CROSS-NATIONAL COMPARATIVE STATUS-ATTAINMENT RESEARCH

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ABSTRACT

Cross-national comparative studies of the process of occupational attainment conducted over the past 20 years are reviewed. Some support is found for the claim that industrial societies are more open than developing societies, but substantive conclusions regarding societal similarities and differences in status-attainment processes are very limited and very tentative. This unhappy state is attributed to a failure by the research community to take issues of measurement comparability seriously. A proposal is made for a collective effort to produce standardized results from individual national studies, in order to facilitate future cross-national comparative research on status-attainment processes and patterns.

INTRODUCTION

More than 20 years ago, Duncan (Duncan and Hodge 1963; Duncan 1966; Blau and Duncan 1967) transformed the study of the intergenerational transmission of social status from a nearly exclusive concern with the bivariate relationship

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between the occupations of fathers and sons into consideration of the diverse paths by which various aspects of parental status are converted into advantages and disadvantages for their offspring. By reconceptualizing status attainment as a *process* in which successive positions in the stratification system (education, first job, subsequent jobs, and income) are linked through a series of direct and indirect causal paths, and by demonstrating how the process could be modelled by means of path analysis (structural equations), Duncan established a paradigm that has been widely followed in the intervening years. The result has been a substantial elaboration of the initial model and cumulation of knowledge about status–attainment processes, at least within single countries—mainly the United States, but other countries as well. These developments have been reviewed in a number of articles (Haller and Portes 1973; Kerckhoff 1976; Mayer 1979; Matras 1980; Bielby 1981; Simkus 1981; Campbell 1983; Goldman and Tickamyer 1984; Kerckhoff 1984; for a critical review, see Colclough and Horan 1983 and the literature cited therein).

From the outset, the main thrust of this research tradition has been comparative (although comparisons have been restricted for the most part to subpopulations within single societies). Very early on, it was recognized that the parameters of a status–attainment model could be read as describing a *system* of social stratification and hence that comparisons *across* social systems of magnitudes of such parameters could be informative about the nature of social stratification in different societies. Thus, modest (two or three country) cross-national comparisons of status-attainment processes began to appear early on (Balan 1968; Jones 1971; Iutaka and Bock 1972; Wilson 1972), as well as programmatic calls for more ambitious efforts to generate comparable status-attainment models for a large number of societies and then model the parameters themselves by reference to exogenous macrosocial variables (Treiman 1970, p. 214).

The substantive research agenda of comparative status-attainment analysts was not new. Hypotheses were mainly derived from earlier theoretical writings (e.g., Lenski 1966, who blends together insights from traditional functionalism, Weberian conflict theory, and the study of technological evolution) or were borrowed from comparative research on intergenerational occupational mobility. Prominent among these is the thesis of industrialism (Treiman 1970), which posits that the level of direct status transfer from parents to their offspring will decrease with industrialization. A corollary is that as the level of average educational attainment increases (which generally accompanies industrialization), the influence of social origins on educational attainment will decrease. (However, others, e.g., Boudon 1973, have suggested the reverse possibility—that the increased length of schooling and the multiplication of decision points in educational careers have actually increased the opportunities for high status parents to provide competitive advantages for their children.) Within the category of technology-related hypotheses is Kelley's (1978) claim that the more unequal the distribution of income (and wealth) and educational attainment in the population

(of parents), the more influential parental status will be in determining the educational and occupational careers of the offspring.

Of more traditional functionalist origin than these propositions about technological factors and the unequal distribution of human resources is a hypothesis at the heart of the reasoning of Blau and Duncan (1967, pp. 429–431); they propose that a value change toward increased universalism as societies industrialize results in a shift from ascription to achievement as a basis for status attainment and a shift from direct occupational transmission to indirect transmission through educational achievement. In a modern variation on this sort of value hypothesis, Inglehart (1977, 1981; cf. De Graaf 1988) has proposed that the growth of postmaterialist values in the Western world since the 1960s has decreased achievement motivation and has, therefore, reduced the strength of the connection between educational attainment and income attainment.

All of the above hypotheses are variations on a theme—the effects of societal development. A somewhat different set of hypotheses is concerned with the influence of political structures, independent of the level of development. One important hypothesis is that intergenerational ties—both the dependence of educational attainment on social origins and the direct transmission of occupational status—should be weaker in state socialist or social democratic welfare states than in more laissez–faire capitalist states, because, in socialist societies, the state is more prone to use the educational system as a tool for promoting equality of opportunity (Parkin 1971). Heath, who also advances this argument, in addition proposes (1981, pp. 195–196, 204–210) that mobility chances will be most limited under right-wing conservative regimes. In an interesting variation upon this political hypothesis, Kelley and Klein (1981) have argued that political revolutions reduce inherited advantage *in the short run* but that new elites, consisting of the educated sector of the *ancien régime* plus those who were able to exploit the revolutionary situation to become educated, soon emerge and move to secure their advantage for themselves and their offspring. Konrad and Szelenyi (1979) construct a similar argument with respect to Hungry after the socialist transformation.

With so many interesting comparative hypotheses to be tested, and so much empirical work on specific societies, it would be reasonable to suppose that considerable progress has been made toward assessing the factors that affect status-attainment processes in different societies. Nearly 20 years after publication of the first comparative models, however, our settled knowledge of whether, to what extent, and in what ways status-attainment regimes differ across societies is not much greater than it was in 1970.

There are two main reasons for this. First, serious comparative research on social stratification, involving the systematic comparison of data from many countries, has engaged the energies of only a handful of scholars. For understandable reasons, most "comparative" studies have been restricted to binational comparisons of the scholar's own data and data from the United States or some

other "reference" society—or, at most, comparisons of three or four societies. But such comparisons have an inherent limitation—it is impossible to know which of the many ways that nations differ, if any, account for observed differences in their stratification systems. To the best of our knowledge, only three studies (Kelley 1978; Sharda, Conaty, and Miller 1983; Treiman and Yip 1989) have attempted to systematically test the effects of societal contexts on status attainment by modelling coefficients of micro–models using macro–indicators. Second, there has been great resistance to the need for measurement comparability. But, as has been suggested previously (Treiman 1975, 1977; Krymkowski 1988), without comparability of measurement, it is very difficult to know to what extent societal differences in the values of nominally comparable coefficients of statistical models reflect true differences in social structure and to what extent they merely reflect "instrument effects," that is, differences due to the way variables are measured—and, conversely, to what extent *similarities* in the values of nominally similar coefficients *mask* true differences in social structure.

