

SOCIAL MOBILITY INTO POST-INDUSTRIAL SOCIETY:

**SOCIO-ECONOMIC STRUCTURE AND FLUIDITY
OF THE AUSTRALIAN WORKFORCE**

DEPARTMENTAL
MONOGRAPH NO.5

**SOCIAL MOBILITY INTO
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OF THE AUSTRALIAN WORKFORCE**

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National Library of Australia card:
Number and ISBN 0 86784 491 4

Library of Congress No. 84-62089

Distributed by Bibliotech, ANUTECH Pty. Ltd.,
P.O. Box 4, Canberra A.C.T.2601, AUSTRALIA



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PREFACE

This monograph is the third book-length publication to arise out of the Social Mobility in Australia Project, initiated in the early 1970s. Previous research has largely been couched within a framework that also dealt with occupational mobility, but from a different perspective: the perspective of status attainment, an approach that focuses on the relative statuses of jobs rather than their economic sector, and that seeks to answer the general question of how the ascriptive forces of unequal social backgrounds affect the achievements of the next generation. Dr Zagórski's study, while it is an analysis of occupational mobility as well, takes as its point of departure the literature dealing with the transformation of an industrial economy into a post-industrial form, and focusses on how that transformation generates different occupational demands upon, and opportunities for, different segments of the population. The flows between economic sectors and industries rather than between occupations and statuses constitute his main point of interest. In status attainment research, opportunities due to structural transformations are taken as background facts rather than as problematic in their own right. Indeed, a good deal of effort has been expended on trying to abstract away such changes in an attempt to measure the relative openness of different societies over time. By bringing changes in industrial structure into the foreground, Dr Zagórski's analysis adds a welcome and informative complementary perspective on processes of occupational change, by demonstrating the crucial role played by changes in the economy in closing off traditional mobility routes and opening up new avenues of employment.

F.L. Jones

Canberra, November 1984.

ACKNOWLEDGEMENTS

This monograph is based on a secondary analysis of the results of the 1973 Australian occupational mobility survey conducted by the Department of Sociology, Research School of Social Sciences, at the Australian National University. Various parts of the book were previously presented and discussed during a Departmental seminar, the 1983 Conference of the Sociological Association of Australia and New Zealand in Melbourne, and the meeting of the Research Committee on Social Stratification of the International Sociological Association in Amsterdam in October 1983. Some parts of Chapter V are taken from the article 'Labour Mobility Between Industries', Work and Occupations, Vol 12, forthcoming.

I thank F.L. Jones for providing the data and valuable suggestions, as well as for his continued efforts to improve my English. The computations could not have been done without the initial careful assistance of M. Robertson. E. Etzioni-Halevy, M. Evans, J. Kelley and G.A. Withers also made helpful comments and encouraged my work. They are, of course, not responsible for its shortcomings.

K. Zagórski

Canberra, November 1984.

Chapter I

STRUCTURAL FEATURES OF POST-INDUSTRIAL SOCIETIES

1. Long term structural transformations.

Though the concept of 'post-industrialism' was elaborated as early as the beginning of the twentieth century and has since been used very widely by sociologists and economists, especially after its popularization by D. Bell's book 'The Coming of Post-Industrial Society' (1976), there is as much agreement concerning it as about any other concept important in social science, namely very little. Neither a common, widely accepted descriptive definition of post-industrial society nor any general agreement concerning the evaluation of its existing, supposed or assumed features has been reached. Even the existence of post-industrial societies is questionable.

The most characteristic feature of a post industrial society is extensive employment in the tertiary sector (in so-called services in a broad meaning of this term). Several authors stress, however, that extensive employment in services occurs also in many underdeveloped countries (Bauer and Yamey, 1951), so it is important to add that post-industrial societies are a 'higher' form of socio-economic formation, following mature, industrialized ones. This form is supposed to emerge as a result of long term socio-economic development, in the course of which the development of efficient agriculture is followed by the development of manufacturing and changes in employment structure in favour of more modern economic branches producing material goods, and then followed by the development and growth of employment of service branches, providing various services and producing symbolic rather than material values. This sequence was described in modern economic terms by Clark (1957) and Fisher (1935, 1935a) in the thirties, though the distinction between three sectors of economy, crucial in this theory, was made first very early by the French physiocrats in the eighteenth century.

Both Clark and Fisher associate this sequence with growing productivity in agriculture and manufacturing on one hand and with the emergence of new human needs and their

satisfaction on the other. After the basic human need of food is satisfied, due to growing agriculture production and rising well-being of the population, the surplus of income is directed towards the consumption of various material goods, durable goods included. The satisfaction of material needs creates the condition for growing non-material ones, in the field of leisure, cultural consumption or participation, travel, sport and so on. These are supposed to be needs of a higher level. The further development of this theoretical view and associated empirical analyses is connected first of all with a great emphasis on productivity and volume of production of particular sectors, as well as income elasticity of demand (Baumol, 1967; Kuznets, 1966, 1971; Leppo, 1980; Tucker, 1977). More modern analysts construct statistical causal models explaining structural changes, and include in the model many independent variables, such as the trade pattern, the share of fixed capital formation in gross national product (GNP), changes in GNP per capita, population size, and so on. (Chenery and Taylor, 1968; Haig, 1975).

It is not difficult to trace the transposition of psychological theories concerning the hierarchy of human needs into Engel's classical micro-economic theory concerning the transition of household needs and expenditures as a result of growing real incomes. The subsequent transposition of this micro-economic theory into a macro-economic one has resulted in such a formulation as that of Clark and Fisher. Now the economists argue that output per employee grows more slowly in services than in manufacturing, so that employment in the former must grow faster than in the latter. By contrast, others argue that a faster growth of total service output (implying a higher elasticity of demand) explains the shift in employment structure (see Dowle, 1970). The evidence gives more support to the first explanation, though the second also seems to be partially valid in some countries.

The whole theory contains many oversimplifications, not to mention its oversimplified presentation above. The appropriateness of employment statistics to analyse the socio-economic structure of pre-industrial and early industrialization societies, and the comparability of such statistics over time, may be also questioned. The theory provides, nevertheless, in spite of all doubts, a good basis:

for analysis and discussion, especially for case studies of particular countries. Sometimes such analyses produce new light and clarifies the image of transitional sequences. For example, with the introduction of modern technology, the industrialisation of so-called developing countries is often not associated with the great growth of employment in manufacturing which occurred historically in already developed societies. Similarly the decline of agricultural employment after World War II in less (or later) developed free-market European countries, such as Finland, Greece, Iceland, Ireland, Italy, Portugal or Spain, has been associated with a greater growth of employment in services than in the secondary sector, so that the share of the tertiary sector in the labour structure is larger than the share of the manufacturing sector, with the latter remaining below the highest levels reached by earlier industrialized countries.

Fisher, the co-founder of the industrial transition theory, saw the development of the tertiary sector less as a 'natural' pattern of economic transition to a higher level than as a symptom of socio-economic progress and a remedy for economic difficulties, especially unemployment. He wrote: "What then shall we do with our boys? (the unemployed, K. Z.)... it is clear that an adequate answer to this question is that, provided we are sensible, we shall arrange for our boys to provide the societies of which they are members with such goods and services as have been inadequately supplied. Instead of this, we usually try to create a state of affairs in which our boys will be encouraged to add to the abundant supplies of things of which we already have enough". (Fisher, 1935:45).

Arguing against Australian protective custom tariffs he added: "We find that people are unemployed in the iron and steel or the woollen industries; the tariff argument suggests that we should endeavour to get them back into the same industries, whereas in a progressive economy the only solution which is thoroughly satisfactory is one which will divert part of the superfluous streams of labour into new channels of employment" (1935:57). There is an interesting analogy between Fisher blaming the petrified Australian economic policy in the mid-thirties for a lack of imagination and an aversion to removing barriers preventing greater employment in so-called 'unproductive' economic

branches (in Adam Smith's and Marx's sense), and the present Labor Minister for Science and Technology, Barry Jones (1982). Jones recently blamed the Australian economy for the same lack of imagination, and limiting not only the growth of employment in the tertiary sector (which could not be very great anyway in his opinion), but also limiting consideration of a reduction in work and an expansion of leisure or educational activities as a remedy for recent economic difficulties, a step also suggested previously by Fisher, albeit in a somehow weaker form. There is also an analogy between Fisher's suggestions concerning the way to cope with unemployment in the thirties and some of the recent discussions on Australian unemployment (Henderson, 1983).

The 'ideal' tendency toward the post-industrial economy is, according to Fisher, limited to a significant extent by economic inertia and a conservative tendency to the self-reproduction of the economic structure in its existing shape. The development of the tertiary sector is, however, in his opinion, not only the ideal or theoretical solution leading to recovery from economic crisis but also an inevitable (but not automatic) stage in a course of economic development. His theory constitutes rather a guide-line for economic policy than a prophecy concerning its shape. The same can be said about Jones' argument.

This chapter is not intended to be a summary of the vast economic literature on structural changes and their causes in modern economies. Some deliberations are, however, necessary to introduce the problematics. The economic and sociological characteristics of a post-industrial society will be summarised in order to provide the basis for further examination of some aspects of employment structure and social mobility in Australia.

2. Post-industrial features of modern economy.

The transition toward a post-industrial employment structure took place, in spite of inertia and petrified attitudes negative to 'unproductive' economic branches of activity, in all developed countries. Earlier experiences of industrialization and urbanization indicate that the

diminishing percentage of population employed in farming or living in rural areas occurs earlier than the decline in absolute numbers. The greater natural increase of rural population rather than the net outflow from agriculture is absorbed by developing industries and growing cities. Only at a later stage does the transfer of population out of agriculture and villages reduce its absolute size. It seems that an analogous mechanism operates on a higher level of transition in employment, namely during the initial period of post-industrialism. Pollard (1979) noted that the whole growth of employment in many developed economies has been confined to the tertiary sector, while the primary as well as the secondary sectors remain the same size in numbers, but not in proportion. Only rarely do both decline. Moreover, some service industries, especially those of a distributive nature like trade and transportation, begin to show the same trend as the primary and secondary sectors, while others grow rapidly. Data analyzed by Ranga Chand (1983) indicate that employment in Canadian manufacturing as well as in the transportation and communication was growing in absolute terms from 1950 till 1979 in spite of the relative decline of these sectors in the total employment structure.

Kahn and Wiener (1967) have forecast trends in the transition of the American labour force from 1965 to 2000. According to their estimates employment in American manufacturing is supposed to rise over that period from 18 to 24 millions, an increase of 33 percent. At the same time, however, the total employment outside of agriculture is expected to rise from 60 to 127 millions, an increase of 112 percent, and employment in various service branches from 39 to 92 millions (136 percent). Employment in manufacturing will rise, if these expectations are correct, not only more slowly than employment in services or in the total labour force, but also much more slowly than the American population 14 years old and over. Its estimated share in total non-agricultural employment would decline from 30 to 19 percent, or if mining and construction are added, from 36 to 25 percent. Even if these forecasts are not totally accurate, the general trend so far is actually similar to that predicted by Kahn and Wiener: the decline in relative proportion of people working in the secondary sector has not meant a decline in their absolute number, even in the country considered to be the first in the race to the post-industrial era.

So far as Australia is concerned, the absolute size of agricultural employment reached a peak in the 1930s. It declined remarkably later on and recently has remained at more or less the same level for more than twenty years. Its share in total employment, however, declined continuously from the end of the nineteenth century.

Both the share and absolute size of population employed in the Australian secondary sector rose until 1960. Since then it has grown slightly in absolute terms, but that growth has not been sufficient to prevent a decline in percentage share. The recent absolute decline since 1976 should be interpreted rather as a result of the economic recession than as the beginning of an accelerated structural transition, although the latter possibility cannot be excluded. The accelerated structural changes are reflected by the fact that since 1960, and especially since 1970, not only employment in industry but also the share of manufactured product in GNP is declining. The share of services is growing both in employment and in GNP. The latter concerns especially finance, administration and those services for which we use here the term "social", but not trade or transportation. One can not exclude the possibility that economic recession actually has accelerated structural changes toward a post-industrial society (Bureau of Industrial Economics, 1979).

The relative or absolute decline in manufacturing employment should not necessarily be associated with an absolute and often even not with a relative decline in industrial production. There are many indications that the number of industrial workers, recently diminishing in some developed countries due to the recession, may decline soon even more rapidly due to technological progress. Such falls in employment may not necessarily cause a decline in production but on the contrary may be associated with its rapid growth.

Not only is the volume of industrial production not falling parallel to the fall in industrial employment, but its share in the GNP does not change very much. Even if its decline occurred recently in some countries, the rate of decline is smaller than the rate of decline in industrial employment. In the long term, moreover, the share of industrial production in GNP has been growing much faster

than the share of services, the latter showing no marked trend, and being irregular or stable (Kuznets, 1966, 1971; Dowie, 1970). This inconsistency in changes of employment and production structure is possible only because of the rapid growth of industrial productivity, and much slower growth of service productivity. Jones gives several spectacular examples of such processes recently taking place in some particular branches of manufacturing:

(i) Production of colour TV sets increased in Japan from 8.4 million in 1972 to 10.5 million in 1976, while the number of workers producing them fell from 47.9 to 25.7 thousand;

(ii) The highly automated Japanese Nissan car factory produces annually as many as 131.2 vehicles per worker, while this figure is as low as 4.5 in the less modernized Australian car industry (car production is one of the most rapidly rising industries in Japan);

(iii) The total volume of printed material in the US has risen 300 percent since 1950, but the number of people employed in printing industries has fallen remarkably. This fall amounted to almost one third of the whole employment in printing in only five years from 1967 to 1972;

(iv) The production of the Australian hosiery industry rose from 11.3 million dozen pairs in 1973 to about 13.5 million dozen pairs in 1978 but employment has fallen from 5.7 thousand to 4.0 thousand workers (Jones, 1982:139-140).

