



OXFORD JOURNALS
OXFORD UNIVERSITY PRESS

Socio-Economic Attainment, Regional Disparities, and Internal Migration

Author(s): Guy L. Coté

Source: *European Sociological Review*, Vol. 13, No. 1 (May, 1997), pp. 55-77

Published by: [Oxford University Press](#)

Stable URL: <http://www.jstor.org/stable/522605>

Accessed: 18/11/2013 08:54

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at
<http://www.jstor.org/page/info/about/policies/terms.jsp>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.



Oxford University Press is collaborating with JSTOR to digitize, preserve and extend access to *European Sociological Review*.

<http://www.jstor.org>

Socio-economic Attainment, Regional Disparities, and Internal Migration

Guy L. Côté

Despite many refinements, the now classic analytical approach of Blau and Duncan (1967) to the study of stratification has not succeeded in explaining why indices of social fluidity seem to display such remarkable constancy over time and across societies, or why massive educational reforms during the post-war period have had so little impact on the reduction of inequalities. Consequently, emphasis has to some extent shifted, during the 1980s, towards other approaches likely to yield fresh insights into these problems.¹ This paper's contribution to the subject is to present evidence, using the 1973 Oxford Mobility Survey, that regional disparities and work-life internal migration are both significantly associated with the manner in which people transform their social background into socio-economic attainment, and that psychological and structural explanations are compatible with observed regularities. The paper is part of a larger study (Côté, 1983a) which uses the dimension of geography to study stratification processes. Methodologically, it highlights the use of residual estimation techniques to overcome under-identification problems when examining the effects of migration and regional disparities on socio-economic attainment.

I. Introduction

There are two aspects to the phenomena under study: on the one hand, the differences between stratification processes in unequally developed regions; on the other, the effects of the migratory act on reward allocation. By 'unequal development' we mean not only disparities in the existing industrial infrastructure but also differences in community life-styles and values which may promote or hinder mobility chances. By 'internal migration' we refer to relocation of place of residence within the society resulting in a significant change of social environment and possibly of job opportunities.

Spatial Polarization

The theory of spatial polarization and the notion of 'growth poles', as formulated by Perroux (1955), imply that the free workings of market mechanisms in capitalist societies accentuate regional imbal-

ances, so that rich regions get richer and poor ones poorer. This process takes place in spite of the efforts of the state to promote secondary growth poles by, *inter alia*, assisting industries to locate or relocate in disadvantaged regions and by granting equalization payments to regional administrations in the hope of ensuring social peace as well as more egalitarian access to services. In Britain, the society studied here, state policies have not prevented the perpetuation of a massive imbalance in economic opportunities between the South-East region (which includes Greater London) and the rest of the country.

The consequences of spatial polarization for stratification processes may be of considerable import. One could argue, for example, that geographically immobile respondents, i.e. those who have spent their entire working life in a particular peripheral locality, would be especially disadvantaged by such

polarization phenomena. Alternatively relocation of industries through government assistance programmes might differentially benefit migrating specialized workers accompanying the relocated enterprises, to the detriment of the local workforce. Further, transfer payments to disadvantaged regions, such as unemployment insurance and social welfare, might act as disincentives for the unskilled segment of the labour force, while the ambitious and qualified middle class migrates to prosperous areas and leaves behind a more impoverished place.

One may thus expect that, owing to the phenomenon of spatial polarization, advantaged and disadvantaged regions will vary in the way in which their residents transform their socio-economic background into achievement, i.e. that there will be evidence of different patterns of social fluidity (Coté 1987).

Migration and its Socio-Economic Correlates

Numerous studies (Jackson, 1969; Rossi, 1980; Friedlander and Roshier, 1966) have shown that the propensity to migrate increases with rising educational qualifications. Generally speaking, better educated people:

1. have more sophisticated and universalist outlooks;
2. have the financial resources to seek better opportunities elsewhere and are not constrained by local public housing policies which subsidize the poor but limit their mobility;
3. are required to travel in order to obtain certain jobs;²
4. hold qualifications that are recognized and valued in all parts of the country.

Conversely, those who obtain only minimal school education may be expected to stay put because they have no special skills which they could exploit elsewhere, and because of their greater communal orientation – an attribute which is claimed to be a working-class value.

Closer examination, however, suggests that migration is not a perfectly functioning redistributive mechanism: 'Men do not flow from places of poor to places of good opportunity with the ease of water' (Blau and Duncan, 1967: 244). Several competing theoretical propositions may be formulated about the relationship between

migration and socio-economic attainment, based both on the individual attributes of the social actors and on the structural characteristics of the society itself.

From the perspective of the ideology prevalent in American status-attainment research (Knottnerus, 1987) – with its emphasis on individual attributes – one might expect, for example, post-war internal migrants in Britain to be for the most part people with drive and initiative, go-getters who are likely to succeed in life and to turn whatever qualifications they have to better use than immobile people. But a counter-argument is possible, leading to opposite conclusions: migrants, far from being go-getters, could be unstable, unsettled people unable to hold down steady jobs. According to this view, one would expect the average migrant to do worse, not better, than his immobile counterpart.

A structural approach would ascribe the disadvantaged situation of working-class migrants not so much to attitudinal characteristics as to a capitalist-maintained floating and relocatable secondary labour market, with a migrating 'reserve army' of workers held in bondage by the economics of profit maximization. But a counter-argument would be that underprivileged members of the working class, because of their exploited situation, would seek to maintain strong communal relations both within and outside the production process, leading both to greater class solidarity and to geographical immobility. The bourgeoisie, on the other hand, due to its powerful hold on legitimizing social institutions (and in particular on education), might exhibit a similar community of interests, but with the major distinguishing characteristic of not being geographically bound.

Then there is the question of the association between social background and migration: does the influence of origins diminish when working-class respondents move away from the place where their parents and close childhood associates live? On the one hand, such a move might weaken the constraints of community norms and the expectations of kinship networks associated with deference patterns and narrowly held perspectives. Thus, migration would be inimical to class closure and would enhance social fluidity (Coté, 1987). On the other hand, the further one moves away from the parental home, the less one would be likely profit

from family assistance and childhood social contacts (Granovetter, 1974). So to the stranger in a new place migration would be deleterious to socio-economic betterment.

Finally, one could speculate, from the perspective of credentialism theory, that immigrants might be disadvantaged because employers would not recognize certain educational achievements from other countries; similarly, internal migrants might fare poorly because employers would be unfamiliar with qualifications arising out of work experience obtained with employers in distant regions. One could likewise suggest that trade-union practices would make it difficult for fully trained strangers from other cities to gain entry into the workforce, to the extent that local apprentices, often the sons of established members, are given preferential treatment. Again, migration would be a hindrance, not an asset. On the other hand, migrants would presumably load the dice in their favour by choosing the best places for getting a well-paying job, i.e. where unemployment is lowest?

Such questions have potentially long-term consequences for the study of stratification. Do social policies that tie the working class to locally administered, publicly subsidized housing and (as in America) to the union security of 'seniority rights', merely compound the worker's disadvantage? In addition, how can class formation and class action be envisaged if the development of strong community relations and the transmission of commonly held values are undermined by frequent geographical relocations and the concomitant development of an individualistic ethos?

Disentangling Regional Disparity 'Effects' and Migration 'Effects'

A major difficulty in examining the above issues is that both migration and regional disparities effects are operating simultaneously, and that the internally migrating population is a self-selected and self-relocating one. If, for example, residents in the South-East of the UK have, in the aggregate, better incomes than those in any other region, can we then claim that the differential represents a 'regional effect' and conclude that the South-East has a more favourable opportunity structure than anywhere else in Britain? Or is it because, once we have taken social

background and education into account, its residents are significantly more productive and successful because of other personal characteristics?

To answer this question, we must recognize that, while different regions may well have different effects on reward allocation owing to their industrial infrastructures, they are composed, in varying proportions, of respondents with different migratory experiences. Some will have travelled considerable distances from their place of origin, while others will have lived in the same town or village all their lives. Migrating and immobile groups may vary significantly in social background and education and may be present in varying proportions in different regions. What is it, then, that determines socio-economic attainment and, in particular, measures of social fluidity or class closure? How much is due to opportunity structures, and how much to education and other individual attributes associated with the migratory act? This important question will be addressed empirically in Part IV of this paper.

