RELATIVE EARNINGS REDUX: YOUTH MOBILITY IN THE 1980s

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A complete view of inequality should encompass not only measures of distance between hierarchical ranks, but also measures of the extent of individual movement across ranks (mobility). Evidence from the NLSY indicates that relative earnings mobility was pervasive among young workers in the 1980s; possibly even higher than in the 1960s. Gender and race differences are apparent, however.

A consensus has emerged that the U.S. distribution of income became more unequal in the 1980s (Karoly, 1993; Levy and Murnane, 1992; Katz and Murphy, 1992; Juhn, Murphy, and Pierce, 1993). Many observers interpret this trend as a symptom of an increasingly stratified class structure, epitomized at the extremes by an elite class of "super-rich" and a permanently impoverished and disenfranchised "underclass." These interpretations are reminiscent of the dual labor market models (Doeringer and Piori, 1971) which asserted the institutional separation of "primary" and "secondary" labor markets. What distinguishes more recent research is (1) the respecification of the characteristics of secondary workers (more emphasis on educational status and structural dislocation rather than race, location, or family income) and (2) more empirical documentation of widening between-group income differences. The conclusion common to both the earlier and more recent studies is that the distribution of income has become more stratified and that structural barriers to primary jobs must be eliminated. The transformation of secondary jobs to primary ones (e.g. via unionisation) has also been advocated (Wial, 1991).

Although the accumulated evidence on inequality may be irrefutable, it is not sufficient for drawing conclusions about stratification. Stratification refers not so much to the distance between various socio-economic clusters, but rather to the degree of movement between them (Schiller, 1977; Yitzhaki and Lerman, 1991). Stratification thus embodies a much longer-term view of inequality, in which *access* to specific status ranks, not the rank structure itself, is the ultimate concern. The focus on equal access (opportunity) rather than equal status also lies at the core of mainstream American socio-political ideology.

Repeated cross-sectional observations reveal nothing about the extent of access to specific income states, much less about *changes* in accessibility over time. To address the issue of equal access, one must have longitudinal data. With longitudinal microdata, observations on inter-class mobility replace cross-sectional inferences as the basis for gauging changing patterns of inequality. In a longitudinal context, it could be said that opportunities were becoming less equal only if the rate of inter-class mobility was diminishing over time, or that it held constant while the gap between classes widened. On the other hand, increasing rates of interclass mobility might more than compensate for widening gaps between classes, preserving or even increasing lifetime equalities.

This paper examines equality in this life-cycle framework by tracking the longitudinal experiences of individual workers. Although the observations are limited to younger workers, the evidence reviewed suggests that rates of interclass mobility were high in the 1980s, perhaps even higher than in earlier decades. This suggests the need for caution in drawing inferences about lifetime inequality from cross-sectional evidence on widening income gaps.

I. THE MODEL

The model of mobility used here is identical to that introduced by Schiller (1977) and used in a number of subsequent studies of relative earning mobility (e.g. Duncan, 1984; Randolph and Trzcinski, 1989). In this model, the earnings distribution is envisioned as a hierarchical ordering of a finite number of ranks. Mobility is defined as a change in an individual's ranking over a prescribed period of time. The basic output of this Markovian model is a set of $n \times n$ transition matrices consisting of n^2 probabilities P_{ij} that an individual will move from one rank (i) to another (j) in a given period of time.

Although there is no absolute standard for assessing the degree of mobility, alternative models of labor market behavior generate varying predictions for the P_{ij}. These range from the extreme of absolute stratification (i.e. all $P_{i,i} = 1$ and all $P_{i,j} = 0$, $i \neq j$) to models of perfectly equal opportunity (i.e. all $P_{i,j} = 1/n$). For the purposes of the present inquiry, increased (decreased) inequality would be manifest in decreasing (increasing) average rates of mobility, i.e. transition matrices moving further away from (closer to) the extreme of all $P_{i,j} = 1/n$. This is analogous to the use of changes in Gini coefficients to measure changes in status equality (see Yitzhaki and Lerman for a related approach).

The mobility measures generated by this model are purely descriptive. They address the core question of how much inter-rank mobility exists. Other longitudinal studies have put more emphasis on *absolute* earnings changes, leaving the issue of "cross-overs" to be resolved by inference. Other studies attempt to decompose observed variance in earnings into "permanent" and "transitory" components (Lillard and Willis, 1978; Gottschalk, 1982; Moffitt and Gottschalk, 1993). Although such efforts are important for interpreting the significance of relative earnings mobility, they are not a substitute for the empirical depiction of that mobility.