The consequence is that few generalizations regarding cross-national differences or similarities in the status-attainment process can be regarded as definitively established. Nonetheless, a number of studies have compared the status-attainment process in two or more countries. In what follows, we pursue four tasks. First, we review these studies from the point of view of measurement comparability, to substantiate the strong claims we have just made regarding the lack of established knowledge and the reasons for it. Second, we attempt to extract from the corpus of comparative studies some generalizations that, if not unequivocally established, might at least be regarded as provisionally supported. Third, we propose a short-term solution to the problem of standardization—a set of standard analyses to be carried out by individual researchers in order collectively to create a sufficient body of standardized results to permit valid cross-national comparisons. Finally, we review new developments in status-attainment research in single countries that appear to us to be particularly promising for pursuit in a comparative framework.

By status attainment, we mean the attainment of education, occupation, and income. If taken in a broad sense, this topic covers a huge body of literature, not only in sociology, but also in economics and education. To make our review of comparative studies manageable, we restrict it to *intergenerational* studies, that is, to studies in which status attainment is explained, at least in part, by parental characteristics; to studies that compare two or more nations; and to studies that involve at least three variables. However, we exclude the extensive literature, in both sociology and economics, on income attainment; existing evidence suggests that direct parental influences on offspring's income are small or nonexistent (Duncan, Featherman, and Duncan 1972, p. 40). Furthermore, we will not be concerned with the extensive literature analyzing the bivariate relationship between father's and son's occupation (for recent reviews see Kerckhoff 1984; Kurz and Mueller 1987; Ganzeboom, Luijkx, and Treiman 1989). Finally, we will not

be concerned with gender, ethnic, or racial differences in status attainment within single countries or with such matters as career mobility, except insofar as career mobility is affected by parental status (and is studied comparatively). While of considerable interest, all these topics would excessively broaden the scope of our review.

MEASUREMENT COMPARABILITY IN COMPARATIVE STUDIES OF STATUS ATTAINMENT

To our knowledge, there have been 28 cross-national comparisons of the process of occupational attainment, 10 of which have involved comparisons of more than two nations.[1] Table 1 summarizes these studies. The table shows standardized coefficients for a model predicting occupational status from father's education and occupational status, respondent's education, and the status of his (or her) first job—or for simpler models omitting one or more variables—together with information about the sample and the coding of the variables.[2]

Inspecting the table, it is evident that many analysts use the same data. But, even when different analysts use the same data, they do not always get the same results (compare, for example, the coefficients from the 1965 Australian study reported by Jones 1971; Featherman, Jones, and Hauser 1975; and Jones and McDonnell 1977). Moreover, the situation is even worse if one attempts to generalize the findings from studies based on different data sets. There are several reasons for this.

First, many analysts are quite cavalier about the properties of the samples being compared. Rural villages and towns in developing countries or small towns are compared with entire industrialized nations (e.g., Lin and Yauger 1975; Kelley, Robinson, and Klein 1981), cites are compared with nations (e.g., Holsinger 1975; Kelley 1978), married men (Iutaka and Bock 1972) or husbands of married women (Kelley 1978) are compared with all adult men, and men of different ages are compared (e.g., Heath 1981). There has been little explicit evaluation of how strongly these noncomparabilities affect results, but, in some instances, the effects are likely to be large. Certainly, it is well-known that the coefficients of status-attainment models differ sharply depending upon whether the farm–origin population is excluded or included (Featherman and Hauser 1978) and also for different age groups (Duncan et al. 1972).

To make things worse, nominal identity does not ensure functional equivalence. It might well be suggested, for example, that the specification of an identical age range (e.g., 20–64) in a comparison of occupational status attainment in Brazil, Japan, and the United States does not achieve true comparability in the populations being studied because a substantial fraction of Japanese and Americans in their early 20s are not yet in the labor force while virtually all Brazilians are and, on the other hand, since 55 is the standard retirement age in

Table 1. Standardized Coefficients for the Regression of Status of Current Occupation on Status of First Job, Education, Status of Father's Occupation, and Father's Education, Cross-National Comparisons