Geographically immobile respondents, those who start work in a particular local area and continue to stay there, approximately reflect what each local area has to offer its inhabitants by way of long-term advancement. Migrants, on the other hand, are a self-selected population and may exhibit personality traits or cultural characteristics which interact differentially with achievement (for example, middle-class internal migrants may be go-getters, while unskilled workers are rootless and unstable; immigrants may be prone to discriminatory employment practices, etc.). Furthermore, migrants may be present in varying proportions in each region, choosing to settle in more propitious locations or in areas where other immigrants are already established. The attainment of between-region and within-region migrants may therefore be an artefact of their selective relocation, their different social backgrounds and education, as well as other unmeasured characteristics.

To disentangle regional area from migration effects, we will resort to residual estimation, a technique by which differences between the opportunity structures of regions are estimated for the geographically immobile segment of the population, standardized statistically for background and education. This technique will be described in Part III, after we have presented in Part II the data at our disposal for the study.

II. Migration in the Oxford Mobility Survey (OMS)

The OMS³ sought quite specific geographical information (town, village, rural area) at six points in the respondent's life.⁴ In this paper, we contrast where respondents were living at age 14 (i.e. before their entry into the labour market) with where they lived in 1972. Regions were agglomerated into five regional areas:⁵

1. the South-East: prosperous London and neighbouring high-skill industrial regions;
2. the Midlands: a primarily industrial area benefiting from its proximity to London;
3. the North: a mining and industrial area with a disproportionately large working-class population;
4. Wales: an area of some ethnic distinctiveness, forbidding geography, coal- and slate-mining, and few other industries;
5. East Anglia and the South-West (EA+SW): areas peripheral to the Home Counties, with fairly prosperous agriculture, clement weather on the south coast, where the elderly often retire.

Other geographical measures used were 'local authority' and 'county', as defined in the 1971 Census. Adopting these administrative structures as the basis for our migration measures was not only dictated by the available information in the data-set, but also by the fact that other bases, such as 'community' or 'locality', presuppose the establishment of criteria which, in large urban areas, are almost impossible to define. There are countless definitions of what a 'community' is and, in a metropolis, interests can lie in two or three different centres for different activities.

Cohorts

Many sociological studies examine cohort effects in ten-year periods, but we depart from this practice. For reasons that are specified below, we have defined three age cohorts: young (20–29), middle (30–49) and old (50–64).

1. *The young cohort.* Migration is massively associated with late adolescence and the early 20s (Rees, 1979: 63). By the time they are 29, most men have entered the labour market and embarked on their career path, they have married and settled down: further

migration will be less frequent and will involve families rather than single individuals. From the age of 30 onwards, we can be reasonably sure that respondents will have completed the bulk of what we might call their 'early' migration cycle. Although some may change occupations after the age of 30, and many will benefit from promotions, any period of job experimentation will be over – respondents will be entering a more mature phase. Thus, the young cohort is representative of a 'settling in' stage in the life-cycle, both occupationally and geographically: the full effects of migration will not yet have been felt. This cohort will not be studied in this paper.

2. *The middle cohort.* The oldest respondents in the 30–49 cohort, even those who started work at age 14, will have done so when the worst of the Depression was over. By the time respondents in this cohort were 16, World War II had started and with it a situation that led either to military service or full-time employment in the UK. For the majority of the 30–49 age group, their working life coincided with the post-war economic expansion, and those who fought in the war came back to programmes designed to make their reintegration into civil life as successful as possible. This was a period when whoever wanted to take initiatives, seek new opportunities, possibly migrate and 'get ahead', would find an economic climate propitious for so doing.

This is not to imply that relocation after the war was radically different in nature to that during the Depression. Law (1980: 60) argues that the high positive correlation between levels of unemployment and net out-migration in the 1930s was also in evidence in the 1950s. Northern regions have continued to lose more people than southern ones and migration has maintained its classic role as an adjustment mechanism, responsive to economic change. Although tighter planning controls have recently slowed down further development in the South-East and the West Midlands, with consequent moves to East Anglia, the South-West and the East Midlands, the primary distinction between the two periods appears to be that pre-war geographical mobility was often *faute de mieux*, while post-war migration has been *pour le mieux*.⁶

3. *The old cohort.* Respondents in the oldest cohort (50–64) started their working life between 1922 and 1936, and most lived through a period of high unemployment in an economic environment scarcely

Table 1. *Frequency distribution of natives and immigrants in the middle cohort by areas of origin (at age 14) and of destination*

Area of Origin	Area of Destination					Total	Internal migration
	Midlands	North	EA+SW	Wales	S-East		
Midlands	636	27	25	8	46	742	106
North	60	1233	26	8	76	1403	170
EA+SW	14	9	350	6	50	429	79
Wales	11	11	11	214	20	267	53
South-East	37	34	47	7	1023	1148	125
Scotland	20	26	5	5	33	89	n/a
N Ireland	3	6	1	1	11	22	n/a
Natives abroad	12	11	7	0	26	56	n/a
Immigrants	70	53	19	5	193	340	n/a
Total	863	1410	491	254	1478	4496	533

conducive to plans for self-betterment and upward mobility. By the time prosperity returned, these respondents had married, settled down, and adopted a life-style from which they would be unlikely to depart.

Origins and Destinations of Migrants

Tables 1 and 2 display the considerable variety of migratory experiences of respondents. 'Natives' are defined as being either UK-born or with UK-born fathers. A small number of respondents of UK origin, born abroad of UK-born fathers or living outside the UK at age 14, are identified as 'Natives brought up abroad'. Included in the notion of 'native' are second-generation immigrants, born and raised in the UK of fathers who were themselves born abroad. Being a native is not the same as being of long-standing British 'stock'. 'Immigrants' are non-natives. They will not be analysed extensively in this paper.

Natives are further broken down into several groups. 'Internal migrants' are those natives of England and Wales presently (in 1972) living in a regional area different from that in which they lived at age 14. The remainder of these natives of England and Wales we call 'stayers', although 2.5 per cent of them did reside during their working life in one or more other regions, but eventually returned to their region of origin. The inclusion of this small group among stayers is arbitrary: if one had wished to study

migration effects irrespective of area of residence, they might have been included among the migrants.

For some purposes, we further subdivide stayers into those who remained all their working lives in the same local authority ('immobiles'), those who moved residence across local authority boundaries but remained within the same county ('local authority movers') and those who, while remaining in the same regional area, moved across county boundaries ('county movers'). The last two taken together are called 'short-range movers' to distinguish them from the longer-range internal migrants. A short-range move may not necessarily imply a change of employment, particularly in densely settled conurbations.

Table 1 pertains to the middle cohort (aged 30–49) and shows what a mixed bag of migratory types the sample population really is. Taking South-East residents as an example, only 69 per cent of those living in the SE in 1972 were stayers, i.e. had been living in that region since age 14, while 13 per cent were internal migrants, 3 per cent came from elsewhere in the UK, 2 per cent were natives brought up abroad, and 13 per cent were immigrants.

Table 2 shows that in the prosperous and densely populated South-East, stayers are twice as likely to have changed counties as residents in other regional areas, no doubt reflecting the fact that counties are small in area, that men in their 20s were likely to move into London itself, and that the better-established men tended to migrate back into the suburbs while commuting to the City. Less than a quarter of

Table 2. *Percentage distribution of stayers in the middle cohort by change of residence*

	Immobile	LA ^a movers	County movers	Total
South-east	34	35	31	100
Midlands	59	28	13	100
North	54	34	13	100
EA+SW	49	35	16	100
Wales	58	29	14	100

^aLA = local authority.

SE residents aged 30 to 49 resided in the same local authority area during their entire working lives.

Table 1 is not an entirely satisfactory picture of migration: not all natives were born in the region in which they were living at age 14, and some 29 per cent of those who migrated across one of the nine Standard Regions during their working life did so several times. For the latter, the ultimate region of destination is only the last stage of a multiple-region journey, while for the remainder (71 per cent), regional relocation may have been a relatively recent event in their lives. Out of all those who did

change regions during their working lives (including the move to a first job), about half changed regions fully ten years after having entered the workforce.

Therefore, we cannot claim that region of destination truly indexes the cumulative impact on careers of multiple relocations. Any 'effects' which we shall attribute to differential attainment of migrating respondents may have in fact been shared with one or several other regions, unspecified in the tables, in which respondents may have spent some part of their working life, or in which they may have been partly socialized when young. Our analysis will thus be indicative of broad trends and will be no less hedged with reservations than that of Blau and Duncan (1967), who likewise had to resort to simplifications of this sort in their treatment of migration.