An appealing feature of the relative earnings approach is that it abstracts from absolute earnings gains. Changes in nominal earnings due to cyclical or structural factors affect the $P_{i,j}$ only to the degree that they alter the relative ranking of individuals. Hence, an individual may experience real earnings gains, but fail to register a rank-order change unless those gains outpace the average. The hierarchical framework thus absorbs considerable transitory (vs. permanent) variance in earnings as well.[1]

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[1]Moffitt and Gottschalk (1993) define transitory shocks as those whose effects disappear within three years. Thus, longer observation horizons like those used here are likely to isolate more permanent mobility. The theoretical limitations of both permanent earnings models and transition matrix models are discussed in Atkinson, Bourguignon, and Morrison (1992).

The basic model is also adapted easily to control for life-cycle earnings dynamics. To do so, the earnings distributions are confined to specific age cohorts. These age-specific distributions are then used to ascertain the mobility of individuals, relative only to other workers of their same age. This is very different from most other longitudinal studies, which must rely on imposed age controls to factor out life-cycle effects in more age-dispersed samples. At the other extreme, Kennedy (1989) limited his analysis to only those men born in a single year (1930).

II. THE DATA

The data requirements for estimating the relative mobility model are daunting. In addition to work history data for individuals, the model requires information on the (cohort-specific) distribution of earnings in various years. The earlier Schiller study (1977) used Social Security Administration earnings files to both (1) estimate the cohort-specific earnings distributions in each year, and (2) ascertain the relative position of each individual in each annual distribution (1957–71). Although Social Security Administration data files are still the most complete source of earnings data for the entire workforce, access to those files has been severely curtailed by confidentiality concerns. An additional drawback is that Social Security files contain virtually no demographic or employer data that might help differentiate or explain documented mobility patterns.

The present inquiry utilises data from the National Longitudinal Surveys of Youth (NLSY). The NLSY was initiated in 1979, with retrospective work histories back to January 1978. The 12,686 respondents in the original sample are weighted to represent a national cross-section of all youth aged 14–21 in 1979. The same respondents have been re-interviewed in each subsequent year, creating extraordinarily comprehensive work and personal histories (see Center for Human Resource Research for details).

The major drawback to the NLSY is that it encompasses only youth cohorts and a ten-year observation horizon. Earnings distributions and individual mobility therein can be constructed only for the age span 14–30 during the observation years (1978–88). Both of these constraints diminish as the NLSY continues. In the interim, however, these data constraints limit the range of generality. No better source of data exists, however, for tracking the mobility of young workers during the first 10–15 years of labor force participation.[2]

Two age cohorts are distinguished in this analysis, namely "teens" (aged 16–19 in the base year) and "youth" (ages 20–24). Ideally, the identification of both cohorts would occur in the first year of the study, thus maximizing the longitudinal observation period. In 1978, however, none of the NLSY respondents were over age 22. Accordingly, the two age cohorts analyzed here originate in different years. The resulting cohorts are 1978 Teens (aged 16–19 in 1978) and 1981 Youth (aged

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[2]The Panel Survey of Income Dynamics (PSID) has been used for most longitudinal studies. Although the PSID is well-suited for analysis of family income dynamics, it contains a much more heterogeneous cross-section of earners. The resulting cell sizes are too small to generate detailed age-specific earnings distributions, much less the specific age–sex–race distributions constructed for this study. The earlier NLS surveys were comparable to the NLSY but suffered from high sample-attrition rates that compromised longer-term mobility measures.

20–24 in 1981). Given the age overlap, some individuals end up in both of the study cohorts.

The focus of the analysis is on the annual earnings of these individuals in each year of the observation period (1978–88 for teens; 1981–88 for youth). All earnings information is collected from the respondents directly. Although survey data are subject to measurement error, annual earnings reports are less subject to measurement error than reports of hourly wages, while longitudinal data also tend to be more valid than retrospective data (Rodgers, Brown, and Duncan, 1993; Bound *et al.* 1994). The partitioned ranks of the earnings distribution used in this study are also broad enough to absorb considerable measurement error.

The NSLY collects extensive data on the current or most recent job (job #1) as well as details on as many as four additional jobs each year. Although other studies have focused on job #1 (Veum, 1993), there is no reason to single out that particular employment. In this study the focus is on total annual earnings—inclusive of tips, bonuses, and overtime premiums—from all jobs held during the year.[3]

Ventile Rankings

To ascertain the relative earnings of each individual, the earnings distributions of each cohort were constructed for each year (1978–88). All cohort members reporting earnings in a given year were included in the observable distribution for that year. Hence, the number and composition of earners may change from year to year. The end product of this effort is a set of cohort-specific earnings distributions for each year.