Author	*Country (Year)*	ED_f	OCC_f	ED	OCC_1	R^2	*Sample*	*Occ. Code*[a]	*Ed. Code*[b]	*Source*[c]
Balan (1968, p. 185)	Mexico (1965)	—	.15	.36	.38	.64	Monterrey, males 21–60	R,S[d]	Y	
	United States (1962)	—	.12	.39	.28	.43	Males 20–64	D	R	Blau and Duncan (1967)
Featherman, Jones and Hauser (1975, pp. 345–346)[e]	Australia (1965)	.04	.11	.28	.36	.39	Males 20+	D	R	
	Australia (1965)	.02	.10	.29	.28	.28	Males 20+	P	R	
	Australia (1965)	.05	.11	.21	.22	.18	Males 20+	T	R	
	United States (1962)	−.02	.11	.38	.29	.40	Males 20–64	D	R	
	United States (1962)	−.01	.10	.37	.25	.32	Males 20–64	P	R	
	United States (1962)	−.00	.13	.33	.20	.25	Males 20–64	T	R	
Heath (1981, pp. 218–219)	Czechoslovakia (1967)	—	.02	.51	.24	.47	Adult males	R	Y	Safar (1971)
	Gt. Britain (1972)	—	.17	.33	.25	.36	Eng. & Wales, males 25–59	P	R	Halsey (1977)
	Spain (1966)	—	.44	.38	—	.50	Madrid, adult males	R	Y	Diez Nicolas et al. (1977)
	United States (1962)	—	.14	.56	—	.39	Native, nonblack, nonfarm origin men[f]	D	R	Jencks (1972)
Herz (1983, pp. 211–216)	Austria (1974)	.00	.20	.41	—	.24	Fully emp. m. & f. 16–65	T	Y	
	Finland (1975)	.00	.08	.47	—	.24	Fully emp. m. & f. 16–65	T	Y	
	German Federal Republic (1974)	.00	.16	.46	—	.28	Fully emp. m. & f. 16–65	T	Y	
	Netherlands (1974)	−.03	.11	.58	—	.37	Fully emp. m. & f. 16–65	T	Y	
	Switzerland (1975)	.15	.16	.33	—	.23	Fully emp. m. & f. 16–65	T	Y	
	United States (1974a)	−.06	.06	.50	—	.25	Fully emp. m. & f. 16–65	T	Y	
Herz (1986, p. 122)	German Federal Republic (1974)	—	.14	.48	—	.30	Fully emp. m. & f. 25–64	T	Y	
	United States (1974a)	—	.07	.50	—	.28	Fully emp. m. & f. 25–64	T	Y	
Holsinger (1975, p. 273)	Brazil (1959a)	−.01	.09	.49	.33	.65	Sao Paulo, adult males	RP	Y	
	Brazil (1959b)	−.09	.23	.49	.24	.62	Rio de Janeiro, adult males	RP	Y	
	Brazil (1959c)	−.07	.32	.22	.51	.74	Volta Redonda, adult males	RP	Y	
	Brazil (1959d)	.07	.12	.49	.28	.66	Belo Horizonte, adult males	RP	Y	
	United States (1962)	−.01	.12	.40	.28	.43	Males 20–64	D	R	Blau and Duncan (1967)
Hope (1984, pp. 26–27)[g]	Scotland (1964)	—	.17	.47	—	.48	Males 27–28	R	R	
	United States (1962)	—	.15	.48	—	.46	Males 25–34	D	R	Jencks (1972)
Iutaka and Bock (1972, p. 218)	Brazil (1959)	—	.14	.35	.24	.34	Six cities, males 18+	RP	R	
	United States (1962)	—	.12	.39	.28	.43	Males 20–64	D	R	Blau and Duncan (1967)

Jones (1971, p. 534)	Australia (1965)	—	.19	.29	.24	.28	Males in labor force	RP	R	
	United States (1962)	—	.12	.39	.28	.44	Males 20–64	D	R	Blau and Duncan (1967)
Jones (1981, p. 112)	Australia (1965)	—	.19	.29	.24	.28	Males in labor force	RP	R	Jones (1971)
	Japan (1965)	—	.11	.17	.47	.36	Adult males	P	R	Tominaga (1969)
Jones and McDonnell (1977, p. 456)	Australia (1965)	.00	.12	.36	.33	.42	Nonfarm origin males, 20+	RP	R	
	Australia (1965)	.02	.10	.32	.34	.38	Nonfarm origin males, 20–64	S	R	
	United States (1962)	−.03	.10	.40	.29	.39	Nonfarm origin males, 20–64	D[h]	R	Featherman et al. 1975
Kelley (1978, p. 102)	Argentina (1964)	—	.04	.15	.71	.69	Buenos Aires, husbands of women 20–50	R	R	
	Bolivia (1965)	—	.16	.22	.52	.61	6 towns, male heads 41+	[i]	Y	
	Brazil (1964)	—	.09	.15	.74	.86	Rio de Janeiro, see Argentina	R	R	
	Colombia (1964)	—	.08	.23	.64	.77	Bogata, see Argentina	R	R	
	Costa Rica (1964)	—	.08	.24	.65	.77	San Jose, see Argentina	R	R	
	Ecuador (1966)	—	.09	.23	.68	.84	Quito, Guayaquil, see Argentina	R	R	
	Guatemala (1964)	—	.10	.17	.69	.76	Guatemala City, see Argentina	R	R	
	Mexico (1964)	—	.06	.26	.65	.78	Mexico City, see Argentina	R	R	
	Panama (1964)	—	.06	.18	.68	.69	Panama City, see Argentina	R	R	
	Uganda (1959)	—	.02	.10	.84	.81	2 Toro villages, males	R	Y	
	United States (1962)	—	.12	.39	.28	.43	Adult males	D	R	
	Venezuela (1964)	—	.05	.25	.67	.81	Caracas, see Argentina	R	R	
Kelley, Robinson and Klein (1981, p. 50)	Bolivia (1965)	.00	.41	.33	—	.45	6 towns, male heads 20+	C	Y	
	Bolivia (1965)	.07	.35	.36	—	.49	6 towns, male heads 20+	[h]	Y	
	United States (1962)	−.01	.23	.43	—	.31	Males heads 20–64 in l.f.	C	Y	
	United States (1962)	.01	.17	.52	—	.38	Males heads 20–64 in l.f.	D	Y	
Kerckhoff (1978)	Gt. Britain (1958)	—	.21	.39	—	.25	Couples with children	R	Y	
	United States (1957)	—	.09	.61	—	.42	White urban parents	RP	Y	
Krymkowski (1986, p. 55)	German Federal Republic (1976)	−.01	.10	.57	—	.36	Males in l.f., 25–65	T	Y	
	German Federal Republic (1976)	−.02	.08	.64	—	.44	Males in l.f., 25–65	T	E	
	Poland (1972)	−.02	.15	.50	—	.30	Males in l.f., 25–65	T	Y	
	Poland (1972)	−.02	.06	.70	—	.51	Males in l.f., 25–65	T	E	
	United States (1973b)	.00	.11	.54	—	.35	Males in l.f., 25–65	T	Y	
	United States (1973b)	.00	.07	.62	—	.42	Males in l.f., 25–65	T	E	
Lin and Yauger (1975, p. 549)	Costa Rica (1971)	—	.40	.22	—	.23	8 towns, married men	T	Y	
	Gt. Britain (1963)	—	.27	.39	—	.27	White male heads 25–64	T	Y	Treiman and Terrell (1985)
	Haiti (1972)	—	.23	.23	—	.12	7 towns, married men	T	Y	
	United States (1962)	—	.11	.53	—	.33	White male heads 26–64	T	Y[j]	Trieman and Terrell (1975)