The increased efficiency of particular branches of material production, and the disappearance of some out-moded ones, did not cause any fall in total productive employment in the past (except for recessions) because the growth of employment in new branches, making newly invented products, not only filled the gap but caused further employment rises. All predictions say that the appearance of such new material production, which might absorb a great number of workers, is now highly improbable. Even if a miraculous new 'X' industry appears, it will be too labour-efficient to increase significantly the demand for labour. Mass

unemployment of a 'structural' or 'technological' character may result in such circumstances. Some economists and economic journalists predict that as much as one quarter of the total labour force may be unemployed in the non-too-distant future of highly developed countries. This could be averted, in their view, only by accelerated transition toward fully post-industrial societies, but such rapid and drastic changes are very unlikely.

What is post-industrial society? Kahn and Pepper (1980) claim that this concept is poorly defined and is covered in negative rather than positive terms. Most definitions or descriptions say, first of all, that it is neither pre-industrial nor industrial, but give no or little definite positive specifications. It is, however, possible to enumerate at least some important post-industrial features, incorporated in the definitions and descriptions by such authors like Bell (1976), Gershuny (1978), Gustafsson (1979), Jones (1982), Masuda (see Jones, 1982), and even Kahn himself, jointly with Wiener (1967) or with Bruce-Briggs (1972).

Most of the characteristics of post-industrial societies are derived by various authors from Bell's book, which constituted a milestone in the construction of the theory of post-industrialism. Let us try to present them briefly, not pretending to give a full description of post-industrial society but simply emphasizing features related to, or relevant for, problems of socio-economic structures.

(i) Economic activities in post-industrial society are service-oriented rather than production-oriented.

(ii) Services oriented towards the 'production' and dissemination of symbolic cultural values rather than towards the redistribution or assisting of production of material values (that is to say, services satisfying individual or social non-material needs for leisure, health, education, cultural consumption or creation, sport, and entertainment) dominate in the tertiary sector. Distributive (trade, transport, communication), financial and administrative services, including those serving primary and secondary activities, do not lose their significance, though they develop less rapidly or stagnate in terms of being a major source of employment. This is the reason for

dividing the tertiary sector into tertiary, quaternary, or even quinary segments, reflecting in a better way structural features of post-industrial societies.

(iii) The occupational structure of post-industrial society is dominated by white collar employment in which professional groups grow rapidly in number and increase their social importance.

(iv) Educational levels are very high.

(v) The market plays a diminished role compared to the public sector or 'social policy' generally, and private business corporations are increasingly subject to governmental regulation. Genuinely mixed economies emerge (in some countries at least, such as Scandinavia, Britain and France).

(vi) Material consumption and material needs lose their motivating importance for human activities and for promoting further social development.

(vii) Since main effect of technological progress in industrial societies is to substitute machinery for human physical work, the main effect of technological progress in post-industrial societies is to substitute computer-controlled interactive robots for human mental labour.

(viii) A greater risk of extensive 'structural-technological' unemployment is characteristic of the labour market.

(ix) The socio-economic system is increasingly technocratic, with skills and education replacing family background and property as the main determinant of social position of individuals and their political power.

Do post-industrial societies already exist? There is no unambiguous clear-cut division between them and industrial societies, just as there is no clear-cut division between industrial societies and pre-industrial ones. Many people use the phrase 'industrial revolution' as a metaphor to indicate rapid and radical change of revolutionary character, as a result of which industrial societies emerged. But it does not mean a real revolution in an exact meaning of the word. True, the French bourgeois revolution marked

the demise of an over-ripe European feudal system, but it cannot be treated as an industrial revolution in a meaning intended by historians, sociologists and economists. Industrial revolutions are complicated, many faceted processes of socio-economic and technological transformations, being much more general in character and taking much more time to accomplish. Is the recent situation of most developed countries 'revolutionary' even in this more limited sense? I would argue that nobody seriously uses the term 'post-industrial revolution', even metaphorically, in a similar way to the meaning of revolution in the 'industrial revolution' metaphor.

It is impossible to date the industrial revolution as accurately as the French bourgeois revolution: there is no birthdate for industrial society. It is even much more difficult to define the date when the post-industrial era began or to provide exact criteria for defining precisely any such date in the future for those who do not believe in existence of post-industrial societies today. There is a continuum, not a contradiction, between industrial and post-industrial society. The transition from one to the other form has been, in this case, rather more evolutionary than revolutionary in character and the delimitation of any transitional point or borderline between the two forms must be arbitrary.

Gustafsson (1979) wrote in his introduction to a collection of essays on post-industrial economic systems that the existence of specific post-industrial societies is postulated rather than proven, but he meant that only limited aspects of the contemporary West were discussed by the authors, rather than that post-industrial societies do not exist. On the contrary, some contributors to the reader, edited by him, took the existence of post-industrial socio-economic systems for granted. An English economist, Gershuny (1978), expresses a different opinion and raises serious doubt whether post-industrial society is really coming, or whether industrial society is really going to cease to exist at all.

Kahn and Bruce-Briggs (1972) predicted that post-industrial societies would emerge no earlier than the beginning of the 21st century, though previously Kahn and Wiener (1967) had expressed the opinion that about a dozen

such societies (USA, Japan, Canada, France, West Germany, Switzerland, Belgium, the Netherlands and the Scandinavian countries) would already exist by the year 2000. When writing about Australian conditions, Kahn and Pepper (1980) identified several important elements of post-industrialism already existing in that country, but expressed the fear that some of them were premature. Given their continued development, Australia might become a 'premature post-industrial society', reaching this stage too early, without sufficient development of material production and material well-being for the nation. To entertain such a fear is impossible without a recognition of the possibility that the State interventionism and deliberate economic policy might encourage post-industrial features. If so, the post-industrial era may be not only brought about, but also postponed, by particular policies exercised by the State, by non-governmental bodies or by large and powerful economic organizations. The role of State and other organizations should not be underestimated or neglected in this respect, since they play a role in mediating structural transitions toward a post-industrial world.

3. Redistributive role of the State in post-industrial development.

In this context, the most important features of the State are its redistributive and welfare functions. It is impossible to expect further radical changes in socio-economic structure of societies entering the post-industrial era without using profits from material production to develop the tertiary sector and to create new jobs in this segment of economy. Just as one function of bourgeois revolutions was to direct the surplus of capital generated in feudal agriculture to productive forces in manufacturing, so the State in most developed industrial countries is expected to direct part of the surplus capital generated by industrial business to the unproductive (in its narrow meaning) tertiary sector. The tendency of industrial businesses to ensure their own extensive reproduction may, as both early critics like Fisher or contemporary ones like Jones state, lead to overgrowth and overproduction, causing serious economic crises. It is even more unrealistic to expect that big industrial business will direct accumulated assets to build and run hospitals, theatres, galleries, art schools and universities than it may have been to expect feudal landlords to invest in industrial

production. It is also unrealistic to expect commercial self-development of such tertiary institutions without external sponsorship. If they are supposed to provide substantially more jobs and more services, the State has to perform its redistributive and sponsoring functions.

The question may be asked, however, whether the recent growth of the tertiary sector is associated with the flow of workers into that part of the economy from other stagnating sectors. Only then it could be considered as a real remedy for world-wide unemployment. The redistributive function of the State, in a sense used in this paper, is performed already nowadays, though insufficiently, so that nothing entirely new or revolutionary is postulated, only the strengthening of existing trends. There is, however, a danger of unnecessary bureaucratization and politicization of a great part of human activity. The question may be posed, how the possibilities of solving the problems on a macro-social and macro-economic scale by the State or other big non-profit organizations may be assured, while securing individual rights manifested by free choice on a micro-economic level and by public control over bureaucracies.

Chapter II

MOBILITY BETWEEN SEGMENTS OF ECONOMY AND STRUCTURAL CHANGES

1. "Suction pump" and "force pump" mechanisms.

One individual's right of choice concerns the choice of occupation. Several authors treat structural mobility as 'forced' mobility. They argue that the demand of growing industries forces people on a mass scale to change their location in the occupational structure. This may be true in many cases, but not always. When we look at social mobility during the initial period of industrialization in late eighteenth or early nineteenth century Europe, and more recently in developing Third World countries, we see that in some societies the outflow of free labour from agriculture was a precondition rather than a result of early industrialization, and that it facilitated the growth of industry rather than was 'forced' by it. It is not always correct to say that this outflow was caused by industrialization. On the contrary, the outflow created in some countries a free labour reservoir which was later used (and even forced physically) to work in developing branches of industry, which took advantage of a situation already existing in the labour market.

Ólafsson (1976) has described such a process in France. He wrote that the growing efficiency of agricultural production led to a gradual release of agricultural workers. This, along with the high fertility of the rural population, created an 'oversupply' of labour to industry. That already existing 'oversupply' adjusted either by social mobility or by unemployment. The mass outflow of the rural population to Third World cities is similar.

The contemporary development of education and the growth of its output create a situation parallel to some extent, stimulating the growth of the tertiary sector and intellectual occupations. The 'production' of graduates in modern societies tends to be greater than the immediate demand for them in the economy, since it is governed, partly at least, by its own internal tendencies as well as the the growing human motivation to obtain higher education.

The oversupply of educated persons stimulates, although not without difficulties and not entirely on its own terms, the growth in some parts of the tertiary sector. It must be also noted that employment in some professions becomes not only a means to earn money but also an end in itself. It specially concerns work in some tertiary professions (e.g., in science, art or politics) but not only there. The demand for such work can lead to the creation of job opportunities, and one may treat such jobs as consumption rather than as a production in a broad sense or at least as having both aspects, a viewpoint somewhat strange from the conventional economic point of view. The development of universities, research institutes, and art, cultural or other social institutions are often self-perpetuating in such circumstances, and may in some cases be described analogously to the development of administration described by Parkinson's law.

Pollard said of the tertiary sector: "... the types of employment under discussion expanded in large part because that is where people prefer to work" (1979:29). This oversimplification is true to some extent, especially (but not only) where the employment of women is concerned. Educated women in modern affluent societies can in some circumstances refrain from work if it is not of a kind they are interested in, but they struggle to have greater opportunities open in some fields of interest, located mostly in tertiary or other professional occupations.

Actually there are two categories of employment growing spectacularly in many developed societies, even in a time of recession and great general unemployment. One is the group of highly educated women commencing professional or semi-professional jobs, and the other is a group of much less educated and (in most cases) much younger women who work in unskilled or semi-skilled service occupations. Australian data indicating such a trend have been presented by Jamrozik and Hoey (1982). As their and other Australian evidence indicates, the latter category works very often only part-time and consists among others of many schoolgirls earning money in their 'free' time. For both the former and the latter groups, located in very different positions in social structures, work is not always an ultimate necessity. Jamrozik's and Hoey's paper stimulated a discussion which underlined the fact that this work, being often an

unnecessary luxury or source of additional but not substantial income, contributed to the well-being of middle-class families. However, it was also often part-time and very insecure, and diminished the chances of full-time secure jobs for those who really needed them (Social Welfare Research Centre, 1983). The conclusion can be drawn, nevertheless, that the perception of mobility as forced only by some 'suction pump' mechanism is very one-sided in many situations, since mobility may be caused by a mechanism of a 'force pump' as well that is to say by supply and not only demand factors.

2. The role of mobility surveys.

Although Kuznets (1966; 1971), the most representative contemporary follower of the 'three sectors' approach in modern economy, has properly perceived the great impact of structural economic transitions on social mobility, neither he nor other economists have analysed the flows between industries. Informations on industrial employment structure and workplace were on the other hand not collected by the great majority of classical mobility surveys, or not analysed even if collected. There are some empirical analyses and theoretical assumptions made in the context of labour market segmentation theory, which concern mobility or attainment in 'core' and 'periphery' sectors (Sørensen and Brandon Tuma 1978; Beck, Horan, and Tolbert, 1978; Tolbert, 1982; Wanner and Lewis, 1981), but the authors use a traditional concept of mobility as a process of flows between occupations or socio-economic statuses. Not much is said about mobility between various sectors or industries, except that there is relatively little between the core and the periphery, though this opinion is doubtful in the light of Tolbert's (1983) recent analysis. The main result of sociological analyses from this theoretical background is that beside the lack of flows between core and periphery sectors (defined not in full accordance with the sectoral economic classification used here), there are different patterns of social mobility or attainment in the classical sense in each sector. Even these findings require further analyses and methodological as well as substantive discussions (e.g. Hauser, 1980; Beck, Horan, and Tolbert, 1980).

Recently Payne and Payne (1983) have shown that the growth of the tertiary sector causes a reduction in social mobility across the blue collar/white collar line. Berglind (1978) has proved the hypothesis, on the basis of Swedish census data, that the post-industrial transition in occupational structure is associated much less with social mobility from agricultural and industrial to service occupations than with economic activation of previously non-active parts of population. This activation concerns mostly women who, as well as their mothers, never worked for pay in the past. Berglind has shown that the net inflow into the service sector due to intragenerational mobility is very small, as compared to economic activation, but he had no data to analyse neither intergenerational mobility nor the overall pattern of transformation. His data show only the net effect of intragenerational intersectoral mobility.

These findings support Blau's and Duncan's (1967) supposition that there are so called 'entry occupations' absorbing the inflow of new workers, which serve as starting points for individual occupational careers, whereas other occupational groups grow much more as a result of intragenerational mobility. Berglind was interested, however, more in the flows between the primary, secondary and tertiary sectors of economy than those between various occupations.

The Australian 1973 social mobility study provides a rare opportunity to study mobility not only between occupational groups or strata but also between industries and sectors of economy. (For details concerning the scope, the design, the sample and main results of the survey see: Broom et al., 1977; 1980).

3. Mobility between economic segments: theoretical and methodological considerations.

The concept of social mobility should be rethought before applying it to the flows between industries or economic sectors instead of positions in social structure, traditionally defined. Intergenerational social mobility is generally considered as the transmission of social status (or the absence of such transmission) between generations. It

is a process of social status attainment in which social background is treated as a resource or as a kind of social capital, given to young people, which helps them to obtain the same or more of it. Social background, though defined in terms of parents' occupational and educational characteristics, is in fact an attribute of sons and daughters, constituting 'property' with which they enter the labour market and begin their own careers. This 'property' is supposed to be an advantage or a burden in the complex process of the attainment of socio-economic status.