Each observed earnings distribution is partitioned into twenty proportional subgroups, ranked in order of observed earnings. These so-called "ventiles" are the basic unit of measurement for gauging relative earnings status and changes therein. The obvious advantage of the ventile structure over more aggregated structures (e.g. quintiles) is that it permits more detailed measurement of rank changes.

Table 1 displays the ventile boundaries for the two primary cohorts. A teenager earning $8,100 or more in 1978 was in the highest ventile (rank #1) of that cohort. A youth (aged 20–24) needed at least $20,000 to attain the same relative cohort ranking in 1981.

Every individual is assigned a cohort-specific ventile ranking in every year in which earnings are reported. Relative mobility is gauged by changes in ventile position from one year to another.

Attached Workers

As a perusal of Table 1 confirms, the earnings differences between ventiles are very small for young workers, particularly teenagers. Most of these earnings are derived from part-year and part-time employment. Accordingly, observed changes in individual ventile ranks are largely a result of sporadic labor force

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[3]Other studies have documented mobility in both hourly wages and annual earnings (e.g. Duncan, 1984; Veum 1993).

TABLE 1

VENTILE BOUNDARIES, LOWER BOUNDARY
OF ANNUAL EARNINGS

Ventile	1978 Teens $	1981 Youth $
1	8,100	20,000
2	6,300	16,010
3	5,009	14,000
4	4,222	12,500
5	3,600	11,208
6	3,020	10,004
7	2,618	9,605
8	2,160	8,900
9	2,000	8,000
10	1,600	7,042
11	1,403	6,005
12	1,200	5,040
13	1,000	4,324
14	888	3,538
15	702	3,500
16	570	2,059
17	445	1,500
18	304	995
19	162	455
20	—	—
	$N = 4,750$	$N = 4,942$

attachment and of little socio-economic interest. Other studies have attempted to minimise such variance by limiting their observations to individuals thought to have completed schooling (Veum, 1992), to heads of household (Duncan, 1984; Gottschalk, 1982), to married men (Randolph and Trzcinski, 1989), to year-round full-time workers (Blackburn, 1990), or to some combination of such characteristics (Lillard and Willis, 1978; Moffitt and Gottschalk, 1993). This study follows Schiller (1977) and Featherman and Hauser (1978) in using an earnings threshold rather than demographic characteristics to identify the core sample. This permits greater generality while still providing a focus on workers with greater commitment to the labor market in the base year.[4] The greater experience of these "attached" workers is likely to generate more meaningful earnings comparisons.

The annual earnings threshold used in this analysis is $3,100 for 1978 teens and $3,500 for 1981 youth. These thresholds are roughly equivalent to the inflation-adjusted 1957 threshold ($1,000) used in the earlier Schiller (1977) study and approximate the return to working half-time throughout the year at the federal minimum wage.[5] Only individuals having base-year earnings in excess of these thresholds are tracked up and down the earnings distributions in each observation year. No earnings thresholds are imposed in years other than the first (base). In addition, the distributions include *all* workers of the same age cohort who have

[4]Since family status and school status change so frequently, these characteristics are particularly unsuitable screens for designing an earnings mobility sample (see Duncan, 1984).

[5]Featherman and Hauser (1978) used the same $1,000 threshold to eliminate marginally attached workers in their analysis of socioeconomic mobility.

earnings in any given year. Accordingly, relative earnings in later years are affected by labor market entry and exit of cohort members, as well as by earnings changes experienced by workers employed throughout the observation period. These separate sources of mobility are assessed.

Gender-Specific Mobility

The cohort-specific earnings distributions reconstructed for each year are further disaggregated by gender. These gender-specific cohort distributions facilitate comparisons with the original study, which examined male work histories only. The gender-specific cohort distributions also reveal differences in mobility patterns within and across gender, as predicted by models of workplace segregation (see Bergmann, 1986; Blau and Jusenius, 1976; Hartmann, 1976; Reskin and Roos, 1990).

III. OBSERVED MOBILITY

The relative mobility analysis focuses on the changes in ventile rankings of individuals over the observation period. The basic product of the analysis is a 20×20 transition matrix for each age/gender cohort, correlating ventile positions in different years.