(continued)

Table 1. (Continued)

Author	*Country (Year)*	ED_f	OCC_f	*ED*	OCC_l	R^2	Sample	Occ. Code[a]	*Ed. Code*[b]	Source[c]
Meyer, Tuma and Zagorski (1979, p. 984)	Poland (1972)	—	.20	.59	—	.48	Adult males	R3[k]	R	
	United States (1972)	—	.22	.41	—	.28	Males 18+	R3	R	
Poentinen and Uusitalo (1975, p. 326)[l]	Denmark (1972)	−.02	.08	.70	—	.54	Wage & salary workers, both sexes, employed full-time all year in 1981	P	R	
	Finland (1972)	.04	.06	.72	—	.59		P	R	
	Norway (1972)	−.05	.03	.83	—	.66		P	R	
	Sweden (1972)	−.01	.08	.76	—	.62		P	R	
Robinson and Kelley (1979, p. 45)	Gt. Britain (1963)	—	.14	.57	—	NA	Employed males	K	E	
	United States (1973a)	—	.11	.56	—	NA	Males 18+	D	Y	
Roos (1985, p. 110)	Austria (1974)	—	.25	.48	—	.39	Males 20–64	m	Y	
	Austria (1974)	—	.14	.48	—	.31	Females 20–64	m	Y	
	Denmark (1972)	—	.09	.62	—	.46	Males 20–64	m	Y	
	Denmark (1972)	—	.01	.54	—	.30	Females 20–64	m	Y	
	Finland (1972)	—	.18	.53	—	.39	Males 20–64	m	Y	
	Finland (1972)	—	.08	.72	—	.53	Females 20–64	m	Y	
	German Federal Republic (1976)	—	.22	.57	—	.46	Males 20–64	m	Y	
	German Federal Republic (1976)	—	.03	.42	—	.21	Females 20–64	m	Y	
	Gt. Britain (1974)	—	.10	.40	—	.19	Males 20–64	m	Y	
	Gt. Britain (1974)	—	−.04	.44	—	.20	Females 20–64	m	Y	
	Israel (1974)	—	.10	.56	—	.35	Males 20–64	m	Y	
	Israel (1974)	—	.02	.64	—	.44	Females 20–64	m	Y	
	Japan (1967a)	—	.13	.38	—	.22	Males 20–64	m	Y	
	Japan (1967a)	—	.20	.35	—	.24	Females 20–64	m	Y	
	Netherlands (1974)	—	.21	.45	—	.32	Males 20–64	m	Y	
	Netherlands (1974)	—	.04	.50	—	.26	Females 20–64	m	Y	
	Northern Ireland (1968)	—	.19	.49	—	.34	Males 20–64	m	Y	
	Northern Ireland (1968)	—	.07	.66	—	.45	Females 20–64	m	Y	
	Norway (1972)	—	.13	.63	—	.49	Males 20–64	m	Y	
	Norway (1972)	—	.03	.70	—	.51	Females 20–64	m	Y	
	Sweden (1972)	—	.03	.64	—	.45	Males 20–64	m	Y	
	Sweden (1972)	—	.03	.61	—	.38	Females 20–64	m	Y	
	United States (1974b)	—	.14	.50	—	.31	Males 20–64	m	Y	
	United States (1974b)	—	.09	.47	—	.25	Females 20–64	m	Y	

Sharda (1981, p. 34)	India (1962)	—	.31	.05	.62	.70	11 villages, male hds 20–64	T	Y
	United States (1962)	—	.06	.24	.24	.15	Rural males 20–64	T	Y
Tominaga (1978, p. 22)	Japan (1967b)	−.06	.12	.05	.50	.31	Tokyo, adult males	P	Y
	United States (1969)	.08	.02	.38	.24	.35	Chicago, adult males	P	Y
Treiman and Terrell (1975, p. 575)	Gt. Britain (1963)	—	.16	.58	—	.42	White male heads 25–64	T	E
	Gt. Britain (1963)	—	.25	.39	—	.27	White male heads 25–64	T	Y
	United States (1962)	—	.10	.54	—	.33	White male heads 25–64	T	E
	United States (1962)	—	.12	.50	—	.30	White male heads 25–64	T	Y
Treiman and Yip (1989, p. 390)	Australia (1967)	—	.28	.33	—	.23	Males 25–64	T	Y
	Austria (1974)	—	.13	.54	—	.35	Males 25–64	T	Y
	Brazil (1973)	—	.16	.52	—	.38	Males 25–64	T	Y
	Denmark (1972)	—	.15	.70	—	.58	Males 25–64	T	Y
	Finland (1972)	—	.15	.42	—	.23	Males 25–64	T	Y
	German Federal Republic (1976)	—	.13	.58	—	.40	Males 25–64	T	Y
	Gt. Britain (1972)	—	.18	.41	—	.26	Males 25–64	T	Y
	Hungary (1973)	—	.11	.63	—	.47	Males 25–64	T	Y
	India (1971)	—	.50	.17	—	.33	Four states, males 25–64	T	Y
	Ireland (1973)	—	.35	.33	—	.27	Males 25–64	T	Y
	Israel (1974)	—	.10	.58	—	.38	Males 25–64	T	Y
	Italy (1975)	—	.05	.59	—	.37	Males 25–64	T	Y
	Japan (1975)	—	.16	.37	—	.21	Males 25–64	T	Y
	Netherlands (1970)	—	.19	.51	—	.36	Males 25–64	T	Y
	Northern Ireland (1973)	—	.24	.43	—	.30	Males 25–64	T	Y
	Norway (1972)	—	.17	.62	—	.50	Males 25–64	T	Y
	Philippines (1972)	—	.33	.22	—	.18	Males 25–64	T	Y
	Poland (1972)	—	.13	.53	—	.32	Males 25–64	T	Y
	Sweden (1972)	—	.04	.64	—	.43	Males 25–64	T	Y
	Taiwan (1970)	—	.15	.35	—	.18	Males 25–64	T	Y
	United States (1973b)	—	.11	.54		.34	Males 25–64	T	Y
Wilson (1972, pp. 96–98)	Argentina (1960)	—	.06	.47	.29	.45	Buenos Aires, male heads	S	R
	Brazil (1960)	—	.20	.53	—	.44	Rio de Janeiro, male heads	S	R
	Chile (1960)	—	.20	.40	.18	.33	Santiago, male heads	S	R
Zagorski (1984, p. 33)	Poland (1972)	.02	.09	.60	—	.41	Adult males	T	Y
	United States (1973b)[n]	−.01	.10	.53	—	.35	Adult males	T	Y
Zagorski (1985, pp. 172, 175–177)	Australia (1973)	.00	.22	.43	—	.30	Adult males	K	NA
	Australia (1973)	.04	.14	.43	—	.24	Adult males	T	NA