Social Background, Education, Occupation, and Income

Tables 3 to 7 show mean scores of father's education (FED) and occupation (FOCC), and respondent's education (ED), occupation (OCC), and log income (INC), by areas of origin and of destinations.⁷ The values in these and succeeding tables have been

Table 3. *Father's education for natives and immigrants by areas of origin (at age 14) and of destination^a*

Area of Origin	Area of Destination					Total
	Midlands	North	EA+SW	Wales	S-East	
Midlands	-27	28	6	*	62	-18
North	-22	-8	55	*	65	-4
EA+SW	*	*	-2	*	46	3
Wales	*	*	*	-10	9	-9
South-East	9	56	1	*	19	6
Scotland	*	48	*	*	52	34
N Ireland	*	*	*	*	*	34
Natives abroad	93	*	92	*	81	79
Immigrants	-12	-6	*	*	36	16
Total	-21	-5	4	-8	18	00

^aMiddle cohort ($n = 4428$); z-scores $\times 100$; education: C scale.

*n.s. at $p = 0.05$.

	C-score	Z-score
Total native	4.76	-1
Total immigrant	5.34	16
Total internal migrant	5.63	25
Total stayers	4.54	-8

Table 4. *Father's occupation of natives and immigrants by areas of origin (at age 14) and of destination*^a

Area of Origin	Area of Destination					
	Midlands	North	EA+SW	Wales	S-East	Total
Midlands	-16	37	6	*	33	-10
North	10	-19	41	*	43	-13
EA+SW	*	*	-3	*	54	4
Wales	*	69	*	-16	56	-6
South-East	20	73	52	*	0	4
Scotland	*	34	*	*	36	22
N Ireland	*	*	*	*	67	26
Natives abroad	74	*	*	*	82	64
Immigrants	21	29	40	*	51	41
Total	-7	-12	8	-12	15	00

^aMiddle cohort ($n = 4211$); z-scores $\times 100$; occupation: H-G scale.

*n.s. at $p = 0.05$.

	H-G-score	Z-score
Total native	40.43	-3
Total immigrant	46.29	41
Total internal migrant	45.44	34
Total stayers	39.41	-11

expressed for comparative purposes in z-scores multiplied by 100, i.e.

$$z = [|\bar{X} - \bar{X}|/s.d.] \times 100$$

A score of 10 indicates that the means of the cell deviate by 0.1 standard deviations (s.d.) from the mean score of the sample population distribution.

Tables 3 and 4 reveal quite clearly the inferior family origins of stayers in the Midlands, the North, and Wales. By contrast (and with only one exception in those cells where the z-score was statistically significant at $p = 0.05$), internal migrants, migrants from Scotland and Northern Ireland, and natives brought up abroad all had above-average family origins, as measured on the C-scale for father's education and the H-G-scale for father's occupation. Immigrants also exhibit above-average origins: many are sons of professionals, particularly those from India and Pakistan, who mainly settled in the South-East.⁸

The cross-tabulated data will not be analysed in detail here, although it is clear from these and subsequent tables that the superiority of internal migrants is maintained whatever the direction of the migratory flow. For example, migrants between the Midlands and the South-East score 20 z-score units for father's occupation in one direction and

33 in the other; those between the North and the South-East score 73 and 43.

Table 5 shows the respondent's own education. Stayers in all regional areas except the South-East are less well educated than the average, but migrants within the UK are notably better-educated, on average a full 0.5 of a standard deviation above the mean. Among those with the highest z-scores are migrants between the North and the South-East, as well as those moving from Wales to the SE. What may be implied here is that distance, whether geographical or psychological, is a barrier for all except those of superior education. But the spread between stayers and internal migrants is not much greater for the respondent's education than it is in the case father's occupation, implying that the relationship between father's occupation and son's education may be independent of the latter's propensity to migrate.⁹

Table 6 shows one end-result in the transmission process: in terms of occupational attainment, disparities between internal migrants, on the one hand, and stayers and especially immigrants, on the other, are heightened still further. Internal migrants within the UK have increased their superiority over immigrants to 0.76 s.d. (from 0.49 s.d. in the case of education). The maximum difference between the mean scores of stayers in the different regional

Table 5. *Present education of natives and immigrants by areas of origin (at age 14) and of destination^a*

Area of Origin	Area of Destination					Total
	Midlands	North	EA+SW	Wales	S-East	
Midlands	-29	71	27	*	49	-18
North	26	-9	53	*	88	-1
EA+SW	*	*	-16	*	66	-5
Wales	*	*	*	-12	91	-1
South-East	30	94	43	*	5	10
Scotland	35	38	*	*	44	43
N Ireland	*	*	*	*	*	5
Natives abroad	*	*	*	*	81	61
Immigrants	-24	-29	*	*	15	3
Total	-19	-4	-1	-8	17	00

^aMiddle cohort ($N = 4474$); z-scores $\times 100$; education: C-scale.

*n.s. at $p = 0.05$.

	C-score	Z-score
Total native	7.36	0
Total immigrant	7.53	3
Total internal migrant	9.95	51
Total stayers	4.90	2

areas is substantial (0.36 s.d.) for occupational attainment, just as was the case for education.

The process of differentiation between stayers in the South-East and other stayers is clearly evidenced in terms of income (Table 7). Fully one-half of a standard deviation separates the mean income of SE stayers from that of their neighbours in EA+SW (£2,074 versus £1,649). The distinction between internal migrants and immigrants, while slightly reduced compared to occupation, remains to the massive advantage of the former. In only two cases, those of internal migration from the North and the Midlands into EA+SW, are mean incomes less than the averages.¹⁰

Taken together, Tables 3 to 7 show that the occupational and income attainment of men differs widely according to both their place of origin, and their regional area of present residence in England and Wales. They also suggest that UK natives who do migrate have better backgrounds, are better educated, and hold better jobs that pay more than the average, while foreigners who migrate are the most disadvantaged. For the rest of this paper, we concentrate our attention on natives of England and Wales.

III. Residual Estimation of Regional 'Effects'

Natives of England and Wales who stay put are often poorly educated and come from inferior social backgrounds. Intuitively, it is not difficult to relate this inferiority of background and poor schooling to low earnings and geographical immobility. Consequently, differentials between stayers and different types of movers might be at least partly accounted for by variations in social origin and educational attainment, rather than by the experience of migration as such. Put another way, migrants might on average be earning more because, as a group, they comprised more of the better educated members of the population and because education is a facilitating condition for geographical mobility. If the experience of migration adds something 'on its own', one would of necessity have to partial out background and education to find out how much they do add. The 'superiority' of migrants may merely be a statistical artefact arising out of the greater propensity of the better-paid middle class to migrate.

Table 6. *Present occupation of natives and immigrants by areas of origin (at age 14) and of destination^a*

Area of Origin	Area of Destination					Total
	Midlands	North	EA+SW	Wales	S-East	
Midlands	-20	55	42	*	65	-10
North	17	-15	41	93	79	-7
EA+SW	*	*	-13	*	67	-2
Wales	*	*	*	-15	103	-2
South-East	43	80	38	*	16	19
Scotland	7	15	*	*	41	23
N Ireland	*	*	*	*	*	-7
Natives abroad	*	*	*	*	54	41
Immigrants	-59	-49	*	*	-5	-24
Total	-15	-11	-2	-9	21	00

^aMiddle cohort ($n = 4468$); z-scores $\times 100$; occupation: H-G scale.

*n.s. at $p = 0.05$.

	H-G-score	Z-score
Total native	45.82	2
Total immigrant	41.91	-24
Total internal migrant	53.27	52
Total stayers	44.58	-6

As a first approximation, the technique of controlling statistically via regression analysis for differences in background and education presents itself as an obvious tool for gaining further insights into the effects of migration. We will use residual estimation, a technique based on summing up the product of least-square regression weights and individual scores for each respondent. In residual estimation, interest does not centre on regression coefficients as such, and the independent variables are best decomposed into dummies rather than scaled. Residual analysis will yield a single estimate for each respondent, and the values may be summed up and averaged for any number of sub-groups. The technique reveals little about the processes: it is rather an estimate of what is left when the hypothesized determinants have been allowed to predict all they can of the dependent variable. The residual is then the 'unmeasured' variable (together with possible interaction terms).

However, even when social background and education have been accounted for, the residual cannot with certainty be ascribed to the effects of migration. As Duncan, Featherman, and Duncan (1972: 225) argue: 'There is always a source of ambiguity: whether migration in some sense "causes" achievement or whether migration is merely selective of those men with qualities like energy and ambition

which would lead to above-average achievement, irrespective of the decision to migrate'.