TABLE 2

MOBILITY RATES OF ATTACHED WORKERS
(Percent who move at least two ventiles
between base year and 1988)

Initial Ventile	1978 Teens	1981 Youth
1	78.8	54.9
2	77.8	62.9
3	83.0	73.9
4	81.4	76.2
5	84.9	78.1
6	89.9	77.9
7	—	78.1
8	—	85.6
9	—	82.7
10	—	82.8
11	—	80.8
12	—	81.0
13	—	84.3
14	—	78.5
15	—	84.6
Total	82.6	77.5
	$N = 1,031$	$N = 2,582$

Table 2 summarises the patterns of mobility over the period 1978–88 for the two primary age cohorts. An individual is defined as "mobile" if he or she moves at least two ventiles, i.e. if the end-year earnings rank is at least two ventiles removed from the base-year rank. The two-ventile threshold precludes individuals

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from being counted as "mobile" who are propelled across adjacent ventile boundaries by small income changes. To be counted as "mobile," an individual must move at least five percentiles (one twentieth of the distribution).[6]

The absence of observations for the lower ventiles in Table 2 is due to the earning thresholds used to identify attached workers. Once in the attached sample, however, an individual can move to any ventile in later years.

As is apparent from Table 2, relative mobility is pervasive among younger workers. Eight out of ten teenagers with significant attachment to the workforce in 1978 were in a different relative earnings position ten years later. The average mobility rate was comparable for youth (aged 20–24 in 1981), especially in view of the shorter observation period (seven years vs. ten) for that cohort. Less than one-fourth of either cohort stayed in the same or adjacent rank of the earnings distribution during the observation period.

Although mobility is pervasive, it is not equally frequent across ranks of the earning distribution. Individuals in the highest ranks tend to have significantly more "staying power" than individuals further down the distribution. This inter-rank difference is consistent with the notion that greater experience tends to reveal more "permanent" differences in earning ability. Ultimately, markets are abe to identify exceptional human capital differences and pay it accordingly. This is not a sufficient condition for relative earnings stability, however: earlier research (Schiller, 1977) showed that high rates of relative mobility continue to characterise cohorts throughout their life cycle.

The mobility of these young workers was not confined to a few adjacent ventiles. As Table 3 documents, these young workers moved long distances across the earnings distribution. Teen workers who were at the top of their cohort distribution in 1978 fell an average of nearly six ventiles over the subsequent decade. Youth workers who were initially at the top also moved significantly down the earnings distribution between 1981 and 1988. In both cases, the early "winners" in the earnings distribution faded far into the middle of the pack. At the same time, those Youth who were initially on the lower rungs of the earnings distribution moved significantly up the ladder in subsequent years. Youth initially in the 15th ventile, for example, moved up the distribution an average of nearly five ventiles in the subsequent seven years.

It should be recalled that the observed changes up and down the ventile rankings do not necessarily correspond with absolute changes in earnings. The mean earnings for both the 1978 teens and the 1981 youths increased greatly during the observation period. Accordingly, individuals could move down the rank order of earnings even while their absolute earnings were increasing. In such cases, the diminuition of rank reflects the faster rate of earnings growth for other members of the cohort or the later entry into the labor market of higher-earning individuals.

The evidence on rates (Table 2) and distance (Table 3) of mobility affirm the precariousness of inferences about inequality from cross-sectional data. The

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[6]By contrast, quintile-based measures of mobility (e.g. Duncan, 1984; Moffitt and Gottschalk, 1993) are compelled either to count very small earnings re-orderings across quintile boundaries as mobility or to ignore substantial intra-quintile movement.

TABLE 3

EXTENT OF MOBILITY

(Mean differences between initial and final ranks)

Initial Ventile	1978 Teens		1981 Youth	
	Absolute Difference	Algebraic Difference	Absolute Difference	Algebraic Difference
1	5.61	5.61	3.44	3.44
	(4.80)	(4.80)	(4.33)	(4.33)
2	6.41	6.29	4.20	3.99
	(4.93)	(5.08)	(4.44)	(4.64)
3	7.60	7.22	4.76	4.27
	(5.33)	(5.83)	(4.45)	(4.93)
4	5.79	4.97	4.65	3.96
	(4.67)	(5.37)	(4.38)	(5.01)
5	6.15	4.94	4.69	3.59
	(4.50)	(5.81)	(4.08)	(5.08)
6	5.37	3.11	4.61	3.33
	(3.40)	(5.56)	(3.76)	(4.94)
7			4.49	2.41
			(3.31)	(5.04)
8			4.77	2.49
			(3.09)	(5.12)
9			4.43	1.95
			(2.88)	(4.93)
10			4.55	2.08
			(2.89)	(4.99)
11			4.21	0.29
			(2.58)	(4.94)
12			4.39	−0.68
			(2.88)	(5.22)
13			4.91	−1.76
			(3.13)	(5.56)
14			4.77	−2.52
			(3.75)	(5.53)
15			6.03	−4.90
			(4.13)	(5.45)
Total	6.19	5.44	4.51	1.88
	(4.69)	(5.54)	(3.66)	(5.50)
	N = 1,031	N = 1,031	N = 2,582	N = 2,582