Many sociologists have stressed that parental occupations can be treated neither as a structure of labour force in the past nor as a structure of the parental generation at any single point of time. These conclusions were skilfully documented by Duncan (1966) and there is no need to repeat his argumentation. Some Polish data may be noted in support of Duncan's thesis. The structure of social origin in the Polish working population, defined by parents occupational groups, differs remarkably from the occupational structure of the parental generation, defined by the same groups but concerning the parents instead of the currently working population. The number of individual farmers in the latter (56.1 percent) is significantly lower than the number of farmers' sons and daughters in the recent working population (62.6 percent); Zagórski (1976). This comparison concerns, however, only those parents whose sons and daughters were in the active labour force and conversely only those sons and daughters whose parents were previously working. There is, moreover, an overlap between the recent working population and the generation of parents. The characteristics of the latter ones do not relate to the same historical time. A proper comparison (impossible to carry out) would probably reveal even bigger differences. In any event, a comparison of social background structures with recent occupational structures does not reflect, or rather reflects inaccurately, structural changes taking place in the workforce. Analogously, information on parents' employment in particular industries or economic sectors, collected in a mobility survey from the current working population, cannot reflect the employment structure of the parents' generation, or any other population at a particular point in time. They may be treated only as an attribute of the people investigated.

Two assumptions, however, make the analysis of mobility between segments of economy a sensible one. The first assumption is that the difference between occupational and sectoral or industrial structures of the workforce and its composition by socio-economic background, (defined in the same terms), reflects the general direction of structural socio-economic transformation, especially in a time of rapid changes, even if it cannot indicate it exactly. Processes of structural transition in the workforce and the result of inter or intragenerational structural social mobility are not the same, but they run parallel to a considerable extent, so that the general tendency in one does not differ substantially from the direction of the other.

The second assumption concerns recruitment to particular industries and sectors. It may be assumed that, analogously to the tendency for inheriting a social or occupational position similar to that of a parent, there is a tendency to undertake a job in the industry or sector similar to the industry or sector in which that parent was working. Structural changes taking place in a socio-economic system will weaken this tendency, directing inter-industrial mobility predominantly in accordance with changes in the structure. Such an assumption, while weak so far as total mobility is concerned, raises less doubt when applied only to the structural component of mobility. Moreover, the analysis of intragenerational mobility between industries raises of course much less doubt than one concerning intergenerational mobility.

There is also a third reason why mobility between labour sectors should not be neglected by sociologists. Employment in particular sectors or industries constitutes an important factor locating individuals in the social structure. We do not want to repeat here the argument stemming from labour segmentation theory, since segmentation as understood in this theoretical tradition takes place seldom according to industrial or sectoral boundaries. They go more often across them, though some congruency does exist. What we have in mind is that employment in agriculture or mining or manufacturing or services (eventually divided into smaller categories) constitutes not only a specific kind of economic activity but also an important element of the way of life per se. It determines not only all job related activities but also a much broader

range of aspects of the social and cultural life of the workers and their families. The meaning of flows between industries and sectors should not be reduced to the flows between parts of economic system, since they are flows between different socio-cultural settings as well. Because of that, both the concept and the term, social mobility, seem to be appropriate to their analysis. The general theories of industrialization and the transition to post-industrial society take as their core a description of regularities in the employment structure, but associate them with important broader socio-cultural features.

Moore (1966) claimed that social mobility is too narrowly understood in most sociological works, since it actually should comprise changes not only in individuals' location (locus) or relative position (status), but also sector, industry or 'lateral' occupational segments (situs), and employer (patronus). The aim of this paper is to analyse more closely 'situs mobility'.

Several questions can be formulated, concerning social mobility between industries or economic sectors with the approach of the post-industrial era.

(i) Is growing employment in services connected with social mobility from agricultural and industrial occupations to those in the tertiary sector, or is it rather associated with an economic activization of parts of population who were not economically active in the past?

(ii) Is mobility between industries and sectors predominantly of a structural kind, i.e. is it caused mainly by structural changes in employment opportunities, or do exchange flows constitute a substantial part of it?

(iii) Is interindustrial or intersectoral mobility mainly intergenerational, i.e. is the structure changed by the 'newcomers' into the labour force who work in industries different from those in which the older generation used to work, or is it affected also by the inflow of individuals during their career, so that such mobility is also intragenerational to a great extent?

(iv) Are changes in ownership and managerial status more likely to occur in some economic sectors than in others, and are they related to intersectoral flows?

(v) Are all of these processes similar among men and women, and how is increased female employment in post-industrial societies reflected in mobility between industries and sectors?

All the above problems concern only one limited aspect of the post-industrial, or early post-industrial, structural transformation. This limitation must be kept in mind in interpreting any observed trends. The analyses which may give answers to the questions listed above concern Australian social mobility data, collected in 1973 during the survey mentioned earlier. The information was collected for the whole nation in a random sample of the adult male and female populations. It concerned, among other topics, employment in particular industries of those interviewed and their parents. The application of the original detailed classification of industries used in the survey, to analyse interindustrial flows, was impossible because of the small sample size. It was necessary to aggregate detailed industries into broader categories. Two such aggregations were made: into (a) ten branches and (b) four sectors of the economy.

Sociologists and economists, who follow the approach of Clark and Fisher, use a classification of economic sectors somewhat more detailed than one distinguishing only the primary, secondary and tertiary sectors. Some use four or five sectors, others even a six-fold classification. Our classification of sectors is the traditional one, except that the primary sector is subdivided into agriculture and forestry on the one hand and mining on the other. This distinction is justified by the exceptionally important role played by mining in the Australian economy as well as the quite different character of agricultural and mining work. In some classifications mining is even included in secondary sector rather than the primary one, because of differences in the character of work and the overall socio-economic setting. It seems, however, that its separation from both agriculture and manufacturing is a better solution.

Our classification of economic branches is more detailed and distinguishes ten categories. The secondary sector is split into four branches, to distinguish between

construction, 'heavy' and machinery industry, 'light' and food industry, and other manufacturing. The tertiary sector is also divided into four branches very similar (though not identical) to those delineated by Singelman and Browning (1980). 'Social' services are distinguished from 'allocative' as well as from 'financial and administrative' ones, with the remaining services constituting a residual ('other') category. This distinction is important, since the first group of services, consisting of education, culture and art, health, welfare, sport and entertainment, are supposed to be the most typical for post-industrial society, serving 'higher' needs of its member. Allocative services (transport, communication, trade) and financial-administrative ones serve not only the general population but also, sometimes to a greater degree, business and the whole socio-economic system.

Many past discussions have been concerned to define the social background of women. Some researchers used father's occupational group as a criterion, others preferred mother's group, but the majority simply left the whole female population aside because of difficulties stemming from the great number of non-working mothers.

Since processes connected with the structural transformation of the labour force constitute the core of our interest here, the economic sector or branch of each working woman should be compared with the sector or branch of her mother, not father. The fact that mothers often did not work in the paid labour market should not be neglected. Working daughters of non-working mothers are considered as a separate category and are not excluded from the analyses. The same concerns the sons of non-working fathers, although there are very few of them in the sample (perhaps in most such cases their fathers died long ago or they were growing up with their mothers only, who were either never married, divorced or widowed).

Most of the data are presented separately for men and women as well as for the whole population. Information concerning employment of mothers of working women and fathers of working sons is aggregated to provide a description of the parental generation, supposedly replaced in the socio-economic structure by the generation of

respondents. To simplify the presentation of the results, we will use the term "structure of parents' group" in the meaning specified above and "structure of fathers' or mothers' employment", rather than speak all the time about "socio-economic background". It must be emphasised once more, however, that the data reflect rather the structure of socio-economic background (origin) than the structure of entire previous generations, whose members not always had children to replace them. In addition, mothers of male respondents and fathers of females are not included in the analysis.

The slight deliberate inconsistency in defining the reference point for father's and mothers's employment should be mentioned. The questions concerning fathers asked about their employment when respondents were 14 years' old, while the questions concerning mothers asked about their employment when respondents were growing up. This difference does not cause any significant error, assuring only the better description of the economic status of those mothers who were temporarily not working.

The target population of the 1973 Australian survey was any male or female aged 30-69, irrespective of current employment status. Only 10 percent of all men in that age but as much as 66 percent of women were not at work at the time of the survey. Only 7 percent of women had never worked, however. So in spite of a relatively low index of economic activity at the time of interview, actually nearly all Australian adult women aged 30-69 had experience of employment. The conclusion follows that the employment of women is much less permanent but not much less common than the employment of men.

The term 'workforce' is used in this paper for the whole population aged 30-69 in current or past employment. The term 'active workforce' designates those working when the survey was conducted, and the term 'passive workforce' consists of those person who worked in the past but were temporarily or permanently out of work for various reasons. Women constituted 48 percent of the total Australian workforce in 1973 (in the meaning specified above), only 29 percent of the active one, but as much as 84 percent of the passive workforce. Only part of this difference may be

explained by earlier retirement among women, related to superannuation. The legal situation in respect of superannuation differs according to scheme, occupation and industry. The more important causes are discontinuous and casual employment, the convention of ceasing work, for a few years at least, after marriage and childbearing, and also higher unemployment among women, very often of a 'hidden' character.

Two ways of defining last job in mobility analyses are possible. In the majority of cases (if not indicated otherwise), we use current job for those still working and last job for those not at work, to define a 'destination point' in our study. The distributions across economic sectors of last jobs of those already not working and the current jobs of those still working do not differ substantially, neither among males nor females, so this aggregation is justified. For some purposes it is necessary to consider these two situations separately, especially when investigating outflow from the active to the passive workforce.

Chapter III

SECTORAL STRUCTURES AND SOURCES OF WORKFORCE

1. Main hypotheses.

Several hypotheses concerning the structure and the recruitment sources of the workforce in particular sectors can be formulated on the basis of previous considerations.

(i) As a result of the growth of the service sector, the parental generation should have more employment in agriculture and less in services than the structure of the surveyed sample.

(ii) Since the proportional decline of labour employed in the secondary sector is only a relatively new feature of the Australian employment structure, the difference between two generations may be smaller in this respect than the difference concerning services and agriculture. However, higher fertility in the rural population causes an 'overrepresentation' of agricultural parents in the structure of social origin, as compared to the supposedly 'real' structure of the earlier generation. So a still greater proportion of industrial workers are expected in the sons' and daughters' generation, in spite of the fact that real structural changes may be much less marked and, in recent years, the earlier trends may be even reversed.

(iii) Since employment in services is growing most rapidly, one can expect this sector to have a greatest share of new members of the workforce as well as substantial inflow from other sectors, while there should be neither inflow mobility nor economic activation expected in agriculture. The situation in the secondary sector is difficult to be predicted in advance of actual empirical analysis.

(iv) Since employment in services is often of a temporary character, services are presumably characterized by both relatively great movements in and out, that is, by high turnover.

As Jones has recently emphasized: "Australia was probably the first 'service-based' economy anywhere" (Jones 1982 p.55). The special role played in the Australian economy by the rural and extraction sectors meant that

manufacturing has never been the largest employer. Moreover, given the export orientation of production in the nineteenth century, the development of services took place prior to and rather more rapidly than the development of secondary industry, in order to service the agricultural population and extractive economy. This peculiarity of Australian economic structure was noticed by Kuznets and is stressed by Australian authors (Dowie 1970). As early as 1881, the Victorian census indicated that services employed above 40 percent of the workforce, mining and manufacturing only about 10 percent each, and agriculture about one third of the labour force. In the early 1970s, when the ANU survey was conducted, the Australian primary sector employed less than 10 percent, the secondary about 30 percent, and the tertiary about 60 percent of the active workforce.

In spite of the fact that the services are considered by almost all economists as much more labour intensive than the material production, their share in Australian GNP is not very different from their share in the employment structure. However, many more service than industrial workers are employed only part-time, so the employment structure expressed in number of persons can not be treated as an equivalent of real work time contribution to the economy. More detailed Australian data on this topic are provided by Tucker (1977).

The employment structure in Australia is reflected in the composition of the mobility survey sample, though all the reservations concerning equivalence of the analysed structures and the earlier employment structure should be kept in mind.

2. Sectoral employment structure.

Several features of the sample's sectoral structure have to be noticed.

(i) The service sector is the largest employer of both the male and female workforce in Australia, and it was also so in the past, as reflected (though not exactly) by the origin structure.

Table 1. AUSTRALIAN WORKFORCE ACCORDING TO PARENT'S EMPLOYMENT AND OWN ECONOMIC SECTORS DURING THE FIRST AND LAST JOB

Workforce Structure	Non-working	Agriculture	Mining	Industry & construc.	Services	Total
The whole male and female workforce						
All parents	35.5	15.8	1.9	16.9	29.9	100.0
Working parents ^a	-	24.4	2.9	26.2	46.4	100.0
Respondent's first job	-	14.0	1.0	29.9	55.1	100.0
Respondent's last job ^b	-	7.4	1.0	34.1	57.5	100.0
Male workforce						
All fathers	8.8	23.1	3.7	28.3	36.2	100.0
Working fathers ^a	-	25.3	4.0	31.0	39.7	100.0
Son's first job	-	21.6	1.6	36.4	40.3	100.0
Son's last job ^b	-	10.2	1.7	41.1	47.0	100.0
Female workforce						
All mothers	64.6	7.8	-	4.6	23.0	100.0
Working mothers ^a	-	21.9	-	13.0	65.1	100.0
Daughter's first job	-	5.7	.3	22.8	71.3	100.0
Daughter's last job ^b	-	4.3	.3	26.4	69.0	100.0

Notes:

a Fathers when their sons were 14 years old, mothers where their daughters were growing up.

b Recent job of those still working and the last job of those already not working.

(ii) Employment in industry and services has grown steadily over the long term, if the assumption is correct that differences between the structure of the parental group and the structure of the respondents' group at first and current job reflect, though inexactly, structural changes actually taking place in the society, or at least parallel them.

(iii) There is the remarkable decline of the share of agriculture in employment structure of the whole population so far as the comparison with parents is concerned, but only men experience a large net outflow from agriculture in the course of intragenerational mobility.

(iv) Generally speaking, intragenerational mobility of men brings about, in addition to the exchange between economic sectors, also some structural changes, since such mobility is not associated with any net change in the female population.

