Second Generation	46.8	43.1	31.7	38.2	38.3	45.0	41.2	32.5
Third Generation	39.0	38.2				31.4	37.3	37.8
TOTAL	40.6	38.3	34.6	38.6	40.9	40.3	41.1	39.6

Table A 3  
Percent Married Spouse Present  
by Generation and Ethnicity

	White	Black	PR	Chic- ano	Cuban	Jap- anese	Chi- nese	Fili- pino
Recent Immigrants	56	73	62	55	78	73	54	52
Earlier Immigrants	85	68	78	79	83	74	81	62
Second Generation	85	66	61	79	72	82	72	66
Third Generation	80	67				52	58	40
TOTAL	81	67	74	78	81 -	73	73	59

Table A 4

Earnings by Generation  
Adjusted for Demographic Factors

	White	Black	PR	Chic- ano	Cuban	Jap- anese	Chi- nese	Fili- pino
Recent Immigrants	\$6690	\$4060	\$4170	\$3690	\$4100	\$7110	\$4560	\$4010
Earlier Immigrants	\$7680	\$3810	\$4460	\$4590	\$6040	\$6910	\$5780	\$4460
Second Generation	\$7410	\$4580	\$5350	\$5020	\$7260	\$7670	\$8260	\$5040
Third Generation	\$6980	\$4050				\$7650	\$7960	\$3810
TOTAL	\$7020	\$4030	\$4570	\$4710	\$5460	\$7600	\$6400	\$4450

Table A 5

Earnings by Generation, Adjusted for  
Education and Demographic Characteristics

	White	Black	PR	Chic- ano	Cuban	Japa- nese	Chi- nese	Fili- pino
Recent Immigrants	\$7070	\$3760	\$4200	\$4020	\$4330	\$6220	\$4740	\$3730
Earlier Immigrants	\$8060	\$3590	\$4500	\$4840	\$5880	\$6760	\$5950	\$4640
Second Generation	\$7370	\$4290	\$4950	\$4800	\$7010	\$7810	\$7770	\$4950
Third Generation	\$6970	\$4060				\$7600	\$7690	\$3890

Table A 6

Education by Nativity and Ethnicity

	White	Black	PR	Chic- ano	Cuban	Japa- nese	Chi- ese	Fili- pino
Recent Immigrants	11.4	11.0	8.5	5.8	9.0	15.0	11.1	13.2
Older Immigrants	10.9	10.7	8.4	6.5	11.1	13.0	11.3	9.4
Second Generation	11.7	10.7	10.5	8.6	11.4	12.4	12.8	11.4
Third Generation	11.6	9.5				12.8	12.3	10.1
					10.5	12.7	11.8	10.8

Table A 7

Hours Worked by Generation and Ethnicity

	White	Black	PR	Chic- ano	Cuban	Jap- anese	Chi- nese	Fili- pino
Recent Immigrants	37.9	37.1	31.3	37.0	37.8	39.7	40.8	26.5
Earlier Immigrants	41.6	37.7	34.4	35.9	39.0	41.2	41.0	31.0
Second Generation	40.1	34.6	33.1	35.9	39.2	41.2	39.9	33.0
Third Generation	38.3	33.4				33.4	37.6	23.6
TOTAL	38.7	33.5	33.9	36.0	38.6	39.0	40.2	29.7

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