(*continued*)

Table 1. (Continued)

Author	*Country (Year)*	ED_f	OCC_f	*ED*	OCC_1	R^2	*Sample*	*Occ. Code*[a]	*Ed. Code*[b]	*Source*[c]
	Australia (1973)	.02	.13	.46	—	.27	Adult males	K	NA	
	Australia (1973)	.03	.14	.45	—	.28	Adult males	T	NA	
	Poland (1972)	.01	.14	.66	—	.54	Adult males	K	NA	
	Poland (1972)	.02	.09	.60	—	.60	Adult males	T	NA	
	Poland (1972)	.01	.10	.67	—	.53	Nonagricultural males	K	NA	
	Poland (1972)	.01	.08	.63	—	.44	Nonagricultural males	T	NA	
	Poland (1976)	.06	.03	.73	—	.53	Lodz, adult males	K	NA	
	Poland (1976)	.03	.06	.64	—	.45	Lodz, adult males	T	NA	
	United States (1972)	−.09	.13	.59	—	.37	Adult males	K	NA	
	United States (1972)	−.06	.13	.56	—	.34	Adult males	T	NA	
Zagorski (1987, pp. 246–247)	Australia (1973)	.00	.08	.35	—	.44	Males in labor force	S	Y	
	Japan (1975)	−.02	.09	.37	—	.29	Males in labor force	T	Y	

Notes: [a]C = canonical scaling of a small number of occupation categories (4 to 20); D = Duncan's (1961) Socioeconomic Index; K = Kelley's Worldwide Socioeconomic Status Scale (Kelley and Klein 1981, pp. 219–222) with scores derived from the canonical correlation of occupation categories with education, income, and father's occupation categories; P = a prestige scale developed for the country being studied; R = rank ordering of a small number of occupation categories (4 to 20); RP = rank ordering of categories based on their relative prestige; R3 = rank ordering of a nonmanual-manual-farm trichotomy; S = locally-developed socioeconomic index; T = Treiman's (1977) International Prestige Scale. Other scoring procedures are described in notes.

[b]E = effect proportional scaling of education (with occupational status as the criterion); R = rank order of levels of schooling; Y = years of school completed (or school leaving age).

[c]Where coefficients are borrowed from another publication, the source and date of publication are given. Where no source is given, coefficients were computed by the investigator from unit data.

[d]Father's status is measured with a rank scale and son's with a socioeconomic index.

[e]Both the Australian and the U.S. data were aggregated to the 10 major occupation groups of the 1950 U.S. Census and were assigned scale scores corresponding to the group mean on each scale (Featherman et al. 1975, p. 341). This coding decision has a substantial impact on the results, as can be seen by comparing the U.S. coefficients based on the Treiman scale with the coefficients in the last row of the entries from Treiman and Terrell that are based on the same data set but with prestige scores coded to detailed occupations.

[f]Computed from correlations reported in Jencks (1972, TAble B–1). Jencks averaged Duncan et al's and Featherman's (1972, Table 3.1) correlations for four 10-year birth cohorts aged 25–64.

[g]IQ is included as an independent variable in the model. The coefficients are .17 for both countries. Still other comparisons, involving more variables, are made between Scotland and, respectively, England and Wales and the United States (Hope 1984, pp. 45–55).

[h]Duncan SEI scores assigned to 1950 U.S. Census occupation major groups.

[i]Thirteen occupation categories were scored on the basis of their average level of living, as measured by housing quality and number of servants.

[j]These are actually the coefficients reported by Treiman and Terrell for an equation using an effect proportional scaling of education, which were apparently miscopied by Lin and Yauger. In addition, Lin and Yauger make several copying or rounding errors.

[k]In Poland, employees of state farms and members of agricultural cooperatives (about 10% of the male labor force) are coded as manual workers, and independent workers (self-employed artisans or small businessmen, about 1.6 percent of the labor force) are coded as nonmanual.

[l]The model also includes sex and age as controls. The coefficients for sex are .37, .42, .41, .44; the coefficients for age are .21, .17, .20, .15.

[m]Occupational wage rate scale: 10–country mean of male earnings in each of 14 occupation categories. See Roos (1985, pp. 34–37) for details of scale construction; see Treiman (1977, Ch. 9) for derivation of the 14 categories.

[n]This model also includes race (Black v. nonblack). The coefficient is −.07.

Japan, the Japanese data—but not the Brazilian and American data—will contain a sizable fraction of persons working at "retirement jobs." But, while the establishment of functional, as against merely nominal, equivalence is devoutly to be desired, status-attainment analysts on the whole have been indifferent even to the simpler task of achieving nominal equivalence between samples.