3. Social mobility and other recruitment channels to different economic sectors.

Let us examine in more detail the role of intergenerational mobility between economic sectors in forming the total workforce. Since economic disactivization processes may take quite a different course in different sectors, it is necessary to look separately at the recruitment pattern of the whole workforce irrespective of actual employment status, and then only that part of it which is actually employed. The first population to be examined is shown in Table 2, upper panel.

The results confirm former findings from many countries that agriculture constitutes in modern societies a part of the economy characterized by low inflow from other branches or occupational groups. Most farmers, farm labourers and other persons working in agriculture have parents who worked in the same sector. Very few, in comparison to other sectors, experienced intergenerational mobility, and also relatively few may be claimed as new acquisitions to the workforce, in the sense that their parents did not work at all. The last category consists almost exclusively of women, and there is a strong supposition that their mothers belonged also to farming

TABLE 2. INTERGENERATIONAL MOBILITY AND ECONOMIC ACTIVATION AS FACTORS OF WORKFORCE FORMATION IN PARTICULAR SECTORS OF AUSTRALIAN ECONOMY

Mobility and Activation Status	Economic Sectors			
	Agriculture	Mining	Industry & Construc.	Services
Total workforce ^a				
Economically Activated				
men	3.7	6.2	6.0	3.8
women	14.9	8.3	22.9	38.0
Intergenerationally Mobile (Inflow)				
men	18.9	62.5	36.1	20.5
women	3.4	6.2	11.8	6.2
Intergenerationally Stable				
men	49.6	16.8	20.8	18.3
women	9.4	-	2.3	13.1
Total	100.0	100.0	100.0	100.0
Active workforce				
Economically Activated				
men	4.7	6.8	7.8	5.3
women	8.3	9.1	11.9	24.0
Intergenerationally Mobile (Inflow)				
men	23.2	63.6	46.4	19.3
women	1.2	4.6	6.3	4.0
Intergenerationally Stable				
men	60.2	15.9	26.3	26.9
women	2.4	-	1.4	10.5
Total	100.0	100.0	100.0	100.0

a Irrespective of recent employment status (non-working persons included and their sectors determined by the character of the last job).

b Sons of non-working fathers and daughters of non-working mothers.

families, but their relatively low involvement in farm work amounts to their being classified as economically inactive.

Australian mining is an economic sector which gained most of its workers via intergenerational mobility. Surprisingly few miners had fathers working in the same industry, contrary to the conditions in Europe, where the employment in mining forms a tradition over many generations in many families. Very few Australian miners were also economically activized, in the specific sense that their "equivalents" in a former generation did not work. Inter-generationally mobile men constitute almost two-thirds of all people engaged in mining, and when the few women in mining are added to this category, it even exceeds two-thirds.

A sector with relative little inflow from other sectors (not much greater than in agriculture) but with many workers representing female "newly activized" labour is that comprising various services. Women whose mothers did not work and who may because of that be considered as "incomers to the workforce" constitute almost 40 percent of total employment in services. Low inflow mobility to this tertiary sector supports the hypothesis formulated on the basis of Swedish data already mentioned (Berglind, 1978), and it contradicts the expectation that growing service industries may absorb a significant portion of labour previously engaged in other sectors.

The secondary sector, i.e. manufacturing and construction, is located in an intermediate position compared with other industries, from the viewpoint of its labour sources.

All these findings concern the whole workforce, including both persons actually employed and those aged 30-69 who had worked previously but who for various reasons were not working at time of interview. When only the active workforce, i.e. only those who are employed, is considered, this picture is more or less the same, with one exception, namely there is a reduced share of "newly activized" women in all sectors except mining (in which female employment is insignificant anyway). This reduction

causes only a small rise in the share of intergenerationally mobile persons in most sectors. But the percentages of immobile male workers increases substantially except in mining. This means that daughters of non-working mothers experience high early economic disactivization of a temporary or permanent character, whereas sons working in their fathers' sectors constitute the most solid and stable group in the workforce.

The differences observed between recruitment patterns of the active workforce in particular sectors are much the same as among the total population. Agriculture is most self-recruited, mining relies most on intergenerational mobility from other sectors, services experience the greatest inflow of newly activized workers (mostly women), and secondary industry is again in an intermediate position.

Until now our concept of "economically activized" or "incomers into the workforce" was limited to those few men whose fathers did not work and those women whose mothers did not. This meaning may be too narrow in countries with considerable immigration, such as Australia, where more than twenty percent of the working population aged 30-69 had parents living abroad at a time crucial for further social mobility of their children (when they were growing up). Such persons may be considered as first generation Australians, even if their parents moved also to Australia later on. They must also be treated as a new inflow into Australian labour. If "the new inflow" is defined as consisting both of newly activized workers, in the narrow meaning used earlier in this paper, and first generation Australians, its share in the total workforce is much greater:

- 30.4
- 20.4 percent in agriculture;
 - 39.5 percent in mining;
 - 55.9 percent in manufacturing and construction;
 - 56.2 percent in services.

Service employment still maintains relatively and absolutely the largest share of workers gained by way of "new inflow", but the secondary sector is now very similar to the services. The difference between them is that

TABLE 3. COMBINATION OF IMMIGRATION, INTERGENERATIONAL MOBILITY AND ECONOMIC ACTIVIZATION IN FORMATION OF WORKFORCE IN PARTICULAR SECTORS OF AUSTRALIAN ECONOMY

Immigration, Mobility and Activization Status	Economic sectors ^a			
	Agriculture	Mining	Industry & Construc. Services	
Australian Descent:	80.8	68.7	59.1	74.3
Intergenerationally Immobile	(52.4)	(12.5)	(15.2)	(24.3)
Intergenerationally mobile	(17.2)	(47.9)	(29.0)	(19.4)
economically activizied ^b	(11.2)	(8.3)	(14.9)	(30.6)
First Australian Generation: 19.2		31.2	41.0	25.6
Intergenerationally Immobile	(6.6)	(4.2)	(8.0)	(7.1)
Intergenerationally mobile	(5.2)	(20.8)	(19.0)	(7.3)
economically activizied ^b	(7.2)	(6.2)	(14.0)	(11.2)
Total	100.0	100.0	100.0	100.0

^a Irrespective of recent employment status (non-working persons included and their sectors determined by the character of the last job).

^b Sons of non-working fathers and daughters of non-working mothers.

manufacturing gains more immigrants while services employs more newly activized persons, mostly daughters of non-working Australian mothers (see Table 3). It should also be noticed that very few first generation Australians work in agriculture, but relatively more work in mining.

Since the differences between sectors are more or less the same whether we focus on the total or active workforce, we will not repeat the same analysis for the economically active population only. It should be kept in mind that the total "new inflow" is somewhat smaller in the active workforce due to the greater disactivization of women whose mothers did not work.

To summarize, agricultural employment is mostly "self-recruited", while mining absorbs both immigrants and persons who are intergenerationally mobile; the manufacturing and construction sector is the largest employer of immigrants; and, finally, activation is the greatest source in providing employment in services. It must be stressed also that the more "modern" is the economic sector (primary to secondary to tertiary), the greater is the role of total "new inflow" in forming its labour force.

4. Economic disactivization.

It should be remembered that the data discussed above concern the whole workforce, both actually working and not working. The arguments raised in discussions of Australia's recent employment structure and unemployment suggest that employment in the tertiary sector, especially of women, is often very insecure, being temporary or even casual in character. As a consequence, economic disactivization is likely to be more prevalent among women in services than in other sectors. The data in Table 4 present information on persons who worked before but were not working when interviewed. The economic sectors of the latter are defined by the character of the last job, while others are characterized by their current job.

The numbers for men, which indicate retired as well as unemployed, oscillate around 10 percent. There are no major differences between sectors in this respect, and the

TABLE 4. RATIO OF ECONOMIC DISACTIVIZATION^a OF AUSTRALIAN WORKFORCE IN PARTICULAR ECONOMIC SECTORS

Sex	Economic Sectors (recent or last job)			
	Agriculture	Mining	Industry & Construc.	Services
Total	27.4	8.4	29.0	38.2
Men	11.1	7.3	9.4	10.7
Women	69.4	x ^b	62.5	58.6

^a Percent of persons who worked but do not work in total (working and non-working) workforce in particular sex and sector.

^b The sample too small for ratio calculation.

absolute numbers are not great, given that they represent two components, namely retirement and unemployment.

The differences are greater among women because of the greater disactivization of female agricultural labour, but this may be caused, partly at least, by difficulties in precisely determining if a woman belonging to an agricultural family does or does not work on a farm. Rural women may consider themselves as no longer working on a farm only when they get married or have babies, even if their actual involvement in farming does not diminish substantially (the survey was based on self-reports). It may also be that women who migrate from a rural to an urban environment before or after marriage may face difficulties in finding a new job. More interesting, however, is the fact that there is no great difference in this respect between women employed in the secondary and tertiary sectors. Contrary to expectations, those employed in industry leave their job temporarily or permanently for various reasons even slightly more often than those working in services. The data suggest that female employment in services is not more temporary or casual than in the secondary sector, but rather confirm that it has much the same character in both sectors.

Chapter IV

SOCIAL MOBILITY BETWEEN ECONOMIC SECTORS

1. Main hypotheses.

The analysis of recruitment to particular sectors would be incomplete without consideration of overall mobility patterns. Outflow and inflow coefficients are examined below. There are some hypothetical features of inter-generational outflow processes, which can be conjectured as follows:

(i) Agriculture is the sector providing the greatest outflow to both secondary industry and services.

(ii) Services, being the sector of the greatest growth, has low outflows to other parts of economy.

(iii) A large exchange is expected between the secondary and tertiary sectors, the outflow from the former being larger than the reverse one.

(iv) Most of the flow from the economically inactive group into the active workforce is directed to services.

(v) When those no longer working are characterized not by the last job but simply as a separate disactivised category, daughters of non-working mothers will be over-represented in this category compared with daughters whose mothers did work.

(vi) Given the supposedly casual or temporary character of work in services, together with the tendency to "inherit" employment in this sector, daughters of women employed in services not only may find employment in the same sector but also may tend to be disactivated to a greater degree than women of other social backgrounds. On the other hand, the great demand for work in services and the fact that economic disactivation in this sectors is in fact (contrary to our initial expectation) no greater than in industry or agriculture, may reduce the number of disactivised daughters of service workers.

TABLE 5. AUSTRALIAN WORKFORCE ACCORDING TO ECONOMIC SECTORS DURING THE LAST JOB^a
AND PARENTS' ECONOMIC SECTORS (OUTFLOW PERCENTAGES)

Parents' ^b Economic Sectors	Economic Sectors (recent or last job)				
	Agriculture	Mining	Industry & Construc.	Services	Total
Total					
Agriculture	27.5	0.8	31.1	40.6	100.0
Mining	2.7	8.4	50.7	38.3	100.0
Industry & Construction	3.2	1.4	46.7	48.7	100.0
Services	3.5	1.1	34.9	60.4	100.0
Non-working	3.9	0.4	27.9	67.9	100.0
Total	7.4	1.0	34.1	57.5	100.0
Men					
Agriculture	30.4	1.1	34.0	34.6	100.0
Mining	2.7	8.4	50.7	38.3	100.0
Industry & Construction	3.5	1.6	48.2	46.7	100.0
Services	4.2	1.4	38.4	55.9	100.0
Non-working	6.0	1.4	44.5	48.0	100.0
Total	10.2	1.7	41.1	47.0	100.0
Women					
Agriculture	18.5	0.0	21.5	60.0	100.0
Mining	-	-	-	-	-
Industry & Construction	1.4	0.0	36.7	61.9	100.0
Services	2.3	0.6	28.9	68.2	100.0
Non-working	3.5	0.3	25.4	70.8	100.0
Total	4.3	0.3	26.4	69.0	100.0

^a Recent job of those working and the last job of those non-working.^b Mothers of daughters and fathers of sons.

2. Flows between economic sectors.

Table 5 presents intergenerational outflows from particular industries to groups defined by current or last job. The largest outflow is from mining to the secondary sector. This cannot be interpreted unequivocally, however, since mining employs only one percent of the total workforce. Because 8.4 percent of sons and daughters of miners and related workers work in the same industry, the ratio of observed to expected stability (Rogoff/Glass index) is very high indeed, indicating a strong tendency to "inherit" that kind of work.

The same index is also very high among agricultural workers, a group to which accounts for 7.4 percent of the total workforce but as many as 27.5 per cent of farmers' sons and daughters. On the other hand, the outflow from farming is also very high. The large difference between farming and mining occurs, nevertheless, because there is a relatively large inflow into mining but little into agriculture. The fact that almost three in four persons of agricultural background work in non-agricultural sectors reflects an ongoing process of economic modernization.

The outflow from the secondary to tertiary sector is, as expected, greater than the flow in the opposite direction, but both are quite remarkable. In full accordance with the hypothesis, services constitute the sector with the smallest outflow, and this is also the sector to which most flows from other sectors (mining excluded) are directed, including flows of an activizing nature, i.e. from the group of non-working parents.

The findings presented in Table 6 do not support the expectations that there is a great "inheritance" of the tendency to quit work by employed daughters of non-working mothers, or that there is any tendency to reproduce social conditions restricting women's work across generations. The disactivization ratio among daughters of non-working mothers is almost the same as in the total female population (albeit slightly greater than the same ratio for daughters of industrial and service workers).

So far as the last hypothesis is concerned (the disactivation of women whose mothers worked in services), the data suggest that actually the tendency toward economic disactivation is smaller among women of that economic background than any other group.

Some mobility flows are connected with the modernization of the economy and its employment structure on a continuum from agricultural through industrial to post-industrial. Mobility from agriculture to all other sectors, from mining to manufacturing and services, and from manufacturing to services, mirror this modernization process, while all other flows can be termed "reverse mobility". Data in Table 7 indicate that modernizing intergenerational mobility flows prevail over reverse flows, though the difference is smaller than might be expected, especially among women.