It is, of course, intuitively appealing to conclude that positive residuals for migrants are due to superiority of personality traits. According to this view, not only do migrants with initiative and drive get better schooling, but, over and above this, their ambition ensures that they obtain better jobs and earn higher incomes. But let us suppose that personality traits such as ambition were, in fact, distributed independently of the propensity to migrate. Could positive residuals still be accounted for? Several explanations come to mind:

1. The social background and education variables used as a control measure what they purport to measure only imperfectly, at best. For example, if migrants come from families with especially favourable financial resources within each occupational category, 'family wealth' (imperfectly measured by the available indices in OMS) may well be a causal antecedent of a respondent's socio-economic success, rather than ambition. Similarly, if migrants are those who went to the very best schools within each school type, a positive residual may only indicate a discrepancy between the educational measure and the actual experience of education.

2. Migrants choose to settle in local areas within a region which offer the best jobs, whereas stayers are

Table 7. *Income for natives and immigrants by areas of origin (at age 14) and of destination^a*

Area of Origin	Area of Destination					Total
	Midlands	North	EA+SW	Wales	S-East	
Midlands	-15	*	-11	*	32	-11
North	40	-16	-7	*	85	-7
EA+SW	*	*	-29	*	39	-22
Wales	*	*	*	-17	51	-4
South-East	15	52	29	*	24	24
Scotland	56	38	*	*	46	45
N Ireland	*	*	*	*	*	*
Natives abroad	*	*	*	*	67	37
Immigrants	-22	-41	*	*	-13	-18
Total	-8	-13	-21	-12	24	00

^aMiddle cohort ($n = 3863$); z-scores $\times 100$; income: ln lstante estimate.

*n.s. at $p = 0.05$.

	Income (£)	Z-score
Total native	1880	2
Total immigrant	1722	-18
Total internal migrant	2183	35
Total stayers	1827	-5

constrained to the local employment markets in the places in which they were brought up. The 'effects' of migration may then only be due to the fact that migrants give themselves a greater range of occupational choices.

3. Migrants are 'freed' from social and family constraints. Migrating working-class men, for example, are likely to have to relinquish council house accommodation previously secured in their community of origin. They enter the more flexible private accommodation market and this flexibility frees them for subsequent moves, making them more responsive to new opportunities. Similarly, migrants 'free' themselves from the influence of their family of orientation and the social circle within which it moves, and this too may promote an easier adjustment to the employment characteristics of their place of destination.

4. Return migration may be selective of the least capable of the original group of migrants: less well-endowed men become discouraged and return home, leaving a doubly-selected long-term migrant in the area of destination.

There is yet another caveat to the partialling out of education. Lieberman (1978: 959), in a thoughtful analysis of income differences between migrants and

northern-born blacks, considers the difficulties of taking educational attainment into account in dealing with birthplace differences in income. There is, he notes in his study, an enormous educational gap between southern-born and northern-born blacks. It is reasonable to assume, he argues, that the superiority of the latter is largely due, directly or indirectly, to regional differences in the educational opportunity structure. If there is a more limited opportunity for black education in the South, one may assume that the personality traits and background characteristics required for southern blacks to reach a given educational level are not the same as those for northern blacks.

Under such circumstances, the income gaps at a given level of education, observed among blacks living in the North, may not reflect regional differences in work ethos distribution or other traits which affect income (such as ambition), but may be due to birthplace differences in the association of a given personality trait with educational attainment. Only if the regression of the personality characteristics on education is identical within each population will it be appropriate to control for education without controlling for the personality characteristics, when accounting for income differences between North

and South. Controlling only for education could then lead to a counter-intuitive pattern in which southern-born blacks at all educational levels have higher incomes, although North and South groups have identical distributions on all attributes that affect income except education.

There are thus very real interpretative limits to findings based on the statistical analysis of individual survey data, using controlling variables. There is the ever-present possibility that controls may even reverse the direction of observed relationships by virtue of differential associations between unmeasured variables and the exogenous factors accounted for, thus leading to erroneous interpretations (the case of Wales may be an example of this: see Table 12A). The story-lines which sociologists formulate to link observed regularities to theoretical formulations, and which include hypothesized 'residual' dimensions, cannot purport to be more than plausible theories which further evidence may well invalidate.

Choice of Group for Residual Analysis

The use of residual estimation techniques for the comparative analysis of sub-groups further raises the question of which reference group should be used for the calculation of the regression coefficients: should it be the whole of the society, or a group based on place of residence, or a group distinguishing movers from stayers? Duncan has resorted to two different approaches, corresponding to two distinct models.

Model 1

In their discussion of geographical mobility, Blau and Duncan (1967: 243–249) use regression coefficients derived from the totality of the (white) sample population in order to estimate the occupational attainment of sub-groups of respondents categorized according to size of place of residence. The computed estimate for each group is expressed in terms of deviations from the overall mean, and the residuals are obtained by subtracting the computed deviations from the actual, uncontrolled, occupational means. The reference group is therefore the whole of the (white) society, and the question is asked: what would the occupational attainment of certain sub-groups be if they translated their back-

ground factors (the controls) into attainment at the same rate (partial slopes) as the white population as a whole?

Model 2

On the other hand, Duncan's classic study of black–white differences in the educational process (Duncan, 1969) postulates that whites and blacks constitute two separate societies, and that the problems of racial inequality are best expressed by considering how blacks would have fared had the educational process been the same for them as it is for whites. Duncan therefore used the technique of cross-group comparison of regression coefficient.¹¹

We have chosen to use regression coefficients computed from the entire population, without distinguishing area of residence or migratory behaviour, as in Model 1. This implies that British society is an organic whole, even though its members may be geographically dispersed and characterized by diverse early socialization experiences. Britain does not have a history of overt, institutionalized segregation, as in the USA: British sub-groups, whether they are based on region of residence, country of origin, or migratory behaviour, do not in fact constitute 'separate societies'. We see Britain, in this regard, as an integrated labour market and posit a society, along the dimensions of the controlling variables, in which all members with identical measured characteristics should arrive at the same outcome.¹² Our choice may be considered to some extent problematic in the case of Wales, where the ethnic/linguistic cleavage may be of significance. Indeed, we did find some evidence to that effect, as we will see below.

Choice of Predictors for Residual Analysis

Table 8 lists the predictors used for residual estimation. Respondent's education has been broken down into 34 dummies and 3 interaction terms (the only significant interactions we found within education components), in order to minimize the arbitrariness of scaling when using education as an exogenous variable. The age of the respondent is controlled by the AGEJOB1 and WRKEXP variables. Quadratic terms for age and other interactions did not significantly add to explained variance in the case of OCC

when the sample was divided into separate (30–49) and (50–64) age cohorts.

Among background variables at age 14 are SIZE of town, CLASS composition of town, and RURAL, an index of rurality (Cloke, 1977). These local ecological indicators, it may be argued, may also partially index regional area-of-origin effects and hence bias residual estimates for differences in region of destination (calculated from data for immobile respondents) towards artificially low values. Our justification for including these indicators is the same as that for including education in the residual equation. Further, as legitimate indices of background, they serve to estimate residual differences between stayers and movers.

Because we wished to reduce to a minimum the number of respondents who would be eliminated by missing values in the regression equation (and thus to preserve as much as possible the representativeness of the sample), we decided that missing information on all but education and the dependent variable would be estimated. The approximations thus introduced are to be preferred to the potentially more serious bias which might have resulted from eliminating a significant proportion of respondents, or from not using controls pertaining, by definition, to some respondents and not to others (such as the index of rurality or wife's education).¹³

Although our list of predictors may appear impressive, it fails to include at least three important indices: family wealth, ethno-religious origin, and IQ. Hence, our controls are incomplete. Errors in measuring social background and education will also tend to attenuate relationships to measures of status achievement or of earnings. Duncan, Featherman, and Duncan (1972: 30) mention the 'importance of evaluating a recursive causal schema with respect to its coverage of intervening variables, as well as its inclusion of the proper predetermined variables'. The variables in OMS, from this point of view, are limited in scope: they will underestimate the process of intergenerational status transmission, and the intervening role of education involved in this process.

The Explanatory Power of the Predictors

Table 9 shows that 40 per cent of the variance in occupational attainment and one-third of that of

income are explained by our list of predictors, a finding that parallels those of numerous researchers from Blau and Duncan (1967) through to Jencks (1979) and beyond. The proportion of variance explained by social background is slightly less than 50 per cent of the total for all four regressions indicated.¹⁴

Geographical location variables at age 14 (SIZE, CLASS, and RURAL) explain more of income than they do of status, but in no case do they account for more than 10 per cent of the total variance explained by background factors. Education before JOB1 accounts for roughly a third, and education after JOB1 for about a sixth of total explained variance. The explanatory power of most indicators is greater for occupational status than for income, implying that for each job level, there is a variation in income which is not predicted by the available personal attributes.