Note: Standard deviations in parentheses.

evidence here suggests that income status in any year is an exceedingly poor approximation to status in other years. Changes in relative earnings are the norm, not the exception, for young workers.

Male vs. Female Patterns

Although status mobility is the norm, mobility patterns are not identical for all groups. There are striking contrasts between male and female mobility patterns and significant differences across racial groups as well.

Table 4 disaggregates mobility patterns by gender. The summary measures reveal that young women have much greater difficulty than young men staying near the top of the earnings distribution. The probability of a female staying in any of the top four ventiles (top quintile) averages less than 8 percent for Teens

and 30 percent for Youth. The male probability of holding on to one of the top rungs of the distribution is significantly higher (25 and 35 percent respectively).

TABLE 4

MOBILITY PATTERNS BY GENDER

	1978 Teens				1981 Youth			
	Pct Immobile		Algebraic Dist		Pct Immobile		Algebraic Dist	
Initial Ventile	Males	Females	Males	Females	Males	Females	Males	Females
1	24.1	7.1	4.97	8.64	47.6	28.0	3.03	6.20
			(4.43)	(5.38)			(3.77)	(6.47)
2	29.5	7.6	5.20	8.47	35.6	41.5	3.55	5.24
			(4.85)	(4.87)			(4.00)	(5.99)
3	22.3	7.4	5.85	9.29	28.4	20.3	3.51	6.39
			(5.71)	(5.42)			(4.57)	(5.29)
4	25.2	8.6	3.23	7.61	27.2	19.7	2.87	5.28
			(4.83)	(5.11)			(4.13)	(5.67)
5	18.0	10.7	3.37	7.27	20.4	24.0	3.12	4.27
			(5.40)	(5.64)			(5.15)	(4.93)
6	8.6	12.3	1.72	5.09	18.9	26.2	2.02	4.73
			(5.48)	(5.08)			(4.44)	(5.09)
7					19.8	24.2	1.16	3.80
							(5.00)	(4.74)
8					13.6	15.1	0.85	3.85
							(5.40)	4.46)
9					19.8	16.2	0.70	2.87
							(5.33)	(4.40)
10					18.0	16.7	1.46	2.52
							(5.11)	(4.90)
11					15.7	22.2	−0.67	1.10
							(5.14)	(4.65)
12					18.2	19.7	−2.17	0.49
							(5.49)	(4.69)
13					20.0	11.4	−3.26	−0.24
							(5.24)	(5.50)
14					25.3	17.6	−3.03	−2.00
							(5.73)	(5.31)
15					10.00	21.1	−6.95	−2.74
							(5.21)	(4.95)
Total	21.3	9.0	4.21	7.70	22.6	21.6	1.21	2.72
			(5.32)	(5.39)			(5.39)	(5.51)
		$N = 667$	$N = 364$				$N = 1,438$	$N = 1,144$

Table 4 also reveals how much further women tend to slide down the earnings distribution over time. On average, women experience net downward mobility that is 75 percent (Teens) to 124 percent (Youth) greater than males. This net downward mobility reflects relatively slower earnings growth of continuously employed women and the later entry of higher-wage male workers.

The pattern of male/female differences within the earnings distribution is also revealing. Among Youth, women who are initially positioned just below the median earnings tend to slide further down the distribution (see ventiles 11 and 12) or make negligible gains (ventile 13). Young men in the same initial positions tend to move up to or beyond the median during the same period. These patterns suggest that the general concept of segmentation (dual labor markets) has some validity when gender conditioned.

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Racial differences in mobility patterns are also evident. Non-white (black, hispanic) Youth have higher rates of immobility, particularly at or below the middle of the distribution (Table 5, ventiles 10–15). At the top of the distribution, however, the racial patterns are reversed: minority youth have significantly less "staying power" than white youth. The relative tenuousness of minority claims on the top ventiles is not evident among teenagers however.