It may be assumed that people whose parents lived outside Australia experienced both greater intergenerational mobility and greater economic activation than other Australians. Immigration may be supposed to result, in a significant number of cases at least, from less fortunate living and working conditions in the less modern parts of the economy in the countries of origin, and from better prospects for employment in the more modern, developing parts of the Australian economy. The data confirm that there is somewhat more economic activation, as well as more intergenerational mobility of both modernizing and reverse character, among first generation Australians. However, the ratio of modernizing to total flows does not differ significantly from the ratio for the rest of the Australian population and is even slightly lower (since the sex composition of first generation and other Australians is not significantly different, it was unnecessary to use this characteristic as a controlling variable here).

Most other surveys show that intragenerational mobility is always smaller than intergenerational mobility. This finding also applies to the flows between Australian economic sectors, but it must be stressed that these flows are by no mean small: as many as 43.8 percent of men and 28.1 percent of women experienced intragenerational mobility

TABLE 7. AUSTRALIAN WORKFORCE^a ACCORDING TO TYPES OF EXPERIENCED INTERGENERATIONAL MOBILITY BETWEEN ECONOMIC SECTORS

	Men	Women	First Generation Australians	Second or More Generation Australians	Total
Modernizing Mobility	32.5	9.2	22.5	20.9	21.4
Reverse Mobility	17.5	7.4	14.1	12.1	12.7
Stability	41.2	18.9	24.2	33.2	30.5
Economic Activization	8.8	64.5	39.2	33.8	35.4
Total	100.0	100.0	100.0	100.0	100.0
Modernizing Mobility as a Percent of Total Mobility	65.0	55.6	61.6	63.2	62.8

^a Irrespective of recent employment status.

TABLE 8. AUSTRALIAN WORKFORCE^a ACCORDING TO TYPES OF EXPERIENCE
INTRAGENERATIONAL MOBILITY BETWEEN ECONOMIC SECTORS

Place of the First Job	Modernizing Mobility	Reverse Mobility	Stability	Total
Total				
First Job in Australia	20.0	13.9	66.1	100.0
First Job in Other Country	24.8	19.7	55.5	100.0
Total	21.1	15.3	63.6	100.0
Men				
First Job in Australia	27.5	15.1	57.4	100.0
First Job in Other Country	29.8	17.6	52.6	100.0
Total	28.1	15.7	56.2	100.0
Women				
First Job in Australia	12.0	12.8	75.2	100.0
First Job in Other Country	19.2	22.5	59.2	100.0
Total	13.1	14.9	71.9	100.0

^a Irrespective of recent employment status.

between economic sectors (see Table 8). These percentages are not directly comparable to the intergenerational mobility indices presented in Table 7, because the status of newly economically activized persons is ambiguous in this respect. The more comparable percentage of intergenerational mobility between sectors, calculated for the people whose parents did work is 54.8 among men and 46.8 among women.

Two interconnected differences between male and female mobility should be underlined. The first is that the relative number of men working in an economic sector different from their fathers (the intergenerationally mobile) is somewhat greater than the comparable figure for women working in sectors different from those in which their mothers worked, but the difference between both sex groups in relative intragenerational mobility is greater. Moreover, intragenerational mobility in "modernizing" directions, defined analogously to "modernizing" intergenerational flows, prevails substantially over the "reverse" mobility among men whereas both kinds are almost as frequent among women. Indeed, "reverse" female mobility from the first to the last job even slightly exceeds "modernizing" mobility. All these findings are in full accordance with the observation made at the beginning of the analysis, that intragenerational mobility between economic sectors contributes to structural changes in male, but not female, employment.

In connection with intragenerational mobility it seems justified to repeat the arguments raised during the intergenerational flows analysis, that immigrants are expected not only to experience greater total mobility than other Australians but that the share of modernizing mobility will also be greater. Analogously to intergenerational mobility, the first supposition is true also as far as intragenerational flows between economic sectors are concerned, although the second supposition turned out to be false.

The overall pattern of outflow matrices for intragenerational mobility between economic sectors is very similar to the pattern of intergenerational matrices:

(i) Agriculture and mining constitute the primary sector from which the greatest outflow takes place, compared to other sectors, though, given the small number of people employed in this part of economy, the relatively strong tendency to remain in agriculture or mining (as measured by the ratio of observed to expected stability) is worth noticing.

(ii) The outflow from industry to services is greater than that from services to industry, but both are quite substantial.

(iii) Services constitute the sector to which most outflows from other sectors are directed.

(iv) The tendency to early retirement and other forms of economic disactivization of women employed in services is, contrary to expectation, smaller than among women working in other sectors, though the differences are so small that the situation in all sectors may be considered to be almost the same in this respect (see Tables 9,10).

(v) The large outflow from agriculture as well as the relatively small inflow to it from other sectors are common features of social mobility in all modern societies. As already stressed, Australia is not an exception to this general regularity, but although Australian agriculture absorbs proportionally a smaller inflow than any other sector (after controlling for sex), this inflow still seems to be greater than in many other countries.

For example, the sons of farmers and farm labourers constituted as much as 85 percent of American farmers (owners and family members) both in 1962 and 1973 (Featherman and Hauser, 1978) and even above 90 percent in such countries as Finland (Pöntinen *et al.*, 1983), Hungary and Poland (Andorka and Zagórski, 1978; 1979). Similar percentages, concerning sons of farmers or farm labourers among recent agricultural workers, are somewhat lower but still exceed 70 percent in the U.S.A., Finland and Poland and even 85 percent in Hungary. If the groups of agricultural workers and farmers are aggregated into a single category, the self-recruitment ratio would oscillate between 80 and 90 percent. These data are for countries very different in terms of economic development as well as social, political, and economic systems, ranging from the

TABLE 9. AUSTRALIAN WORKFORCE ACCORDING TO ECONOMIC SECTORS DURING THE FIRST AND THE LAST JOB (OUTFLOW PERCENTAGES)

Economic Sectors in the First Job	Economic Sectors (recent or last job) ^a				
	Agriculture	Mining	Industry & Construc.	Services	Total
Total					
Agriculture	36.6	1.3	29.0	33.1	100.0
Mining	6.8	15.6	39.3	38.3	100.0
Industry & Construction	2.5	1.0	58.2	38.3	100.0
Services	2.6	0.7	22.4	74.3	100.0
Total	7.4	1.0	34.2	57.4	100.0
Men					
Agriculture	34.8	1.6	31.2	32.4	100.0
Mining	7.8	17.9	45.0	29.3	100.0
Industry & Construction	3.2	1.6	59.9	35.3	100.0
Services	3.4	1.0	29.0	65.8	100.0
Total	10.2	1.7	41.1	47.0	100.0
Women					
Agriculture	43.7	0.0	20.0	36.3	100.0
Mining ^b	x	x	x	x	x
Industry & Construction	1.4	0.0	55.2	43.5	100.0
Services	2.1	0.4	17.9	79.6	100.0
Total	4.3	0.3	26.5	68.9	100.0

^a Recent job of those working and the last job of those non-working.

^b The sample too small for percentages calculation.

TABLE 10. AUSTRALIAN WORKFORCE ACCORDING TO ACTUAL EMPLOYMENT STATUS, AND ECONOMIC SECTORS DURING THE FIRST AND THE RECENT JOB (OUTFLOW PERCENTAGES)

Economic Sectors in First Job	Recent Employment Status and Economic Sectors					
	Agriculture	Mining	Industry & Construc.	Services	Non- working	Total
Total						
Agriculture	26.6	1.1	23.8	26.4	22.2	100.0
Mining	5.4	14.3	31.8	28.8	19.7	100.0
Industry & Construction	2.1	1.0	40.9	28.1	28.0	100.0
Services	1.8	0.6	15.2	41.9	40.6	100.0
Total	5.4	0.9	24.2	35.5	34.0	100.0
Men						
Agriculture	31.2	1.4	27.1	28.0	12.3	100.0
Mining	6.1	16.4	36.5	26.2	14.8	100.0
Industry & Construction	2.8	1.5	55.1	31.3	9.2	100.0
Services	2.9	1.0	26.9	59.3	9.9	100.0
Total	9.0	1.5	37.4	41.8	10.2	100.0
Women						
Agriculture	7.4	0.0	9.8	19.6	63.2	100.0
Mining ^a	x	x	x	x	x	x
Industry & Construction	0.8	0.0	16.1	22.5	60.5	100.0
Services	1.0	0.4	7.9	31.1	59.7	100.0
Total	1.3	0.3	9.9	28.5	60.0	100.0

^a The sample too small for percentages calculation.

TABLE 11. AUSTRALIAN WORKFORCE ACCORDING TO ECONOMIC SECTORS DURING THE LAST JOB AND PARENTS' ECONOMIC SECTORS (INFLOW PERCENTAGES)

Parents' Economic Sectors	Economic Sectors (Recent or Last Job) ^a				
	Agriculture	Mining	Industry & Construc.	Services	Total
	Total				
Agriculture	53.0	12.8	14.4	11.1	15.8
Mining	0.7	15.8	2.8	1.3	1.9
Industry & Construction	7.4	23.4	23.2	14.3	16.9
Services	14.3	33.3	30.7	31.5	30.0
Non-working	18.6	14.7	28.9	41.8	35.4
Total	100.0	100.0	100.0	100.0	100.0
	Men				
Agriculture	69.0	15.0	19.1	17.0	23.1
Mining	1.0	18.5	4.5	3.0	3.7
Industry & Construction	9.7	27.6	33.0	28.0	28.2
Services	15.1	31.2	33.9	43.0	36.2
Non-working	5.2	7.7	9.7	9.5	8.8
Total	100.0	100.0	100.0	100.0	100.0
	Women				
Agriculture	33.3	x	6.3	6.8	7.8
Mining	-	x	-	-	-
Industry & Construction	1.5	x	6.5	4.2	4.6
Services	12.2	x	25.3	22.9	23.1
Non-working	53.0	x	61.9	66.2	64.5
Total	100.0	100.0 ^b	100.0	100.0	100.0

^a Recent job of those working and the last job of those non-working.^b The sample too small for percentages calculation.

U.S. (the most developed free market country) through Finland (a developed welfare mixed economy) to Hungary and Poland (two medium developed communist countries with centrally planned and controlled economic systems). Since the evidence from such different countries is very similar in this respect, it may be assumed to reflect very general features of contemporary societies.

It is difficult to compare this evidence directly to the indices reflecting self-recruitment in Australian agriculture, because agricultural employment means something different from working as a farmer or farm worker. In addition to farmers, occupations as different as drivers, mechanics, veterinary doctors, accountants and many others may be employed in agriculture. However, this discrepancy is perhaps not great in absolute terms, so the ratio of self-recruitment in Australian agriculture, amounting to about 70 percent of men working in this sector, seems exceptionally low as compared to other countries, even though it is higher than in other sectors.

Sons of service workers constitute as much as 15 percent of men working in Australian agriculture. Sons of industrial and construction workers constitute an additional 10 percent. Analogous percentages are smaller for agricultural women, but agriculture can not be described in Australia as a sector without substantial inflow from other parts of the economy, mostly from services. This should be probably explained by the specific kind of Australian agriculture and its greater role in the total economic system than in workforce employment as such.

The largest inflow of persons from agricultural backgrounds is expected in the most rapidly developing non-agricultural sector. In Australia this share is not much different in manufacturing as against services, a finding which may be connected with the fact that services here developed relatively early compared either to other modern societies or to the development of Australian secondary industry. The secondary and the tertiary sectors recruit workers mainly from these two parts of the Australian economy, with a considerable exchange between them. Mining is most diversified from the viewpoint of intergenerational inflow directions.

TABLE 12. AUSTRALIAN WORKFORCE ACCORDING TO ACTUAL EMPLOYMENT STATUS, RECENT ECONOMIC SECTORS AND PARENTS' ECONOMIC SECTORS (INFLOW PERCENTAGES)

Parents' ^a Economic Sectors	Economic Sectors (Recent or Last Job) ^b				
	Agriculture	Mining	Industry & Construc.	Services	Non- working
	Total				
Agriculture	62.7	12.7	16.4	12.9	11.1
Mining	1.0	15.8	3.2	1.6	1.1
Industry & Construction	8.6	25.6	27.7	18.8	8.4
Services	14.6	29.9	33.4	22.2	25.9
Non-working	13.1	16.0	19.6	29.3	57.2
Total	100.0	100.0	100.0	100.0	100.0
	Men				
Agriculture	68.3	14.6	19.3	17.2	22.4
Mining	1.1	18.3	4.0	2.6	7.1
Industry & Construction	9.1	29.5	32.7	27.8	30.2
Services	16.0	29.4	34.4	43.7	31.1
Non-working	5.5	8.2	9.6	8.7	8.8
Total	100.0	100.0	100.0	100.0	100.0
	Women				
Agriculture	70.9	x	4.4	5.9	9.0
Mining	-	x	-	-	-
Industry & Construction	4.8	x	7.3	4.3	4.4
Services	4.0	x	27.9	27.4	20.6
Non-working	70.3	x	60.4	62.4	66.1
Total	100.0	100.0 ^c	100.0	100.0	100.0

^a Mothers of daughters and fathers of sons.^b The recent job of those working and the last job of those non-working.^c The sample too small for ratio calculation.

All of these observations are based on data from Table 11, in which non-working persons are described by their last job and are included in particular sectors of economy. The results are substantially the same if such persons are grouped in a separate, non-working category (Table 12). The composition of parental employment structure in this category, is very similar to the composition in the total population, after controlling for sex.

The inflow to Australian agriculture is even more striking when intra-generational mobility between sectors is examined. More than one third of the female, and about one fourth of the male, agricultural workforce had their first job in the secondary or tertiary sector. The figure for women rises to more than two thirds if non-working persons are excluded (Tables 13, 14). This seems to be another atypical feature of Australian agriculture.

Generally speaking, the service sector is intragenerationally slightly more self-recruited among men, and much more self-recruited among women, than the secondary sector, but there is also intragenerational exchange between them, since many industrial workers also worked in services during their first job and vice versa.