If nothing were known about the respondent except his education, our findings (data not presented in the table) show that one could still predict 90 per cent of the status variation and 80 per cent of the income variation that can be explained by including all the predictors in Table 8. The components of the C-scale are clearly most effective predictors of socio-economic attainment.

One can, however, present these findings in another perspective: it is also a fact that the combined explanatory power of all the predictors does not appreciably narrow the dispersion of the dependent variable. The standard error of the residual is between 76 per cent and 83 per cent of the standard deviation of the dependent variable, which implies that respondents with similar backgrounds and schooling appreciably scatter themselves in the occupational structure and that the range of monetary rewards they receive is only 25 per cent less than for the population in general.

As a consequence, the relation of occupational attainment to social background, place of residence as a young person, education achieved both before and after entry into the workforce, marital status, work experience, wife's education, and present family size is sufficiently loose that, in the words of B. Duncan (1967: 371), a man's attainment 'is not strictly determined or even sharply limited' by all these personal and environmental circumstances. The relation with income is even

Table 8. *List of predictors for residual estimation^a*

Variable name	Description
<i>Social Background</i>	
COLOUR	White or coloured (UK origin only)
FED	Father's education (C-scale) ^b
MED	Mother's education (C-scale)
FOCC	Father's occupation (H – G scale) ^b
SIBS	Number of siblings of respondent
TEL	Whether parents had a telephone when R was 14
FLUSH	Whether parents' residence had an inside flush lavatory
TENURE	Whether parents rented a council house, rented privately, or owned their home (2 dummies)
SIZE	Conurbation or size of town of residence at age 14 ^{cc}
CLASS	Percentage classes I & II and IV & V in town at age 14 (2 dummies) ^f
RURAL	Cloke Index of rurality at age 14 ^f
<i>Education</i>	
PRIED	State or fee-paying primary school (1 dummy)
SECED	Type of secondary school (6 dummies) ^d
EXAMS	Examination level achieved (5 dummies)
SCHLV	Left school before Minimum School Leaving Age (2 dummies)
ETA	Academic tertiary qualifications to JOB1 (4 dummies)
ETN	Non-academic tertiary quals to JOB1 (6 dummies)
AGEJOB1	Age of respondent at first job
ETADIF	ETA after JOB1 (4 dummies + (EXAMS ETA interaction))
ETNDIF	ETN after JOB1 (6 dummies + (EXAMS ETN and SECED ETN interactions))
<i>Post-Education</i>	
MAR	Single, divorced, widowed, or married (3 dummies)
WIFED	Wife's education (C-scale)
FAMSIZ	Total number of children in the family
WRKEXP	Number of years since JOB1

^aSee Coté (1983a: ch. 4) for details of the predictors.

^bMissing values estimated by regression.

^cComputed variable.

^dElementary and foreign (reference group); comprehensive; technical; grammar; incl. non-HMC; direct-grant; HMC.

^eEngland and Wales only.

looser, and wide variations in earnings persist for men of identical origins and education, even among older respondents. In a sense, as Halsey (1982: 966) argues with respect to the USA, British society could be described as 'an open lottery', implying that the bond between origin and destination that we are concerned with is not fully or even mainly determinative of outcomes. It could be retorted, however, that, despite the formidable array of predictors in Table 8, we (and many other sociologists) have failed to include other pertinent

indicators, notably IQ, which would have added to explanatory power.¹⁵

The Effects of Size of Town at Age 14

Three ecological variables, measured at age 14, were introduced into the regression equation. But only one, SIZE, accounts for a significant amount of explained variance, once other background factors have been controlled. Table 10 shows that in terms of occupational status, taking conurbations as a

Table 9. Incremental variance explained by various blocks of predictors (middle and old cohorts)^a

Dependent variable	OCC ^b		INC ^c	
	MID	OLD	MID	OLD
<i>Social Background</i>	0.208	0.190	0.160	0.137
<i>Location at age 14</i>	0.003	0.003	0.017	0.015
<i>Education before JOB1</i>				
School type	0.084	0.078	0.058	0.054
Exams	0.038	0.034	0.030	0.044
Tertiary quals.	0.005	0.006	0.004	0.009
Age at JOB1	0.003	0.003	0.000	0.002
<i>Education after JOB1</i>				
Tertiary academic	0.007	0.003	0.009	0.004
Tertiary non-academic	0.068	0.047	0.026	0.036
<i>Post-Education</i>				
Marital status	0.009	0.015	0.023	0.016
Wife education	0.004	0.006	0.004	0.006
Number of children	0.000	0.005	0.002	0.000
Years of work experience	0.002	0.002	0.000	0.008
Total R ²	0.434	0.392	0.333	0.332
No. of cases	4432	3160	3835	2493

^aSee Table 8 for a complete list of predictors.

^bOCC: H – G scale; INC: (ln Istance estimate) × 100.

^cCases weighted to 36-cat. OCC distribution for each cohort to adjust for missing values in INC.

point of comparison, the fact of having lived in less densely populated places as a young person has only a modest negative effect (less than 0.1 s.d. for rural districts) when background and education have also been accounted for. But in terms of income,

men of similar personal attributes (including education) who lived in conurbations at age 14, make significantly more money than those who lived in rural districts (0.3 s.d.) or in small towns (0.2 s.d.). It should be borne in mind, however, that because

Table 10. Effects of size of agglomeration on outcomes^a

Dependent var. ^d	Metric partial slope (B coeff) ^b Equivalent z-score × 100 ^c			
	OCC	INC	OCC	INC
Size of agglomeration at age 14^e				
Conurbation	0	0	0	0
> 100,000	–0.7	–111	–5	–13
50,000–100,000	–0.1	–96	–1	–11
< 50,000	–0.4	–159	–3	–19
Rural districts	–1.3	–257	–9	–29

^aMiddle cohort; dummy variables in multiple regression of OCC and INC using all variables in Table 8; N = 4468 (OCC); 3835 (INC).

^bB-coefficients (with CONURBATION set as reference dummy).

^c(B-coefficients/standard deviation) 100.

^dOCC: H – G scale; INC: (ln Istance estimate) × 100.

^eEngland and Wales natives only.

some respondents still live in the same size town that they lived in at age 14, the effects we are measuring confound origins and destinations to some extent.

Our findings thus only partially confirm Blau and Duncan's claim that for American men of similar attributes, living in rural districts brings inferior occupational achievement when compared to living in large towns. In our case, it is income which is the discriminating dependent variable in so far as origins are concerned.

IV. Regional and Migratory 'Effects' Disentangled

We have been arguing that, because some regions in England and Wales have a higher proportion of educated men than others, we cannot claim that differences in the socio-economic attainment of regional residents can be exclusively attributed to a structural peculiarity, or an 'effect', of region *per se*. If people come from better social backgrounds and are better educated, this fact must be taken into account before concluding anything about the region itself. Moreover, since we hypothesize that migration may index personal characteristics such as ambition and initiative, as well as the disadvantages of being a 'stranger', we must control for migratory experience in order to study the net effects of regions. Because each region comprises different proportions of migratory types (as seen in Tables 1 and 2), the regional aggregates are as much statistical artefacts of these different proportions as they are of the different distributions of social backgrounds and educational qualifications.

In the following analysis, we cross-tabulate residuals by region of present residence and migratory type. We have argued that the interaction between the geographically immobile (who account for about half of the population) and the region is an index of what we call the latter's 'opportunity structure' – and that the attainment of migrants merely reflects the structure of the better locations within the region in which they congregate, as well as unmeasured and possibly favourable personality traits. We shall therefore use the residual attainment of immobile respondents as a base model. By standardizing these immobile residuals to zero, an

assessment can be made in each region of the 'effects' of migration.¹⁶

Table 11(A) presents mean actual H–G scores for men aged 30–49, by region and migration type. Immobile men living outside the South-East have roughly similar average occupational status, some one-quarter of a standard deviation less than SE residents. In three of the five regional areas, there is a monotonic progression in mean status within each region with increasing distance travelled. The contrast between regional stayers and internal migrants (Table 6) is thus confirmed when stayers are disaggregated into migration types: on average, more than three-quarters of a s.d. separates internal migrants from immobiles. Clearly, people who have migrated furthest hold, on the average, the best jobs.