Second, there has been nearly as little attention to comparability of measurement. Both occupation and education, the two principal variables in status–attainment models, may be scaled in a number of different ways. While some analysts (e.g., Featherman et al. 1975; Treiman and Terrell 1975; Roos 1985; Zagorski 1985; Krymkowski 1986; Treiman and Yip 1989) have taken seriously the issue of measurement comparability, many others have not, casually comparing coefficients derived from a variety of scaling procedures (e.g., Heath 1981). But, as the evidence in Table 1 makes clear, different scaling procedures can produce substantially different results (e.g., note the substantial differences in the size of the coefficients obtained by Featherman et al. (1975) when prestige and socioeconomic status scales were used and the equally sizable differences in the size of the coefficients obtained by Treiman and Terrell (1975) and by Krymkowski (1986) when years of schooling and effect-proportional scales were used to measure educational attainment).

Third, there has been little standardization across studies with respect to the variables included in status-attainment models. As Table 1 shows, in models predicting current occupation, father's education is sometimes included and sometimes excluded, and similarly for the status of the first job. Moreover, some analysts include still other variables, such as sex (Poentinen and Uusitalo 1975), age (Roos 1985), race (Zagorski 1984), and IQ (Hope 1984).

There are two major consequences of the noncomparabilities we have just reviewed. First, *results obtained by analysts who have not troubled to standardize their samples, their measurement instruments, and their models must be dismissed as simply meaningless.*[3] In such cases, it is simply impossible to draw valid inferences about the degree of similarity or difference in social structures and processes from comparisons of coefficients across samples because there is not way of determining to what degree the observed differences, or similarities, between coefficients are artifacts of measurement differences.

Second, the relative lack of attention to exact replication of the work of others, even on the part of analysts who are internally consistent, has hampered the cumulation of comparable data across societies. Because no one analyst will command the data or the resources to carry out the definitive cross-national comparison of status-attainment processes, our only alternative—if we are serious about understanding how such processes vary across societies and about gaining leverage by increasing the number of societies being compared beyond a trivial level—is to generate the necessary information collectively. But this requires that each analyst contribute to the collective effort by producing results that are genuinely comparable to those produced by others.

To facilitate this effort, we propose a standard set of analyses that we hope each analyst of a national (or regional) data set will undertake and publish—*not as an alternative to but rather in addition to* whatever other analysis he or she carries out. Before turning to this, however, we need, first, to consider what generalizations *can* be drawn from existing cross–national comparisons of status attainment.

TENTATIVE GENERALIZATIONS

Of the hypotheses reviewed above, only two sorts—those concerned with the effects of industrialization and those concerned with the effects of the degree of status inequality—have been tested in anything approaching a rigorous way. In 1989, Treiman and Yip attempted to assess both sets of propositions, utilizing data from 21 countries with father's and son's occupational status measured by Treiman's (1977) international occupational prestige scores and educational attainment measured by years of school completed. They found substantial support for both sets of propositions, but concluded that the main reason that the status-attainment process in industrialized countries is dominated by achievement is that industrialized countries tend to have relatively egalitarian status systems. Computations restricted to the nine Latin American cities among the 12 places analyzed by Kelley (1978)—which we did in order to render the data genuinely comparable across samples—show weak but consistent relations between the degree of inequality, the degree of economic development, and the dependence of status attainment on social origins. Sharda et al. (1983), in a comparison of published data from 12 countries, also found that industrialization weakens the dependence of occupational status on social origins and increases the connection between education and occupational status.[4]

Despite these systematic differences, perhaps the most interesting conclusion that can be extracted from the analyses summarized in Table 1 is about cross-national similarities, not differences: in most nations for which there are data, occupational status depends mainly on educational attainment and only weakly upon father's occupation. The only exceptions are countries with very large agricultural populations: Bolivia, Brazil, Costa Rica, Haiti, India, Ireland, the Philippines, and Spain—which, of course, gives some added support to the industrialization hypothesis. Further, the importance of education holds even when we consider the indirect as well as the direct effects of social origins—but, again, mainly for industrialized nations. Computations based on Treiman and Yip's (1989) analysis of data for 21 countries show that on average only 24 percent of the explained variance in the prestige of men's occupations is associated with their social origins.[5] Similar computations from Roos' (1985) 11-country analysis, which scales occupations by the average earnings of male incumbents, show mean percentages of 35 for men and 25 for women. However,

the nine Latin American cities in Kelley's (1978) analysis (in which occupations are scaled by ranking six gross categories) show a substantially different pattern: for these cities, 62 percent of the explained variance in occupational status can be attributed to father's occupational status. Thus, it appears that in industrialized countries, but not in urban areas of developing countries, occupational attainment is largely a matter of educational achievement and education is largely independent of social origins, so that social reproduction is quite weak. Our conclusion regarding industrialized countries—the dominance of achievement over ascription—is not particularly scale dependent, because it also holds when occupational status is scaled by Roos' wage-rate scale (which is close to an SEI scale); but the conclusion regarding nonindustrialized countries is less robust. This is particularly so since it is clear that the use of different scales can lead to nontrivial differences in estimates of the degree of ascription and achievement—in fact, to differences that are comparable in magnitude to the variability across societies assessed with the same scales. So, once again, we see the strong impact of measurement differences on substantive results and, hence, the strong need for comparability of measurement.

CUMULATING STANDARDIZED COMPUTATIONS

In this section, we propose a standard set of computations to be undertaken by students of status attainment analyzing single societies, as well as those engaged in explicitly comparative efforts. We suggest that, in addition to whatever other analysis is carried out, the following be reported, as a way of cumulating genuinely comparable data for a large number of societies. This is intended to be a minimal list, relatively easy to implement; we have resisted the temptation to propose more than a small fraction of the elements that would be included in a comprehensive analysis.