As far as intergenerational mobility is concerned, the total Australian workforce can be divided into three more or less equal parts, namely mobile, immobile and "activized" workers (the last group having non-working parents, consisting mostly of women whose mothers did not work). It must be stressed that persons who are intragenerationally mobile constitute also about one-third of the total workforce. This proportion is not comparable to that concerning the intergenerationally mobile, since persons whose parents did not work were defined as intragenerationally mobile or immobile rather than excluded as a separate category. In spite of that, intragenerational mobility between economic sectors must be evaluated as being surprisingly high in Australia.

If intragenerational mobility is divided into modernizing and reverse flows, the whole pattern remains very similar to intergenerational mobility. Modernizing

TABLE 13. AUSTRALIAN WORKFORCE ACCORDING TO ECONOMIC SECTORS DURING THE FIRST AND THE LAST JOB (INFLOW PERCENTAGES)

Economic Sectors In First Job	Economic Sectors (Recent or Last Job) ^a				
	Agriculture	Mining	Industry & Construc.	Services	Total
Total					
Agriculture	69.4	17.2	11.9	8.1	14.0
Mining	0.9	15.0	1.1	0.6	1.0
Industry & Construction	10.2	31.0	50.9	20.0	30.0
Services	19.5	36.3	36.1	71.3	55.0
Total	100.0	100.0	100.0	100.0	100.0
Men					
Agriculture	74.8	20.8	16.3	14.9	21.6
Mining	1.2	17.6	1.8	1.0	1.6
Industry & Construction	11.3	36.5	52.7	27.4	36.4
Services	13.4	25.0	29.2	56.7	40.4
Total	100.0	100.0	100.0	100.0	100.0
Women					
Agriculture	57.5	x	4.3	3.0	5.7
Mining	0.0	x	0.0	0.4	0.3
Industry & Construction	7.3	x	47.8	14.5	23.0
Services	35.3	x	47.9	82.1	71.1
Total	100.0	100.0 ^b	100.0	100.0	100.0

^a Recent job of those working and the last job of those non-working.

^b The sample too small for percentages calculation.

TABLE 14. AUSTRALIAN WORKFORCE ACCORDING TO ACTUAL EMPLOYMENT STATUS, AND ECONOMIC SECTORS IN THE FIRST AND THE RECENT JOB (INFLOW PERCENTAGES)

Economic Sectors in First Job	Recent Employment Status and Economic Sectors				
	Agriculture	Mining	Industry & Construc.	Services	Non- working
	Total				
Agriculture	69.3	16.8	13.7	10.4	9.1
Mining	1.0	15.0	1.3	0.8	0.6
Industry & Construction	11.7	31.6	50.5	23.7	24.6
Services	18.0	36.3	34.5	65.1	65.7
Total	100.0	100.0	100.0	100.0	100.0
	Men				
Agriculture	27.3	19.4	15.7	14.4	26.0
Mining	1.1	17.3	1.6	1.0	2.3
Industry & Construction	11.4	36.5	53.7	27.2	32.8
Services	13.2	26.8	29.1	57.3	38.9
Total	100.0	100.0	100.0	100.0	100.0
	Women				
Agriculture	31.8	x	5.6	3.9	6.0
Mining	0.0	x	0.0	0.4	0.2
Industry & Construction	13.7	x	37.4	18.1	23.1
Services	54.5	x	57.0	77.5	70.7
Total	100.0	100.0 ^a	100.0	100.0	100.0

^a The sample too small for ratio calculation.

TABLE 15. AUSTRALIAN WORKFORCE^a ACCORDING TO TYPES OF EXPERIENCED INTRAGENERATIONAL MOBILITY BETWEEN ECONOMIC SECTORS

	Men	Women	First Job in Australia	First Job overseas	Total
Modernizing Mobility	28.1	13.5	20.0	24.8	21.1
Reverse Mobility	15.7	14.8	13.9	19.7	15.2
Stability	56.2	71.7	66.1	55.5	63.6
Total	100.0	100.0	100.0	100.0	100.0
Modernizing mobility as a percent of total mobility	64.1	47.6	58.9	55.7	58.0

^a Irrespective of recent employment status.

mobility prevails over reverse mobility but the difference is not large and is restricted to men. In the female population both flows are almost equally frequent. Those who immigrated to Australia after commencing their first job overseas experience intragenerational mobility slightly more often than other Australians, but the ratio of modernizing to total mobility is almost the same in both groups and, contrary to expectations but in accordance with the findings concerning intergenerational mobility, native-born Australians experience even relatively more modernizing mobility, though the difference is not large.

3. Structural and endogenous differences in sectoral mobility.

It was emphasised that women are less mobile than men, both in terms of intragenerational and intergenerational mobility, and that this difference is especially great where "modernizing" mobility is concerned. It was also stressed that there is no great difference between the mobility of Australian-born persons and immigrants, though the latter group is slightly more mobile.

These statements do not take into consideration dissimilarities in marginal distributions of both socio-economic origin and socio-economic destination in flow matrices describing different groups defined by sex or immigration status. Let us imagine a situation where the outflow coefficients from agriculture are equally high in either groups (say men and women) and where the outflow from services is equally low. In such circumstances, the pattern of flows or association between particular sectors is the same, but the group having relatively more parents working in agriculture would display more total mobility, and its mobility would be of a predominantly "modernizing" character, since by definition it is logically impossible to be mobile in the "reverse" direction from agriculture. On the other hand, the group with predominantly "service" socio-economic origins would be overall less mobile and their mobility would be mainly of a "reverse" character. Also the group in which many persons are economically "newly activized" may be both less mobile and less stable, falling in most cases into the third, ambiguous category. It is easy to predict that even if the whole outflow pattern were the same among men and women, the latter appear as less mobile because of the greater share of "service" social backgrounds and greater economic activization.

Similar (albeit reverse) reasoning applies to the current employment structure, inflow coefficients and mobility matrices constructed for various subpopulations or groups. Differences may be brought about partly because of dissimilarities of marginal distributions in the matrices (simultaneously concerning the origin and the destination) and partly because of the different patterns of association, reflected proportionally by the odds-ratios, though not by the percentages. For example, Hauser and his colleagues have concluded that comparison of American mobility tables concerning 1952 and 1972 shows that "... none of the observed differences may be attributed to change in the underlying pattern of association in the table. All must be attributed to change in the occupational structure" (Hauser et al., 1975:588).

This conclusion was reached after careful examination of the differences between original (or rather empirically reconstructed) matrices and "proportionally adjusted" matrices. The authors presented a method of proportional adjustment leading to a restructuring of the empirically observed matrix such that both marginal distributions are identical to the distributions of another empirical matrix to which it is to be compared. However, the odds-ratios of the original matrix are preserved, so the pattern of association between particular groups is the same, though not the percentage flow between them.

If such an adjusted matrix is identical or very similar to the matrix to which it is compared, then all the observed differences between the original (unadjusted) matrices can be attributed to differences in marginal distributions, that is, to "structural" differences. If, however, the adjusted matrix still differs substantially from the matrix to which its marginal distributions were adjusted, it means that the differences between two original matrices are due both to their different marginal distributions and to different odds-ratios, reflecting dissimilarity in the underlying patterns of association. The comparison of mobility ratios in the two tables before and after adjustment allows an estimate of the role of those two factors causing any discrepancy between them, namely differences in odds-ratios reflecting the associational pattern and differences in marginal distribution reflecting structural change.

This method of analysis is suitable not only for comparisons of gross mobility ratios, but also for mobility in particular directions. It is theoretically possible and empirically realistic to assume that both structural and endogenous factors cause total or specific mobility flows in one subpopulation to be greater than in another. It is also possible that these two factors may influence mobility in quite opposite directions, reducing partly or completely each other's final impact. It has to be emphasised here that the distinction between structural and endogenous factors causing the difference between two flow tables is not equivalent to the widely used distinction between structural and circular mobility.

Both intergenerational and intragenerational inter-sectoral mobility matrices for Australian women were adjusted to the marginal distributions of the respective matrices for men. The same method was used to compare the mobility of immigrants and other Australians. The comparison of the female intergenerational flow table to that for men reveals that almost the whole difference between them is caused by structural dissimilarity, especially by the greater economic activization of women whose mothers did not work. This structural dissimilarity means that fewer women than men are both socially mobile or immobile while more are "activized". This structural factor reduces female "modernizing" mobility twice as much as the "reverse" flow. The difference in underlying association patterns is small and is confined to a slightly greater tendency among women towards "reverse" mobility and a greater tendency among men towards "modernizing" mobility. In effect the proportions of "modernizing" to total mobility is smaller among women than men, due almost equally to structural and endogenous factors.

As far as intragenerational female mobility is concerned, both structural and endogenous factors reduces its magnitude relative to male mobility, though the structural factor is also much more important here, affecting especially mobility in "modernizing" directions. It has no effect on "reverse" mobility.

TABLE 16. DIFFERENCES BETWEEN FEMALE AND MALE MOBILITY RATES

	Intergenerational Mobility			Intragenerational Mobility		
	Differences due to:			Differences due to:		
	Total difference	different association patterns	different marginal distributions	Total difference	different association patterns	different marginal distributions
"Modernizing" Mobility	-23.3	-2.7	-20.6	-14.6	-2.5	-12.1
"Reverse" Mobility	-10.1	+1.3	-11.4	-0.9	-2.3	+1.4
Stability	-22.3	+1.4	-23.7	+15.5	+4.8	+10.7
Economic Activation	+55.7	0.0	+55.7	x	x	x
"Modernizing" mobility as percent of total mobility	-9.4	-3.8	-5.6	-16.5	+1.5	-18.0

The relatively great similarity of mobility patterns between immigrants and other Australians has already been underlined several times. It must be added that the underlying associational pattern contributes to a somewhat higher "modernizing" mobility rate among immigrants compared to other Australians, but generally speaking the difference is small, so no detailed data are presented.

The more important question concerns changes in mobility patterns and in intensity (i.e. degree of association between sectors). The comparison of two age groups serves as a proxy for dynamic analysis in this connection. It can be hypothesised that as a result of economic development the younger group experienced more mobility than the older one, and that the share of "modernizing" mobility in total mobility is greater among younger than older men and women.

The population was divided into two more or less equal groups, those born in 1930-1943, and those born before 1930. Even in the younger group, who were at least 30 years old when interviewed, intersectoral mobility is probably in most cases complete, since it typically occurs relatively early. Later intragenerational mobility has more often the character of promotion (or some demotion among persons close to retirement) but does not involve a drastic change in occupational or sectoral setting.

Two things should be emphasised. First, the sectoral employment structure of older and younger groups is, contrary to expectation, very similar. Second, their mobility differs much less than might be expected. There are almost no differences when the total population is considered, but some differences emerge when men and women are analysed separately.

There is slightly less intragenerational mobility among younger than older men. This difference surprisingly concerns "modernizing" mobility and is caused by endogenous as well as by structural factors, the latter being exclusively responsible for the smaller share of "modernizing" in total intra-generational mobility. These differences disappear when the final effect is considered,

TABLE 17. DIFFERENCES BETWEEN MOBILITY RATES OF MEN BORN 1930-1943 AND THOSE BORN BEFORE 1930

	Intergenerational Mobility		Intragenerational Mobility		
	Total difference	Total difference	Differences due to:		
			different association patterns	different marginal distributions	
"Modernizing" Mobility	-2.0	-9.1	-3.1	-6.0	
"Reverse" Mobility	-0.1	+0.4	-2.9	+3.5	
Stability	+3.1	+8.7	+6.0	+2.7	
Economic Activation	-1.0	x	x	x	
"Modernizing" mobility as percent of total mobility	-1.4	-8.3	+2.2	-10.5	

i.e. when intergenerational mobility between economic sector of fathers and last economic sector of sons is considered. Total intergenerational mobility, as well as "modernizing" and "reverse" flows, are almost identical among older and younger men (Table 17).

There is a much more visible difference between the intergenerational mobility of older and younger women. Since the process of economic activization of women takes place continuously across several generations, the mothers of younger women were more likely to have working mothers than the older ones, so that the younger group experienced relatively less economic activization. This is the only cause of greater mobility of younger women, since the association pattern expressed by the odds ratio is almost the same in both groups.

A very slight difference in this pattern causes only insignificant changes in female intergenerational mobility rates, but it has influenced "modernizing" and "reverse" mobility in an opposite direction, so is responsible for the fact that "modernizing" mobility constitutes the larger part of total flows among younger than among older women.

Since the main difference between younger and older women concerns the declining activization ratio, not only the percent mobile but the percent of immobile women (where the immobility concept applies) increases. The overall role of mobility in global structural transformation does not change drastically in such a situation. The fact that only the economic activization ratio is important in this respect is confirmed not only by an unchanging intergenerational association pattern but also by the complete lack of difference in intragenerational mobility of older and younger women (Table 18).

4. Balance of mobility into and out of services

To synthesize as far as possible the picture of mobility related to post-industrial formation, only mobility into and out of the tertiary sector should be examined, distinguishing both intergenerational and intragenerational flows. Until now we have analyzed intragenerational mobility

TABLE 18. DIFFERENCES BETWEEN MOBILITY RATES OF WOMEN BORN 1930-1943 AND THOSE BORN BEFORE 1930

	Intergenerational Mobility		Intragenerational Mobility
	Differences due to:		
	Total difference	different association patterns	different marginal distributions
			Total difference
"Modernizing" Mobility	+4.7	+1.4	+3.3
			+1.0
"Reverse" Mobility	+1.1	-1.8	+2.9
			+1.1
Stability	+5.8	+0.3	+5.5
			-2.1
Economic Activation	-11.7	0.0	-11.7
			x
"Modernizing" mobility as percent of total mobility	+8.9	+11.6	-2.7
			0.0

by comparing economic sectors of parents to the last economic sector of their sons and daughters. This is a reasonable comparison because the great majority of parents were aged from about 35 to about 55 years when their children were 14 years old, so their individual transition histories at that time were approximately at the same stage as those of their sons and daughters when interviewed in 1973.

The concept of intergenerational mobility, measured in terms of last or current rather than first job, is more appropriate when mobility is identified with the succession and replacement of generations in the labour market. When the composition of mobility processes is the main interest, however, the concept of intragenerational mobility based on a comparison of parental socio-economic position with respondents' position at the beginning of their careers is much more useful, since a decomposition of total mobility into its intra- and inter-generational cumulative components can be made. Such mobility concepts will be applied to analyse processes of flows into and out of the tertiary sector (see Figures 1, 2, 3).