Table 11(B) shows residual status. Differences between immobile residents are now considerably attenuated: very little separates the Midlands or Welsh immobiles from their SE colleagues. The superiority of the latter group appears almost entirely due to the fact that its residents are better educated. If we are prepared to consider differences in residual status attainment of immobile men as reflecting differences in the 'effects' of regions *per se*, Table 11(B) tells us that these differences are not considerable (0.1 s.d.) and not always statistically significant.¹⁷ Indeed, our set of predictors has eliminated more than half of the variation between regions in the mean status of immobile residents.¹⁸

Table 12(A) presents the same information as Table 11(B), displayed more conveniently by standardizing to zero the mean residual status attainment of immobiles in each region (the left-hand column shows the actual residuals computed for immobile respondents). Net of region, short-range movers within each regional area (local authority movers and county movers) have better residual attainment than immobiles, but they do not do as well as internal migrants. These findings imply that:

1. Migration is conducive to higher status, even when the influence of social background, education, marital status, and region of residence has been accounted for.
2. The 'effects' of long-range migration *per se* (24 z-score units) appear to be about twice the order of magnitude of the maximum differences

Table 11. *Actual and residual occupation by regional area and migration type^a*

A. Present occupation					
	Immobile	LA move ^b	County move	Internal migrant	Total ^c
Present res.					
Midlands	-31	-1	-9	28	-12
North	-33	10	-5	65	-10
EA+SW	-33	-3	25	36	-1
Wales	-29	-11	37	39	-9
South-East	-6	-8	15	75	24
Total ^c	-28	9	22	52	
B. Residual occupation^d					
	Immobile	LA move ^b	County move	Internal migrant	Total ^c
Present res.					
Midlands	-5	6	9	9	1
North	-14	13	-14	14	-4
EA+SW	-11	10	12	12	3
Wales	-6	-8	15	33	1
South-East	-3	7	17	25	9
Total ^c	-4	9	8	17	

^aMiddle cohort; OCC: H-G scale; z-scores $\times 100$.

^bLA move = local authority move.

^cWeighted mean of each row or column.

^dResidual using predictors in Table 8; $n = 4468$.

distinguishing the regional areas themselves (North [-14] - South-East [-3] = 11 z-score units).

Table 12(B) shows the same type of information as Table 12(A) for men aged 50-64 (the old cohort). On average, migration remains conducive to higher status, but long-range migration into the Midlands and the South-East is not selective of such men, thus confirming the hypothesis that during the Depression years a greater proportion of unskilled workers migrated into these two industrial areas than did so during the more prosperous war years. However, for older respondents, county migration within the South-East region remains selective of those men with higher residual status (22 z-score units), owing, one may suppose, to the continued flight into the suburbs of particularly successful London men.

Inasmuch as the opportunity structure of regions is indexed by the residual estimate of geographically immobile men, no significant differences are found in the data for the middle and the old cohorts, imply-

ing that although Britain went through two distinct periods of economic hardship and prosperity, the actual opportunity structure of the regions themselves remained invariant.

In Table 13, background and education predictors have been used to estimate income residuals without including occupation as an intervening variable. This is in line with the thinking of Kerckhoff, Campbell, and Trott (1982: 352), who argue that earnings should be considered a characteristic rather than a result of a man's occupation, i.e. one among a number of rewards (the others being prestige, authority, and control), rather than the ultimate reward. From Table 13(A), we infer that:

1. Between the five regional areas, there is a larger spread of residual income among middle cohort immobiles (40 z-score units) than was evidenced for residual status in Table 12(A) (11 units): immobile Welshmen are the best-paid for the background and education they have, while residents in the North and EA+SW have low residual earnings.

Table 12. *Residual occupation, net of regional effects, by region and migration type^a*

	Regional Effect ^b	Residual occupation			
		Immobile	LA move ^c	County move	Internal migrant
Present res.					
<i>A. Middle cohort</i>					
Midlands	-5	0	11	14	14
North	-14	0	27	0	28
EA+SW	-11	0	21	23	23
Wales	-6	0	-2	21	39
South-East	-3	0	10	20	28
Total ^d	-4	0	17	15	24
<i>B. Old cohort</i>					
Midlands	-5	0	18	5	-6
North	-12	0	16	13	29
EA+SW	-3	0	-14	7	23
Wales	-11	0	-9	6	*
South-East	1	0	15	22	5
Total ^d	-7	0	12	18	11

^aUsing predictors in Table 8; OCC: H-G scale; z-scores $\times 100$; $n = 4468$ (middle cohort); $n = 3160$ (old cohort).

^bResidual for immobile respondents.

^cLA move = local authority move.

^dWeighted mean of each column.

- On average, and especially in the South of England, internal migrants are not as well-paid as those who have migrated within their region. The lack of relevance of certain industry-specific qualifications obtained elsewhere may to some extent account for these differences between occupation and earnings. The migrants may have qualifications that are of no use to them, or they may actually be in jobs for which they are qualified, but in which they will not earn as much.
- Migration within Wales departs significantly from the general pattern: short-range movers exhibit strong negative residuals, implying that within-region geographical moves are associated, in Wales, with people of good social background and educational qualifications, who, nevertheless, are not paid commensurately relative to Welshmen who stay put. We have shown elsewhere (Coté 1983a: ch.3, 46-49) that the educational opportunity structure in Wales is exceptionally favourable, compared to that in England. If, as a consequence, Welshmen are over-educated for the jobs they can obtain and the money they can earn, then educated Welshmen will be characterized by negative residuals

and, since it is the educated respondents who usually migrate, migration will appear to be associated with negative attainment when, in fact, the effect is due to birthplace differences in the association between education and attainment. Under these circumstances, controlling for education can be, in the words of Lieberman (1979: 959), a 'pseudo control' and can lead to misleading results.

Table 13(B) displays residual income for the old cohort. It shows that, amongst geographically immobile men (who, we argue act as an index of the opportunity structures of the regional areas), the disparity in incomes evidenced for the middle cohort in the Midlands, North, and EA+SW regions is confirmed, but that the relative positions of Wales and the South-East are reversed. The opportunity structure for older men now favours the South-East (17 z-score units): this is probably a reflection of the fact that the heart of the British economy provides (to a much greater extent than does Wales), the sort of better-paid jobs that men of equivalent social background and education may eventually attain after they reach the age of 50.

Table 13. *Residual income, net of regional effects, by region and migration type*^a

	Regional Effect ^b	Residual income			
		Immobile	LA move ^c	County move	Internal migrant
Present res.					
<i>A. Middle cohort</i>					
Midlands	-7	0	17	28	19
North	-15	0	18	5	3
EA+SW	-2	0	19	27	4
Wales	18	0	-28	-58	-6
South-East	0	0	16	25	11
Total ^d	-8	0	15	17	9
<i>B. Old cohort</i>					
Midlands	-2	0	12	4	7
North	-20	0	12	27	44
EA+SW	-14	0	2	3	6
Wales	2	0	-22	14	*
South-East	17	0	-6	-5	-7
Total ^d	-5	0	3	6	8

^aUsing predictors in Table 8; OCC: H-G scale; z-scores $\times 100$; $n = 4468$ (middle cohort); $n = 3160$ (old cohort).

^bResidual for immobile respondents.

^cLA move = local authority move.

^dWeighted mean of each column.

Table 13(B) also shows that the average residual earnings of all migratory types, when controlling for background and education, are almost identical. Put another way, the migration experiences of these older men bear little relationship to their current residual earnings: only regional effects remain, immobile SE residents being better paid, immobile North and EA+SW respondents being the worst off.

Indeed, within-region and between-region migration for migrants now living in the SE is revealed to be inimical to high earnings: only in the North can county migrants and internal migrants be said to have positive residual earnings that achieve statistical significance. In brief, then, for English residents:

1. The net regional disparity in earnings between the South-East and other areas is a significant one for both age cohorts. Other things being equal, people eventually make more money in the South-East than elsewhere.
2. Though internal migrants hold more desirable jobs than those who stay put, they do only slightly better than the latter in terms of earnings. Job for job, there is on average little 'cash premium' for those who pull up their roots and move across regional areas.
3. Superior earnings are enjoyed by middle-aged, within-region migrants (where employers may be more familiar with the respondent's previous work experience), but this superiority vanishes for the older cohort, as internal migrants obtain, with time, more adequate recognition from employers for what they can really do.
4. Among the older men, the experience of migration for South-East residents is associated with lower than average residual earnings, while the opposite is true for residents in the North.