Samples

We recommend that where data for both males and females are available (which we regard as highly desirable) separate analysis be carried out for each gender. This will facilitate comparisons with single-gender studies. Analysis should be restricted to those age 20–64 but should not be further restricted. Although the age range is somewhat arbitrary, past experience indicates that it works reasonably well; it has the additional advantage of retaining comparability with previous analysis. We *do not* believe that analysis should be restricted to those in the labor force, mainly because to do so would distort the analysis of educational attainment by excluding the most highly-educated sector of the population, which is likely still to be in school at age 20. Rather, each analysis should

be carried out using complete information on all the variables included in that analysis.

Variables

When new data collection is undertaken, the following information should be gathered: father's job when the respondent was age 16; first full–time civilian job after leaving school (see Featherman and Hauser 1978, pp. 23–24 for a discussion of strategies for asking this question effectively); and current job. In each case, information should be gathered on the nature of the work, in sufficient detail to be coded into the local detailed (three-digit) occupation code or the International Standard Classification of Occupations (ISCO) (International Labour Office 1968); on employment status (self-employed vs. employee); and on supervisory-status (does the job entail supervisory responsibility?). In addition, father's and respondent's educational attainment should be ascertained, in enough detail to capture all locally important distinctions regarding amount and type of schooling. Finally, information should be obtained on whether the respondent works full-time or part-time and on his (or her) annual income.

Coding

Information on education should be coded into years of school completed, in addition to whatever local education classification is used. Information on occupation should be coded into categories of the expanded ISCO (see Treiman 1977, Appendix 9.1, and Ganzeboom et al. 1989b, on coding strategies) in addition to whatever local detailed occupation classification is used. The great advantage of coding occupation data into the ISCO is that there exist standard mappings from the ISCO categories to Treiman's international prestige scale (1977, Appendix A), Ganzeboom, De Graaf, and Treiman's International Socioeconomic Index (ISEI) (1989), Kelley's Worldwide Socioeconomic Status Scale (Kelley and Klein 1981, pp. 219–222), and the Erikson–Goldthorpe-Portocarero (EGP) (1979) nominal occupational classification that is rapidly becoming the international standard (Ganzeboom et al. 1989b).

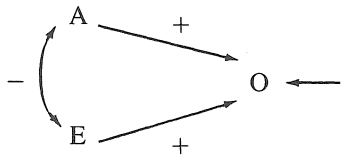
Basic Statistics

The means, standard deviations, and correlations among all of the basic variables in status–attainment models should *always* be published, as well as the same information for any subsamples analyzed (e.g., age groups, ethnic groups, and so on). (It is startling how infrequently this is done currently.) The variables that should be included are: years of school and type of schooling (indigenous scale) completed by father and respondent; father's occupation, respondent's first occupation, and respondent's current occupation, with each occupation repre-

sented by three variables: a locally-preferred indigenous measure (where one exists), Treiman's international prestige score and Ganzeboom et al.'s ISEI score,[6] annual income, and age (the reason for including age will be explained later).

Models

A fully recursive set of models linking age, father's education, and father's occupation (the exogenous variables), respondent's education, first occupation, current occupation, and income should be estimated with multiple measurement models (Krymkowski 1988) or, alternatively, separately for each of the occupation and education codes.[7] The reason for including age is that its omission misspecifies the relation between education and current occupation and between education and income. Both occupational status and income tend to increase with age, but there has been a worldwide increase in educational attainment over time and, in many countries, an upward shift in the occupational distribution as well. In consequence, the omission of age results in an underestimate of the effect of education on occupational status. This can be easily seen by considering a simple path model relating age (A), education (E), and occupational status (O), shown with the expected signs of the paths:



Now, from the algebra of path analysis, we know that $r_{OE} = P_{OA}r_{AE} + P_{OE}$. But, as we see from the figure, the product $p_{OA}r_{AE}$ is negative, which means that p_{OE} must be larger than r_{OE}; but if A is omitted from the model, $p_{OE} = r_{OE}$. The same analysis applies to other variables in the models that are related to age, a point that has been insufficiently appreciated.

The standardized analyses just proposed manifestly do not reflect any conceptual innovations. Rather, they represent a strategy for exploiting existing knowledge and existing data in the service of valid cross-national comparisons anticipated nearly 20 years ago (Treiman 1970) but not yet realized.

NEW DEVELOPMENTS

Thus far, we have written as if the methodology introduced by Duncan in the mid 1960s (and its extension to multiple measurement via latent variable models) has

been the final word in stratification research. We are well-aware, of course, that this is not the case, and that this area of research has been very much the arena of methodological innovations. Many of these innovations would advance the comparative study of status attainment as well, provided certain conditions are met. We briefly review the three developments we think are most pertinent: (1) discrete variable models, (2) event history models, and (3) sibling models.

Discrete Variable Models

One reason comparative stratification research has not yet fulfilled its early promise is that structural equation modelling, the foundation of the status–attainment paradigm was, to a considerable extent, superceded among students of social stratification by discrete variable methods: loglinear and log-multiplicative models of occupational mobility (Goodman 1978, 1984; Hauser 1978; Hope 1982). This "shift of paradigms" has several components. First, continuous measures have been replaced by categorical measures, an operational shift that corresponds to a theoretical shift in focus from hierarchical aspects of status to nominally-defined class categories. Second, multivariate analysis, as introduced by Duncan's model, has been downplayed in favor of a return to bivariate analysis: analysis of the pattern of causal connections among many variables, each a unidimensional summary measure, has been exchanged for a detailed analysis of the association between two variables. As is usual in exchanges, something is gained and something is lost. The gains of loglinear analyses are not to be underestimated: apart from where one may stand on the theoretical debate regarding hierarchies versus classes, two fundamental conclusions about the process of stratification have been established by loglinear approaches. First, the degree of intergenerational occupational transmission cannot be fully characterized by a single correlation coefficient because the pattern of association involves appreciable nonlinearities and nonuniformities. Second, it is important to control differences in marginal distributions to tease out the correct association pattern (even if that pattern is characterized by one coefficient, as in some scaled association models). However, there are important costs to loglinear approaches as well, including the difficulty of introducing control and intervening variables into the analysis, the impossibility of making reliability and validity corrections, the awkwardness in comparing indigenous classifications, and the lack of parsimony and clarity resulting from the large number of coefficients yielded by many loglinear analyses. We think it desirable to mix discrete and continuous methodologies, using, for example, such models as have been introduced by Logan (1983) and by Hout (1984) for the analysis of mobility tables and by Mare (1980) for the analysis of educational transitions, and by moving again to multivariate analyses of individual level data. It will, we suspect, be necessary to solve a number of problems to make these techniques viable for large-scale cross-national comparisons—an effort we strongly encourage.