Figure 1 shows similar amounts of intergenerational mobility (parent to first job) from primary and secondary combined into the tertiary sector and vice-versa. These exchanges, being equal, do not produce any net change in employment structure. The whole growth of the tertiary sector takes place exclusively by economic activization, i.e. by new workers whose parents did not work in the past, mostly women, entering the labour market. Their share in tertiary first employment is much greater than either the percent of service personnel whose parents also worked in services, or service employees whose parents worked in other economic sectors. It is in fact not much smaller than these latter groups combined.

Persons from agricultural and industrial socio-economic origins, who commenced their first job in services, constitute only eleven percent of the total Australian workforce. Persons of services origin, who commenced their first job in agriculture or industry, is equally small. The exchange flows occurring later on during intragenerational mobility are also almost equal in the total population. The gross intragenerational inflow from agriculture and

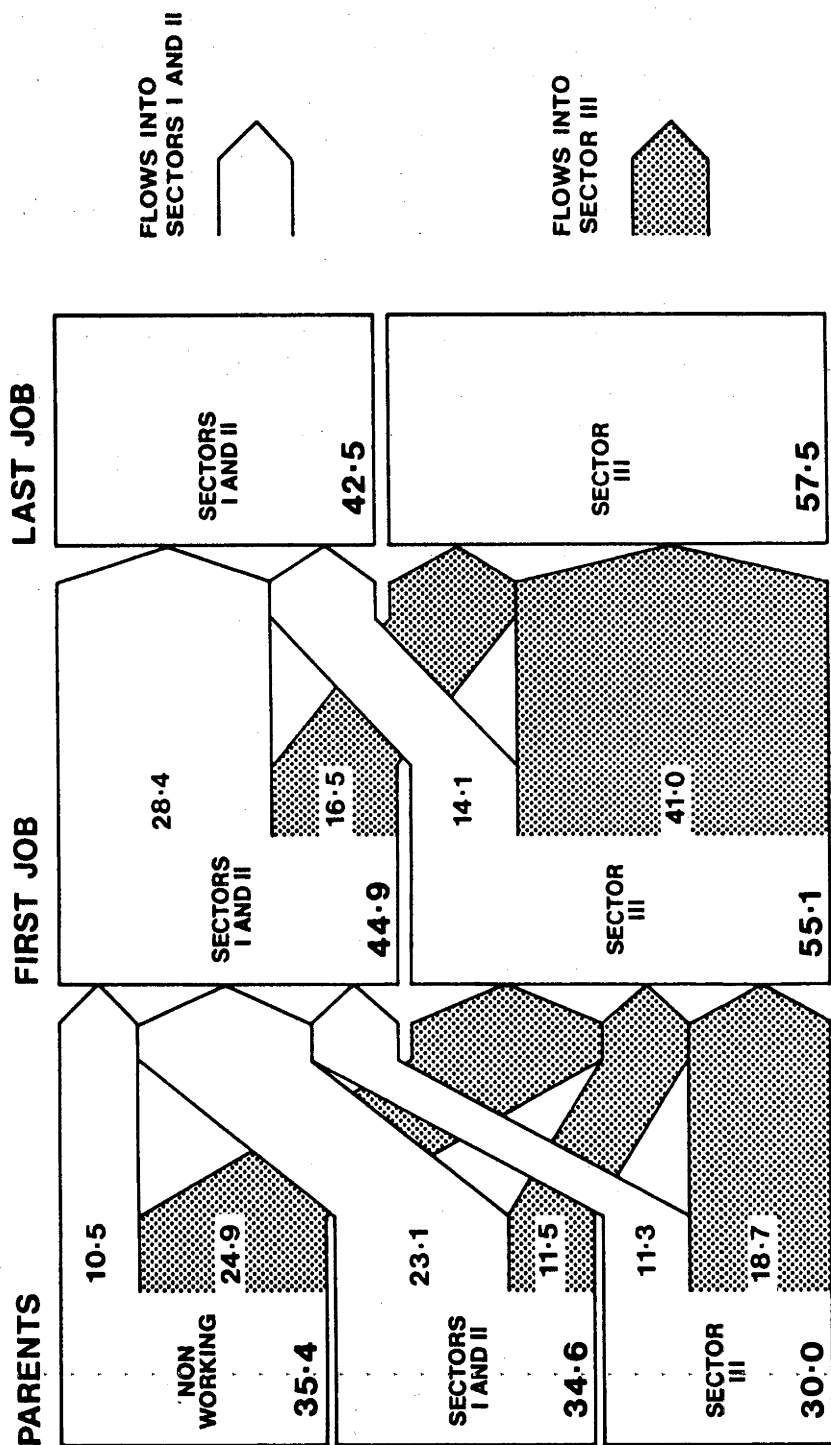


Fig. 1. The Role of Inter- and Intragenerational Mobility Between Economic Sectors in Australian Work Force Formation (Percentages).

manufacturing into services is not only relatively small but almost exactly counterbalanced by outflows in the opposite direction. The net intra-generational inflow into services amounts only to 2.4 percent of the total population.

The overall pattern differs between men and women. The economic activization of men is so small that it has practically no effect on the employment structure. Intergenerational exchange, measured from parent to first job, is equal in the two directions examined, but intragenerational inflow does have some net effect favouring the service sector (Figure 2). Among women both inter- and intra-generational inflows to services are almost identical to the outflow to the rest of the economy. The formation of employment structure at their first job is affected mostly by the activization pattern. Most newly activized women go into services. Neither inter- nor intra-generational mobility changes the female employment structure (Figure 3).

Since first employment outside agriculture is often relatively short term in character, a substantial proportion of young men and women commencing their first job in economic sectors different from those of their parents can be expected to return to a position closer to their socio-economic origin in the course of their later occupational careers. In other words, the hypothesis is that the remarkable number of persons intra-generationally mobile from services to the rest of economy were previously inter-generationally mobile into services from other sectors, and vice versa.

Actually, almost one third of the sons and daughters of farmers and industrial employees who worked in services for their first job returned to their parents' sector later on as a result of intragenerational mobility. Such returnees amounted to as much as forty percent of persons working initially in agriculture or manufacturing with parents employed in services. These percentages do not differ between men and women except that daughters of agricultural and industrial workers commencing their first job in services experienced "return" mobility less often than sons. This difference is understandable in terms of the character of employment in services, which is heavily reliant on the inflow of female workers.

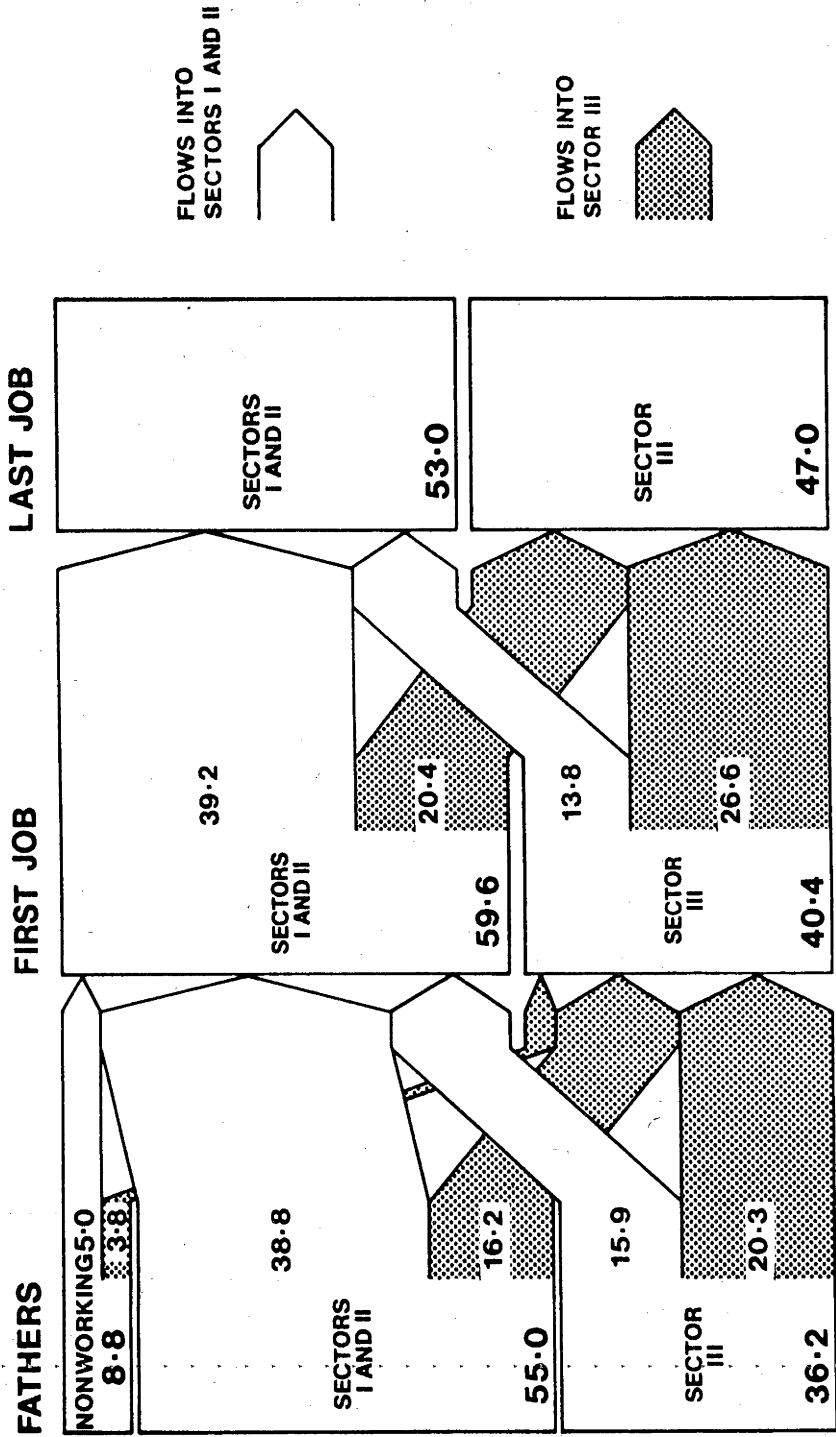


Fig.2. The Role of Inter- and Intragenerational Mobility Between Economic Sectors in Australian Male Work Force Formation (Percentages).

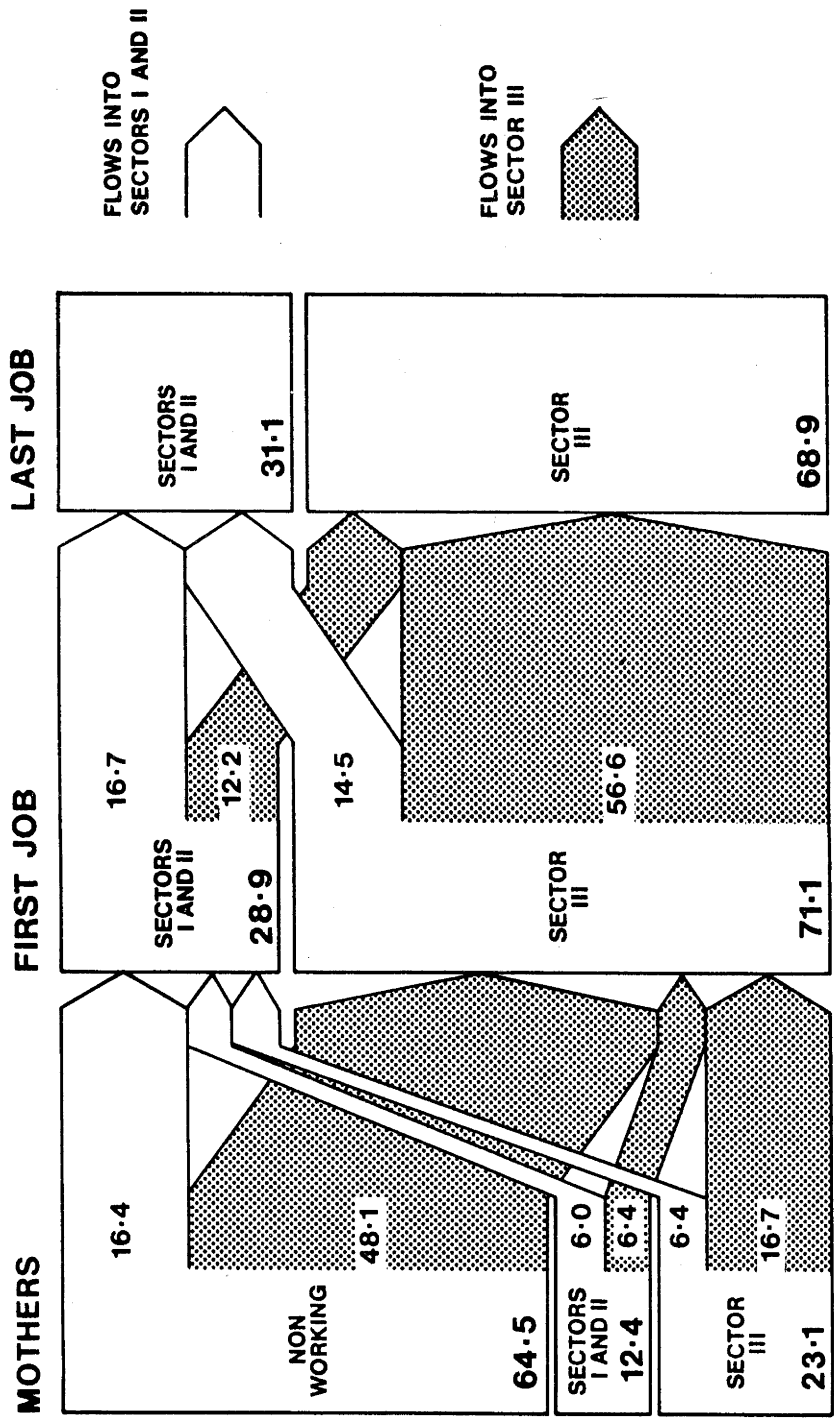


Fig.3. The Role of Inter- and Intragenerational Mobility Between Economic Sectors in Australian Female Work Force Formation (Percentages).