V. Conclusions

Within the limits imposed by techniques of statistical analysis which use correlated controlling variables, we have demonstrated that five regional areas in England and Wales, broadly differing in their industrial infrastructures, natural resources, and demographic make-up, exhibit significant differences in their reward allocation, net of the socio-economic attributes of their residents. In terms of occupational status, the prosperous core, the South-East, exhibits significant structural

superiority over working-class areas in the North. In terms of income, the disparity is more pronounced, extends to all other regional areas of England, and increases as people grow older.

Secondly, we have shown that the experience of migration *per se*, net of the structural effects of regional areas, is clearly favourable to socio-economic achievement, particularly in the case of men aged 30 to 49. Income differentials between movers and stayers for older men are slight, as the effects of migrating during one's youth attenuate. Among middle-aged migrants, those who travel furthest, i.e. between regional areas, exhibit higher status achievement than those who relocate within their own area, though the former are less well paid.

We may conclude that, in addition to the imbalances provoked by spatial polarization, geographical relocation is itself associated with the processes of intergenerational status and income transmission, and the role played by education in these processes. Since such relocation may be stimulated by government policies as well as motivated by economic self-interest, the evolution over time of stratification processes in a society (if one may thus generalize from data pertaining to England and Wales) may in part be elucidated by considering the geographical mobility of its citizens. Indeed, social inequalities may be perpetuated or even heightened by the flight of the advantaged from underprivileged areas to places of opportunity. Conversely, forces constraining the working class to certain geographical locations may be deleterious to greater equality in reward allocation.

However, it should however be kept in mind that our model is merely a simulation of reality: we do not argue that government intervention should necessarily be directed towards promoting the large-scale relocation of its citizens. As experience has shown in the case of education, perverse and unforeseen effects may well result from such interventions. Just as the massive growth in educational infrastructure has led to credentialism, over-qualification, and a two-tier labour market, so might massive migratory movements lead to rootlessness, anomie, and the break-up of community. Nevertheless, in capitalist societies, the affective links experienced

by many working-class citizens in favour of their community of initial socialization, together with various social measures and union constraints which limit their geographical movement, may well be inimical to their socio-economic betterment.

Notes

1. Among these are (1) international comparisons such as the CASMIN and the International Class Structure projects and (2) labour segmentation studies.
2. Some occupational groups may exhibit specific migration patterns for reasons connected with occupational requirements. A skilled manual worker may be less prone to relocate than an unskilled one, the former being more likely to be tied to an employer, a particular craft, or a particular area where his speciality is practised (a coal miner, a steel worker). On the other hand, middle class workers such as assistant bank managers are often relocated from one county to the next as part of their training.
3. The Oxford Mobility Survey was conducted in England and Wales and comprised of 10,309 males in the labour force between 20 and 64 years old (Goldthorpe 1980: 281–94). Designed as a stratified two-stage sample, the survey provided for 417 primary sampling units. The regional distribution of the completed interviews closely parallels that of the 1971 Census data for men aged 20 to 64, with the exception of some under-representation in the Greater London area (sample = 13.9%; Census = 16.0%).
4. The six points are: where the mother was living when the respondent was born; where he himself was living at age 14; where he was at the time he got his first full-time job once he had completed his full-time education (the latter described as 'a period not interrupted by a period of more than two years except by National Service'); where he was 10 years after his first job; three years before the interview; and at the time of the interview in 1972. Two of these points in time are related to the age of the respondents, two are contingent on his work-life, two are determined by the year of the interview. From a life-span perspective, these pairs of points are characterized by a constant number of years between their beginning and end (14, 10 and 3), but obviously they may occur at different moments in the respondent's life. For some, first job was in 1922, for others in 1972; some men in the sample started work at age 11, others were 32 before they did so. To this diversity must be added the quite different periods during which the respondents grew up: the

Twenties, the 1930s Depression, the War, the Post-war economic expansion – each corresponding to different education and employment opportunities. Within a single age cohort, some left school early to get a job while others entered the labour market after a prolonged period of University training, at a time when the economic climate had changed. The points capture the respondent's situation at a particular moment in time but reveal nothing about intervening events. In spite of these limitations, the geographic information available is considerably more detailed and useful than is usual in such large-scale surveys.

5. In the decade between 1965 and 1974, the Standard Regions in Britain as defined by the Census were changed twice, once on April 1st, 1965, and again on April 1st, 1974, giving rise to an 'old', a 'transitional' and a 'new' set of Standard Regions. OMS was conducted in the middle of these changes and the location data was coded according to the 'old' boundaries. For purposes of sociological analysis, however, we chose to recode the location information into the 'new' Census regions in which East Anglia, primarily a rural region, is distinguished from the South-East region (which itself encompasses Greater London and includes the most prosperous areas of the country).
6. We have not split up the middle cohort into smaller age segments, although it could be argued that the post-war period was far from homogeneous, being subjected to several shorter-range economic cycles. These, however, go beyond the possibilities of our data: when, for example, the 4,505 respondents in the cohort are broken down into a 5 × 5 area of origin and destination matrix, many cells contain relatively modest numbers of respondents (20 to 70). Further disaggregation would not have given statistically useful results and would have forced us to report only a few summary measures.
7. Considerable analysis based on the education data of the OMS has been published, much of it employing categorical data in cross-tabular form (Halsey, Heath and Ridge 1980) and centred not on the content of the schooling process but on certain of its structural features. Continuous scaling of the education dimension has also been attempted (Hope 1981:17; Heath 1981:141), using various combinations of types of schooling, examinations and tertiary qualifications. These various scales did not appear to incorporate all the pertinent information available. We have therefore devised a new scale, the C scale, for use in regression analyses and in breakdowns (Coté 1983b). The new scale has a range from 1 to 23, the lowest value being attached to respondents having attended primary state schools, elementary secondary state schools, having dropped out two or more years before the minimum school leaving age, without passing any examinations or obtaining any further qualifications. The highest value of 23 is attributed to respondents having attended a Direct Grant or HMC Public School and then having gone on to obtain a second University degree. When regressing present occupation (H–G scale), variance explained by the C scale is 36.4% as compared to 18.6% when 'years of schooling' is used as a measure of education, and 28.7% for the scale used by Heath (1981). The authors of the OMS coded their carefully researched occupational data into the 124 Hope–Goldthorpe schema (Goldthorpe and Hope, 1974), which takes account of both work role and employment status, and assigned each category with a numerical value reflecting the assessment of British evaluators. The H–G scale has been used in this paper: it reflects the 'general desirability' of occupations.
8. Income information represents present income (1972). If the respondent was unemployed at the time of the interview, no information was recorded about his income as from the time when he last worked. Respondents were asked to place themselves in one of thirteen income categories, the top and bottom of which were open-ended. In order to ascribe a numerical value to each category, the authors of OMS originally coded the middle value within each of the eleven categories, and made an 'informed guess' respecting the two open-ended ones. An alternative approach was taken by Istance (1976): he superimposed on the categorical OMS distribution (a histogram) a continuously-measured income distribution curve obtained from a similar population, and estimated the intersection of this curve with the histogram. It is this estimate (INC), in its natural logarithmic form (to the base *e*), which we have used here.
8. A note of caution is in order about the measurement of social background for immigrants, most of whom appear to have higher occupation scores than education ones. Substantial numbers of immigrants come from agricultural backgrounds. On the H–G scale, 'farmers' have a value of 58 units, well up in the third quartile, reflecting the high desirability, in the minds of the British evaluators, of those British farmers who are land-owners engaged in a profitable business (and who are in reality somewhat untypical in Britain). But being a 'farmer' in Pakistan or in the West Indies conjures up the image of a modest peasant on a small plot of land: to ascribe the same score to these farmers as to the British ones is possibly not to reflect sociological reality. Hauser and Featherman

(1977:27) make the point, when comparing occupations on prestige and SEI scales in America, that farmers score high on the former and low on the latter Treiman (1977:183) notes that prestige ratings in highly agricultural countries show high intercountry variability. The latter advises treading with care in assigning scale scores to agricultural occupations, discounting mere nominal similarity.