Racial differences in the distance of mobility are small. Although minority youth tend to fall further or rise less, the racial differential exceeds two ventiles in only three ranks (12, 14, 15). This contrasts sharply with gender differentials (Table 4) that are 2–3 times larger. Apparently, gender gaps are more substantial than racial gaps, both in terms of static wage differentials and life-cycle dynamics.

TABLE 5

MOBILITY PATTERNS BY RACE

Initial Ventile	1978 Teens				1981 Youth			
	Pct Immobile		Algebraic Dist		Pct Immobile		Algebraic Dist	
	Nonwhite	White	Nonwhite	White	Nonwhite	White	Nonwhite	White
1	18.2	30.0	4.97	5.38	47.8	39.7	3.02	4.32
			(4.49)	(4.99)			(3.89)	(5.04)
2	25.6	15.6	5.20	6.86	36.5	38.2	3.81	4.33
			(4.85)	(4.90)			(4.66)	(4.61)
3	16.3	18.6	5.85	6.69	28.0	22.5	3.66	5.50
			(5.71)	(5.62)			(4.62)	(5.31)
4	17.1	22.9	3.23	5.31	24.6	22.0	3.64	4.72
			(4.83)	(5.23)			(5.04)	(4.92)
5	14.9	13.5	3.37	5.24	17.7	21.6	3.52	3.76
			(5.40)	(5.25)			(5.25)	(4.64)
6	9.2	12.5	1.72	3.78	19.6	26.9	3.36	3.28
			(5.48)	(5.69)			(5.20)	(4.54)
7					23.0	19.3	2.24	2.82
							(4.98)	(5.20)
8					14.6	14.1	2.24	2.93
							(5.22)	(4.93)
9					20.7	13.0	1.62	2.45
							(5.11)	(4.61)
10					13.0	23.1	1.93	2.28
							(5.51)	(4.22)
11					17.6	21.6	0.29	0.28
							(5.10)	(4.73)
12					15.3	25.0	−1.53	0.71
							(5.53)	(4.35)
13					13.5	19.4	−1.95	−1.45
							(5.65)	(5.43)
14					15.9	29.5	−3.53	−1.05
							(5.86)	(4.67)
15					11.1	25.0	−5.59	−3.37
							(5.60)	(4.98)
Total	16.9	19.2	4.21	5.67	21.3	24.1	1.62	2.36
			(5.32)	(5.31)			(5.60)	(5.26)
		$N = 728$	$N = 303$				$N = 1,667$	$N = 915$

Note: The "nonwhite" category includes black and Hispanic individuals.

Within-Group Mobility

The apparent disadvantages of young women and minorities in life-cycle earnings profiles reflects their losses relative to white males. Mobility patterns *within* gender- and race-specific groups may not be that different, however. As discriminatory barriers fall, within-group mobility patterns may begin to look more similar even before between-group differentials shrink. To examine this and other hypotheses, the aggregate earnings distributions are decomposed into gender- and race-specific sub-distributions.[7] Each individual is then assigned a within-group ranking for each year. Within-group mobility is measured by ventile changes within these gender- and race-specific cohort distributions. This perspective facilitates comparisons of mobility patterns within and across sub-populations.

For expositional convenience only the within-group patterns of Youth are summarised in Tables 6 and 7. In Table 6 the general pattern of regression toward the mean is evident in both intra-male and intra-female patterns. There are sharp differences, however, in the force of their respective patterns. Young women who reach the highest ranks of the female distribution have a tenacious staying power. The probability of women staying in the top four female ventiles (32.5 percent) is a third higher than that for men (24.3 percent). This suggests that high-achievement females are more uniquely differentiated than high-achievement males.

Table 6 reveals another sharp difference in gender-specific mobility patterns. Women who do leave the higher ranks tend to fall much further down the distribution than similarly-situated men. Indeed, net downward mobility continues for women even to the twelfth ventile. On the other hand, women from the lowest ranks experience much less upward mobility than men. These differentials may be attributable to much higher rates of labor market re-entry among women, especially the re-entry of women in their late twenties with above-average earning power.

Racial Differences in Stratification

Striking differences in mobility patterns are also apparent across racial groups (Table 7). In general, the minority earnings distribution is much more stratified than the white distribution. The average rate of mobility among white male Youth is 84.8 percent; but only 75.7 percent among minority Youth. Moreover, minority Youth have a 50 percent higher probability (34.1 percent vs. 23.1 percent) of holding onto the higher ranks (top four ventiles) of their earnings distribution. Greater stratification is also apparent in the lower ranks of the minority distribution: minority Youth in the lower (ventiles 12–15) are 50 percent more likely than white Youth to remain in their respective positions.