Event History Models

A second major innovation in the study of status-attainment processes is the application of event history models (Tuma and Hannan 1984). These models require a fundamentally different sort of data from either conventional status-attainment models or loglinear models, information about *all* career events. Event history techniques model status-attainment processes as dynamically developing over time and thereby solve at least one fundamental problem inherent in the traditional status-attainment approach: they make it possible to pinpoint the historical point in time at which moves took place and hence permit the introduction of time-specific exogenous variables (Blossfeld 1986). Unfortunately, complete career histories are rare in existing data (to our knowledge, they exist—for general population samples—only for Austria, Hungary, Ireland, Japan, and Northern Ireland) and comparative work is even rarer (but see Allmendinger 1988); hence, using event history methods for comparative analysis will require the collection of a great deal of new data. Also, existing event history analyses (e.g., Blossfeld 1986; Carroll and Mayer 1986) have been relatively negligent of the traditional issues that have dominated the status–attainment and mobility literature: they have concentrated on career moves as such without analyzing the influence of family background on the moves, have neglected the differences between structural changes and social fluidity, and have preferred discrete measurements, with the interpretative difficulties attending models with a large number of parameters. However, none of these flaws is intrinsic to event history models as such, which leaves open the (desirable) possibility that event history analysts will turn their attention to the old—unsolved—research questions.

Sibling Models

Finally, a major innovation in the analysis of intergenerational status-attainment processes is the sibling models introduced by Hauser (Hauser and Mossel 1985). These models, which technically are simply elaborations of the traditional status-attainment model, exploit the association between the status characteristics of different offspring of the same parental family to estimate the degree of family influences on status outcomes. Such estimates then provide a standard against which to assess the explanatory power of such measured attributes as father's education and father's occupation. Like event history analysis, this method requires data that have not been collected routinely in stratification research—complete information on at least two siblings of the same family, measured independently. To the best of our knowledge, there are *no* national data that meet this standard (although some national surveys contain information on the status attributes of brothers, reported by respondents). Cross-national comparisons of sibling models are completely lacking.

In sum, all three of these new developments have great virtues and should be

included in the arsenal of research designs and methods of analysis wherever possible. However, we do not believe that these methods are currently appropriate to answer the important research questions that have dominated comparative status-attainment research, due to limitations either of data or of the models themselves. We therefore think it regrettable that much recent national and cross-national stratification research (e.g., Jones and Davis 1988) has applied only the newer methodologies, without using the status-attainment model as a benchmark. We believe that conventional status-attainment models are capable of revealing much more regarding systematic similarities and differences between societies than has been firmly established to date. By attempting exact replications along the lines we have proposed, *in addition to* whatever other analysis seems appropriate, students of social stratification will not only be able to build up a cumulative body of comparable data for many societies but will be in a much better position to decide when measurement and methods are inadequate and need to be modified than we are at present.

NOTES

1. We restrict our summary to published studies and those Ph.D. dissertations to which we had access. In addition, there are several unpublished studies, including some of our own. We also restrict our review to analyses reporting ordinary least squares estimates for interval level variables. Other studies of occupational status attainment, based on different statistical procedures, include a logistic regression analysis of data from five countries (Robinson 1984), a tabular analysis of data from four Scandinavian countries (Poentinen 1980, p. 38), a comparison of Finland, Norway, and Poland that treats current occupation as a series of dummy variables (Pohoski, Poentinen, and Zagorski 1978, pp. 170–175). Still other studies fail to report the necessary coefficients (e.g., Boyd, Featherman, and Matras 1980; Bornschier 1986; De Graaf 1988).

2. Similar tables could, of course, be constructed to summarize comparative studies of educational attainment or the determinants of the status of the first job, but the measurement issues are essentially the same in all three cases.

3. By "standardize" we mean make comparable. A persuasive argument that nominally different sample definitions or measurement instruments are "functionally equivalent" would fall within our definition of standardization, but such arguments are notable in the literature for their scarcity.

4. All of these studies used a statistically suboptimal strategy in which microlevel processes are estimated separately for each country and then, in a second step, the countries are treated as the units of observation and the parameters of the micromodel are modelled by reference to macrosocial characteristics. See Mason, Wong, and Entwisle (1983) for a discussion of a superior approach, multilevel modelling.

5. On average, the reduced form R^2 (from a model in which the prestige of the current occupation is predicted from father's years of schooling and the prestige of father's occupation) is only 24 percent as large as the R^2 from a model that includes a respondent's years of schooling as well.

6. Currently, the most widely used occupational status scale for comparative analysis is Treiman's international prestige scale. But, for studies of intergenerational status transmission, a strong argument can be made for preferring a socioeconomic status scale (Featherman et al. 1975). Until the issue is fully resolved, we think it prudent to publish results based on both prestige and socioeconomic status scales. With respect to the scaling of occupational socioeconomic status for

comparative analysis, there are two contenders: Ganzeboom et al.'s and Kelley's. We prefer the Ganzeboom scale for two reasons: (1) it is derived by a procedure that optimizes the causal linkage of education, occupation, and income, whereas Kelley's scale includes father's occupation as a criterion, in addition to education and income, which leaves its interpretation unclear; (2) Ganzeboom's scale provides scores for each of the detailed categories in the ISCO whereas Kelley's scale provides scores only for 14 aggregated categories.

7. Both sets of models can be estimated from published data, provided a complete set of correlations, means, and standard deviations is included.

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