9. Though immigrants appear to have about the same average education as natives, further disaggregation (Côté 1983a, Ch 3, Table 5) reveals that Irish and West Indian immigrants score low and Indian, Pakistani and 'other white' immigrants score high on the educational C scale.
10. Immigrants, whose social background is significantly above the average, exhibit lower incomes (-18 s.d.), the result, doubtless, of their being foreigners and often visible minorities rather than of their having migrated.
11. Duncan, Featherman and Duncan (1972:236) used this same model for comparing migrants with non-migrants, but divided their sample population into five agglomeration size categories. For each category, they substituted the means of the migrant groups into the regression equation of the non-migrants to compute the 'net' effects of migration. Duncan and Duncan (1968:356-64), in their analysis of minorities and the process of stratification, used a different version of Model 2: instead of computing the regression equations for each sub-group separately, they introduced in the one regression equation for the entire population a series of dummy variables for the minority sub-group, thus allowing for interaction between the sub-groups and the relationships with the other independent variables. Their model assumes that the effects of family characteristics on education and occupation are the same for members of each sub-group, but can vary from one sub-group to another.
12. We have repeated the residual computations presented in Tables 10 to 13 using regression coefficients obtained from a population consisting only of regional stayers, i.e. adopting Duncan's Model 2. The results do not differ appreciably from those reported here.
13. Because of the importance of FOCC and FED as background components and the fact that such information was unavailable for some respondents, missing values for these two indicators have been estimated separately for men aged 30-40 and 50-64 and, in each case, for stayers, internal migrants and immigrants, using the most significantly correlated variables of background and education as predictors.

These six groups sufficiently differ in reward allocation to be treated separately for the estimation of FED and FOCC. The percentage of cases thus adjusted is 7% for the middle cohort, and 10% for the older one.

Missing values for the local area variables CLASS and RURAL, as well as for MED, WIFED and AGE-JOB1 were replaced with the exact mean of the valid values for the population included in each residual estimation: this technique ensures that the inclusion of those respondents, for which these dimensions do not apply or for which no information was available, does not partial out sub-group differences.

The SIZE variable was constructed in the following way: first, we regressed the dependent variable on all predictors, using five dummy variables for CON-URB (the reference dummy) and the appropriate B coefficients were coded for respondents living in the four outside-conurbation agglomerations. Finally, the mean value of all respondents so far coded was ascribed to the remaining non-England-and-Wales respondents, thus ensuring the inclusion of this sub-group without partialling out group differences. In the full regression equation, SIZE has by definition a B coefficient of 1.00 SIZE must be computed for each dependent variable and for each population cohort.

14. The extent of direct and indirect effects of background factors on achievement in the OMS data is also similar to that found in numerous other studies. Using a method outlined in Côté (1983b), we obtain for the middle cohort the following path coefficients for hypothetical 'blocks' of background (BG) and education (ED) variables on occupation (OCC):

$$\begin{aligned} \text{BG} \rightarrow \text{ED} & 0,492 \\ \text{BG} \rightarrow \text{OCC} & 0,178 \\ \text{ED} \rightarrow \text{OCC} & 0,538 \\ R^2 & = 0,415 \end{aligned}$$

The direct and indirect paths of BG are therefore:

Direct	0.178	40%
Indirect	$(0.492 \times 0.538 = 0.265)$	60%
		100%

Thus, on average, the variance explained by social background operates primarily via education, with, nonetheless, a significant direct component.

15. In the regression of INC, the presence of a class structure variable – in the form of dummy variables indexing the intermediate and working classes of Goldthorpe's three class schema (1980:39-42), introduced after the OCCUPATION variable (H-G scale) – adds an insignificant amount of explained variance (0,001 for the middle cohort). This class-based schema is therefore entirely subsumed by the

previous controlling variables (BG, ED, OCC) and has no explanatory power of its own. Though this is not a test of class theory, it is clear that a much more detailed approach (Wright 1982), using information that OMS did not ask, would be required to test whether the notion of class has more explanatory power than the notion of 'general desirability' implicit in the H-G scale.

16. Interaction effects between education and region are, in effect, allocated to 'regional effects'. So are effects of unmeasured variables which may themselves also be differentially associated with the regions.
17. For a differential of 0.1 s.d. to be significant at $p = 0.01$, some 300 respondents are required in each cell, a condition satisfied in only 3 of the 5 immobile cells.
18. It is of course possible that the predictors are controlling not only for 'social background' as such, but also in part for regional area. If, for example, the North comprised a high proportion of fathers who were semi-skilled and unskilled manual workers, or if the South-East population, at all socio-economic levels, had more telephones when the respondent was 14, then the technique of controlling for these factors will not only take account of the personal characteristics imputed to the respondents by virtue of the fact that they had a working class father or access to a telephone, but will also partial out the ecological characteristics of area of origin with which these indices are correlated. By considering immobile respondents as the base for comparison (i.e. by stipulating that area of origin and destination are identical), we may be partialling out a portion of the structural differences between regions of present residence. On the other hand, since indicators of background and education only imperfectly measure the individual attributes (due to measurement errors and the absence of indices such as IQ and family wealth), it is also possible that the predictors are over-estimating the residual which we attribute here to the structural effects of regional areas. These imprecisions should however not invalidate our conclusions about the effects of migration, when controlling for region, particularly when making comparisons across cohorts.

Acknowledgements

The author is indebted to John Goldthorpe and Paul Bernard for their supervision of the original research, and to Monica Boyd, Victor Piché and Paul Bernard for their helpful comments on a previous draft of this paper.

References

- Blau P M, Duncan O D. (1967) *The American Occupational Structure*. Wiley, New York.
- Cloke P J. (1977) An index of rurality for England and Wales. *Regional Studies*, 11, 31-46.
- Coté G L. (1983a) Moving on: area, migration and socio-economic attainment in sociological perspective. D.Phil. thesis, Oxford.
- Coté G L. (1983b) A new education scale. Unpublished manuscript, Department of Social and Administrative Studies, Oxford.
- Coté G L. (1987) Social fluidity and regional disparities. Unpublished manuscript.
- Duncan B. (1967) Education and social background. *American Journal of Sociology*, 72, 363-372.
- Duncan B, Duncan, O D. (1968) Minorities and the process of stratification. *American Sociological Review*, 33, 356-364.
- Duncan O D. (1969) Inheritance of poverty or inheritance of race?. In Moynihan D P. (ed.) *On Understanding Poverty*. Basic Books, New York.
- Duncan O D, Featherman D L, Duncan B. (1972) *Socioeconomic Background and Achievement*. Seminar Press, New York.
- Friedlander D, Roshier R J. (1966) A study of internal migration in England and Wales, part II: recent internal migrants - their movements and characteristics. *Population Studies*, 20, 45-59.
- Goldthorpe J H. (1980) *Social Mobility and Class Structure in Modern Britain*. Oxford University Press, Oxford.
- Goldthorpe J H, Hope K. (1974) *The Social Grading of Occupations*. Clarendon Press, Oxford.
- Granovetter M S. (1974) *Getting a Job*. Harvard University Press, Harvard, Mass.
- Halsey A H. (1982) 'Review of *Who Gets Ahead?*. *American Journal of Sociology*, 87, 966
- Halsey A H, Heath A F, Ridge J M. (1980) *Origins and Destinations*. Oxford University Press, Oxford.
- Hauser R M, Featherman D L. (1977) *The Process of Stratification*. Academic Press, New York.
- Heath A. (1981) *Social Mobility*. Fontana, London.
- Hope K. (1981) Vertical mobility in Britain: a structured analysis. *Sociology*, 15, 19-55.
- Istance D. (1976) Education and income. B. Phil. thesis, Oxford.
- Jackson J A. (ed.) (1969) *Migration*. Cambridge University Press, Cambridge.
- Jencks C. (1979) *Who Gets Ahead?* Basic Books, New York.
- Kerckhoff A C, Campbell R T, Trott J T. (1982) Dimensions of educational and occupational attainment in Great Britain. *American Sociological Review*, 47, 347-364.

- Knottnerus J. D. (1987) Status attainment research and its image of society. *American Sociological Review*, **52**, 113–121.
- Law C. M. (1980) *British Regional Development since World War I*. David and Charles, London.
- Lieberson S. (1978) A reconsideration of the income differences found between migrants and northern-born blacks. *American Journal of Sociology*, **83**, 940–966.
- Perroux F. (1955), Note sur la notion de pôle de croissance. *Economie appliquée*, **8**, 307–320.
- Rees P. H. (1979) *Migration and Settlement, I. United Kingdom*. International Institute for Applied Systems Analysis, Luxemburg.
- Rossi P. H. (1980) *Why Families Move*, 2nd edn. Sage, London.
- Treiman D. J. (1977) *Occupational Prestige in Comparative Perspective*. Academic Press, New York.
- Wright E. O., Costello C., Hachen D., Sprague J. (1982) The American class structure. *American Journal of Sociology*, **47**, 709–726.

Manuscript received: March 1995

Author's Address

As author is deceased, address correspondence to: Professor Paul Bernard, Université de Montréal, Faculté des arts et des Sciences, C.P. 6128, succursale Centre-ville, Montréal, Québec, H3C 3J7, Canada.