The greater earnings stratification among women and minorities is consistent with models of discrimination. Discrimination barriers reduce the probability of a minority worker achieving high relative earnings. Those who do attain high ranks must presumably demonstrate extraordinary motivation, productivity, or

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[7]This mirrors recent decompositions of changing cross-sectional inequality into within-group and between-group variances (Katz and Murphy, 1992).

TABLE 6

WITHIN-GENDER MOBILITY PATTERNS OF YOUTH

Rank in 1981	Percent Immobile		Mean Ventile Change	
	Males	Females	Males	Females
1	35.1	51.2	3.87 (4.17)	4.69* (5.87)
2	29.7	21.4	4.28 (4.24)	6.11* (5.67)
3	13.6	25.0	4.58 (4.68)	4.04 (5.29)
4	18.8	32.2	4.06 (4.97)	3.30* (4.97)
5	29.8	20.0	3.99 (4.67)	4.10 (5.59)
6	18.9	16.7	3.09 (4.93)	3.64 (4.77)
7	17.4	23.8	3.85 (4.79)	2.44* (4.51)
8	13.4	16.5	2.14 (5.29)	2.19 (4.98)
9	14.9	13.8	2.26 (4.94)	1.24* (5.10)
10	12.5	17.1	0.89 (6.04)	0.03* (5.13)
11	16.0	23.4	1.23 (5.17)	−0.66* (4.79)
12	13.3	14.1	0.36 (5.17)	−1.24* (5.81)
13	18.2	13.3	−1.19 (5.74)	−2.56* (5.53)
14	11.8	19.0	−2.14 (5.41)	−3.76* (4.92)
15	16.9	—	−2.96 (5.79)	—
Total	18.7	22.0	1.97 (5.58)	2.16 (5.81)
	$N = 1,438$	$N = 1,144$		

*Significantly different from male average at 0.10 level of confidence.

credentials. These traits will tend to distinguish them more sharply from other, less successful minority workers, thus serving to solidify their relative position. Their position may also be enhanced and protected by affirmative action practices that reduce the probability of replacement.

IV. COMPARISONS TO THE 1960s

The relative earnings mobility observed for the 1980s provides a unique perspective on the central issue of equality. That perspective would be enhanced with comparable observations from earlier periods. Then one could gauge *changes* in stratification, as well as changes in static equality. Unfortunately, the data required for a complete analysis of changing stratification are not available. The earlier research with social security files covered all ages, but excluded women. The NLSY data used here include women, but cover only a narrow range of ages. Accordingly,

TABLE 7

WITHIN-RACE MOBILITY PATTERNS OF MALE YOUTH

Rank in 1981	Percent Immobile Whites	Percent Immobile Blacks	Mean Ventile Change Whites	Mean Ventile Change Blacks
1	34.9	48.8	4.24 (4.52)	3.49* (4.69)
2	28.8	31.7	4.54 (4.34)	4.80 (4.68)
3	14.3	37.5	4.43 (4.54)	2.45* (3.95)
4	14.5	20.0	4.36 (4.77)	4.53 (5.40)
5	17.6	35.5	3.89 (4.84)	3.24 (5.23)
6	12.7	25.0	3.46 (4.44)	3.31 (4.69)
7	17.9	17.1	3.19 (5.60)	2.31* (4.84)
8	16.4	11.4	2.75 (5.04)	1.84* (5.40)
9	16.7	8.3	1.95 (5.57)	1.72 (6.31)
10	11.7	13.3	0.95 (5.18)	0.95 (5.19)
11	10.2	19.5	0.86 (5.41)	−0.39* (5.21)
12	19.6	25.7	1.72 (5.31)	0.43* (4.94)
13	16.4	18.9	−1.64 (5.99)	−1.54 (5.01)
14	13.3	23.7	−2.05 (5.84)	−1.21* (5.10)
15	14.3	28.6	−2.65 (5.99)	−4.79* (5.00)
Total	16 2	24.3	2.01 (5.70)	1.73 (5.53)
	$N = 901$	$N = 537$		

*Significantly different from white average at 0.10 level of confidence.

the only data overlaps are for the male Teen and Youth cohorts in the context of gender-specific distributions.

The available evidence suggest that relative mobility for young men was no less, and possibly higher in the 1980s compared to the 1960s. Among male Youth, 80 percent were mobile in the period 1957-71 and 81 percent were mobile in the period 1981-88 (Table 8). Although this difference is small, it is constrained by the shorter observation period for the 1980s. When mobility rates for the 1960s were recalculated for a ten-year period (1957-67), the average immobility rate increased by 17.2 percent. In other words, relative mobility rates tend to rise as the observation period lengthens.[8] A partial time adjustment decreases the 1960s

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[8]Moffitt and Gottschalk, using PSID data, found that transitory (unexplained) variance declines over time, while Veum (1992), using NLS data, observed that year-to-year mobility is higher than long-term mobility. Neither observation is inconsistent with the observation here that ventile re-rankings (which absorb much transitory variance) increase over time.

TABLE 8

GENDER-SPECIFIC MALE MOBILITY: THE 1960s VS. THE 1980s

Youth Measure		Male Teens			Male	
1967	1981–88	1957–71	1957–67	1981–88	1957–71	1957–
Percent mobile 77	81.3	83.0	80.0	81.9	80.0	
Mean absolute 3.76	4.75	6.49	4.66	6.01	5.23	
Change (in ventiles) (3.52)		(4.68)		(4.46)	(3.89)	
Mean algebraic N/A	1.97	5.60	N/A	4.96	0.56	
Change (in ventiles) (5.58)		(5.72)		(5.60)	(6.50)	

Note: 1957–67 adjustment based on averages reported in Schiller, 1977, p. 934; no data available for adjusting algebraic moves; standard deviations in parentheses.

Youth mobility rate to 77 percent, significantly below the experience of the 1980s. A complete adjustment of time horizons (to seven years) might widen this gap further. Similar conclusions apply to Teen mobility, where unadjusted rates were 83 percent (1960s) and 82 percent (1980s), as Table 8 shows.

In addition to greater frequency of status change, young people in the 1980s appear to have moved greater distances across the earnings distribution. The unadjusted mean *absolute* rank changes for Youth were 5.23 ventiles (1960s) and 4.75 ventiles (1980s). Adjusting the former figure to a ten-year horizon (1957–67) yields a mean absolute move of only 3.76 ventiles, significantly below the seven-year experience of the 1980s.

The mean *algebraic* moves are also revealing. In the 1980s the cohort of attached Youth fell an average of nearly two ventiles in only seven years, vs. a loss of less than half a ventile for Youth in the fourteen-year period encompassing the 1960s (no data are available to adjust the algebraic moves to more comparable time horizons). This is strong collaboration of the hypothesis that educational credentials became a more forceful signaling mechanism in the 1980s (Blackburn, 1990; Juhn, Murphy, and Pierce, 1993). The average decline in this gender- and age-specific relative earnings must be attributable to the later entry of Youth who stayed in school longer than the initially attached workers.

A similar explanation may apply to the observed mobility of black youth. Rates of mobility were higher for black Youth in the 1980s (82 percent), compared to the 1960s (77 percent), even without an adjustment for the length of the observation period. The mean absolute change in ventile rank increased (4.43 to 4.97) as well. However, the net algebraic loss also grew larger (2.85 to 2.03) suggesting an erosion in the relative position of black youth in the 1980s. This observation is consistent with growing wage differentials across educational subgroups.

V. CONCLUSIONS

A complete assessment of inequality must incorporate measures not only of distance between distributional ranks, but also measures of movement between

ranks. While substantial evidence on the increasing distance between ranks has been collected, perspectives on inter-rank mobility remain scarce. This paper has sought to develop those perspectives further by examining the relative earnings mobility of young workers.

The available evidence indicates that young workers experienced high rates of intra-cohort earnings mobility in the 1980s. Less than one out of four young workers was still in the same or adjacent cohort specific earnings rank (ventile) ten years after first being observed. There is a clear tendency of regression toward the mean, with early "winners" losing relative position and early "losers" gaining.

Although relative earnings mobility is pervasive among youth, there are significant between- and within-group differences defined by race and gender. Women, and to a lesser extent blacks and Hispanics, have less staying power than white (Anglo) men at the top of the cohort earnings distribution and tend to fall further when they leave the top ranks. *Within*-group stratification is much greater for women, however; and also higher for minority youth, as would be suggested by models of discrimination.

Limited comparisons of mobility patterns in the 1980s and 1960s suggest that relative earnings mobility did not decline in the 1980s and may have increased. Although the mobility experiences of youth may not be replicated for older workers, these observations underscore the need to exercise caution in drawing conclusions about (increasing) inequality from successive cross-sectional observations.

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