In sum, intragenerational mobility into and out of the services is not only relatively small and mostly of an exchange character. Moreover, one third of it directs persons previously intergenerationally mobile back to the economic sector of their parents.

The data discussed above concern the whole Australian workforce, irrespective of current employment status. Persons currently not working are classified by their last employment. As I have already mentioned, disactivization affects more or less evenly all three sectors, when the employment of men and women is considered separately. The analysis of mobility balance, carried out analogously to that discussed above but taking into account the outflow from the active workforce, reveals almost the same regularity. There is very little net effect of men's intragenerational mobility on the sectoral employment structure, and there is no net effect at all as far as female employment is concerned. The outflow from the active workforce does not influence the exchange balance.

CHAPTER V

EMPLOYMENT AND MOBILITY IN SELECTED ECONOMIC BRANCHES

1. Concepts and hypotheses.

Neither the secondary nor the tertiary sector constitutes an homogeneous entity. Different branches of manufacturing and different services devote different part of their activity to the direct satisfaction of human needs. The needs of the population are more directly satisfied by food and so-called "light" industries than by "heavy" industry, which provides many products used by other industries in the final production of consumer goods. This is a simplification, of course, since heavy industry also produces many consumer goods, and products which can be used by other productive parts of the economy as well as by the public, e.g. cars or other means of transportation.

The same may be said about services. Arguing against the post-industrial thesis, Gershuny (1978) stresses that the nature of human economic activity in the global society is changing much more slowly, perhaps even in the opposite direction, from what might be assumed from an analysis of the employment structure of advanced societies. In his opinion the growth of service employment reflects rather the specialization and segmentation of work than changing work content. Let us use traditional craftsmen to provide an example. Individual carpenters, shoemakers or similar small producers, whose number was quite great in the not too distant past, not only produced and repaired goods, but distributed them, managed their finances, and did most of the administrative work relating to their activity. In the modern large-scale economy, all of these functions, even if not taking much more time, are separated organizationally, with the result that the growth of "services" estimated on the basis of this organizational and employment structure is actually an over-estimate.

From the viewpoint of post-industrialization theory, the "services" of prime importance are those which "produce" symbolic or cultural goods rather than those that contribute to material production. Singelman has distinguished

between groups of services in a way relevant to this frame of reference. His classification will be used here with slight modification (Singelman 1978; Singelman and Browning 1980).

The first group consists of allocative services, like trade, transportation and communication. It may be assumed that increased complexity in the network of cooperation and interaction in production and international exchange, as well as a growing quantity of products to be distributed, exchanged or sold, stimulates the development of the transportation and communication infrastructure which serves material production. The situation is not so clear as far as public transportation and trade are concerned. On the one hand, the development of the car industry caused a remarkable shift from public to individual transportation, but on the other hand the growth in international and other long distance communication, as well as traffic congestion in big cities, works in the opposite direction. The level of production in consumer goods might increase employment in trade, if not counterbalanced by organizational changes such as the rise of big supermarkets and the implementation of self-service across almost the whole retail trade. Only very slight changes of employment in allocative services can be expected in such a situation, and their direction is difficult to predict.

Singelman's second group consists of services not connected, or connected very indirectly, with material production, which satisfy more or less directly cultural and social needs. Education, mass media, science, high-brow and popular culture and entertainment are the most typical examples of this kind. Also health service and welfare can be included here. This group of services constitutes the core of the post-industrial economic structure.

A third group comprises public and economic administration, as well as financial and insurance institutions. These are the services which coordinate the functioning of whole societies, including their political and economic systems. Besides such a general or macrosocial role, they also serve individual persons or individual business organizations, but because their individually-oriented roles are performed simultaneously with general

ones, this distinction is difficult to apply in empirical analyses. One popular opinion is that the bureaucratization of social and economic life and the growing power of state administration, as well as big political or other non-profit social organizations, causes the rapid growth of employment in these services. The fourth, remaining category distinguished is a residual one only, comprising such different elements as personal and household services, army and police, and some other activities.

2. Employment structure and recruitment pattern.

As expected, the share of allocative services in the structure of the Australian workforce is almost the same whether we consider first job, last (current) job, or the parental generation. Within the service sector, the most rapidly growing are social services. Employment in this branch constituted only 5.9 percent in the parental generation but as much as 10.3 percent among sons and daughters (first job) and 13.6 percent (last or current job). Employment in finance and administration grows continuously, albeit not as much as social services. The evidence supports our hypothesis stemming from post-industrialization theory and are also congruent with the findings concerning broad economic sectors in respect of inter- and intra-generational differences. The observed pattern of changes does not vary between men and women, though the latter are much more often employed in social services than men.

Now, a question which remains to be answered is how much are these changes related to social mobility between particular branches of economy. In general, the more detailed is the classification of economic activities, the more mobility may be expected between them. Persons shown as immobile between economic sectors may change their branches within each sector, and so inter-branch mobility ratios will be higher than the ratios of mobility between whole sectors.

Analysis of intersectoral flows underscored the fact that immigration performs an important function in the growth of secondary sector employment in Australia, while economic activation of women is more important in

TABLE 19. AUSTRALIAN WORKFORCE ACCORDING TO PARENT'S EMPLOYMENT AND OWN ECONOMIC BRANCHES DURING THE FIRST AND THE LAST JOB

Branches of economy	Parents		Respondents	
	All	Only Working	First Job	Last Job ^a
Non-working	35.5	x	x	x
Agriculture	15.8	24.4	14.0	7.4
Mining	1.9	2.9	1.0	1.0
"Light" and Food Industry	4.1	6.4	10.1	9.7
"Heavy" and Machinery Industry	3.0	4.7	7.0	9.7
Other Industry	5.1	7.9	8.2	9.4
Construction	4.6	7.1	4.6	6.3
Allocative Services	16.5	25.5	27.2	24.3
"Social" Services	3.9	5.9	10.3	13.6
Finance and Administration	3.2	5.0	7.7	8.2
Other	6.6	10.2	10.0	11.3
Total	100.0	100.0	100.0	100.0

^a Recent job of those who work and the last job of those already not working.

TABLE 20. INTERGENERATIONAL MOBILITY, ECONOMIC ACTIVATION AND IMMIGRATION AS FACTORS OF WORKFORCE FORMATION
IN SELECTED BRANCHES OF AUSTRALIAN ECONOMY

Immigration, Mobility and Activation Status	Branches of Economy (Recent or Last Job)					
	Industry		Construction		Services	
	"light", food	"heavy", machinery	other		allocative	social administration finance,
Australian Descent	63.3	53.0	60.6	57.9	75.4	75.6 77.7
intergenerationally immobile	(3.7)	(4.8)	(6.7)	(9.6)	(15.2)	(5.1) (5.9)
intergenerationally mobile	(30.2)	(37.3)	(42.9)	(45.3)	(33.4)	(30.9) (53.3)
economically activated	(29.3)	(10.8)	(10.9)	(3.6)	(26.8)	(39.7) (18.5)
First Australian Generation	36.7	47.0	39.4	42.1	24.6	24.4 22.3
intergenerationally immobile	(1.3)	(4.3)	(2.7)	(5.6)	(3.5)	(1.4) (1.5)
intergenerationally mobile	(18.2)	(27.5)	(25.6)	(27.5)	(10.8)	(10.8) (11.8)
economically activated	(17.2)	(15.2)	(11.1)	(8.3)	(10.3)	(12.2) (9.0)
Total	100.0	100.0	100.0	100.0	100.0	100.0 100.0
Total "New Inflow" ^a	66.0	57.8	50.3	45.7	51.4	64.1 40.8
Total Economic Activation	46.5	26.0	22.0	11.9	32.1	51.9 27.0
Total Intergenerational Mobility (inflow)	48.4	64.8	68.5	72.8	44.2	41.7 65.1

^a Economic activation of persons of Australian descent and immigration.

facilitating the growth of the tertiary sector. Mobility between sectors is relatively less important in both these cases. Detailed data presented in Table 21 indicate that "heavy" and machinery industries constitute the branch which absorbs more immigration than others, whereas "light" and food industries, employing fewer Australians of foreign origin, recruits a remarkable part of its workforce through economic activization. In spite of such differences, all branches distinguished in the secondary sector, construction included, employ more first generation Australians than particular groups of services. It seems also that there is more mobility between industries than between services.

Social services constitute not only the most rapidly growing branch but also derive a great share of employment from newly activized workers. This finding suggests that the group experiencing the most rapid activization of women is the middle class and that activization is related primarily to the growth of female professional employment in education, science, health, culture and similar activities. Since social services employ also relatively many immigrants (though not as many as some other industries) the total share of the new inflow into this branch amounts to around two-thirds of total employment, compared to 40-50 percent in other services.

Services with lesser economic activization but large inflows due to intergenerational mobility are represented by the branch of finance and administration. The total percent of persons intragenerationally mobile in this branch is as high as 65 percent, while in other services it does not exceed 45 percent. Thus, the overall recruitment pattern differs substantially between social and bureaucratic services, with allocative ones occupying an intermediate position.

The greatest economic activization in services as a whole, as compared to other sectors, is also connected with disactivization, caused often by temporary and insecure work. Contrary to expectation, services do not differ very much in this respect from manufacturing, when treated as one aggregate group. The situation looks different when particular branches, instead of whole sectors, are compared.

TABLE 21. RATIOS OF ECONOMIC DISACTIVIZATION^a OF AUSTRALIAN WORKFORCE IN SELECTED BRANCHES OF ECONOMY

Sex	Branches of Economy (Recent or Last Job)							
	Industry			Construction		services		
	"light", food	"heavy", machinery	other			allocative	social	finance, administration
Total	52.2	21.7	24.3	11.2	37.9	37.2	26.1	
Men	11.7	8.1	10.2	8.9	10.7	11.6	6.9	
Women	71.7	49.7	59.0	38.5	65.3	47.6	57.7	

^a Percent of persons who worked but do not work in total (working and non-working) work force in particular branches and sex groups.

The branch in which disactivization most often takes place belongs not to services but to manufacturing. It is the branch of 'light' and food industry. This branch also has relatively large numbers of newly activized workers, so the greatest turnover takes place here. It involves both men and women although differences in recruitment-disactivization patterns of the male labour-force are not as great as among women. A relatively low disactivization ratio among men employed in administration and finances is the only exception in this respect.

The second branch in which many either retire early or quit consists of allocative services. Social services, in which the greatest activization occurs, seem to be very stable and secure as far as female employment is concerned.

To conclude, while it is true that the part of economy most typical and most important for post-industrial society is growing, it grows primarily not because of mobility but because of the economic activization of the female part of population, inactive in earlier periods. It concerns the whole service sector compared to other economic sectors, and especially social services compared to other specific branches. Social services, however, do not constitute the branch most characterised by short-time and insecure jobs, since such jobs are much more often located in 'light' and food industry or in allocative services, branches employing many unskilled workers and many women.

3. Mobility Patterns.

Generally speaking, the percentages of intergenerational outflows from particular branches of secondary industry to services are much greater than percentage outflows from particular services to the secondary sector. But because employment in services is greater than in manufacturing, and since more tertiary sector workers come from the newly activized part of the labour force, the inflow percentages from services to particular industries are much greater than the inflows to particular services from manufacturing. Particular industries and services differ in this respect. The intergenerational outflow to services is greater from 'light' and food industry than from other parts of secondary sector, while the outflow to

TABLE 22. INTERGENERATIONAL MOBILITY OUT OF AND INTO SELECTED BRANCHES OF ECONOMY (PARENTS - LAST JOB FLOW PERCENTAGES)

Types of flows	Branches of Economy						
	Industry		Construction		Services		
	"light", food	"heavy", machinery	other	allocative	social	finance, administration	
Outflows from economic branches of parents							
Immobile	11.5	25.7	17.3	20.2	27.6	22.8	18.6
Outflow to: agriculture	1.8	1.8	4.4	4.1	3.6	3.7	5.4
mining, industry and construction ^a	29.8	26.3	32.7	28.8	37.8	34.8	32.0
services ^a	56.9	46.2	45.6	46.9	31.0	38.7	44.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Inflows into economic branches of sons and daughters							
Economic activation	46.5	26.0	22.0	12.5	37.1	51.9	27.5
Immobility	5.0	9.1	9.4	15.2	18.7	6.5	7.4
Inflow from: agriculture	12.3	12.3	14.2	20.7	13.0	8.8	12.8
mining, industry and construction ^a	7.7	22.2	18.3	21.1	18.6	11.1	17.9
services ^a	28.4	30.3	36.1	30.4	12.6	21.7	34.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

^a Outflow to branches in secondary or tertiary sector other than the branch of parents and inflow from branches other than defined by the last job.

TABLE 23. INTRAGENERATIONAL MOBILITY OUT OF AND INTO SELECTED BRANCHES OF ECONOMY (FIRST - LAST JOB FLOW PERCENTAGES)

Types of flows	Branches of Economy						
	Industry		Construction		Services		
	"light", food	"heavy", machinery	other	allocative	social administration finance,		
Outflows from economic branches during the first job							
Immobile	38.1	30.8	31.4	43.1	45.7	65.7	40.1
Outflow to:							
agriculture	1.8	2.6	2.5	3.7	3.1	1.2	1.6
mining, industry and construction	20.4	29.8	21.6	26.3	28.2	11.7	24.2
services ^a	39.7	36.8	44.5	26.9	23.0	21.4	34.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Inflows into economic branches of the last job							
Immobile	39.7	24.9	27.7	31.6	51.1	49.6	37.8
Inflow from:							
agriculture	10.8	8.6	12.7	16.7	9.7	6.0	9.4
mining, industry and construction	10.7	29.5	23.4	21.7	22.6	14.3	23.4
services ^a	38.8	37.0	36.8	30.0	16.6	30.1	29.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
^a Outflow to branches of secondary or tertiary sector other than the branch during the first job and inflows from branches other than during the last job.							

^a Outflow to branches of secondary or tertiary sector other than the branch during the first job and inflows from branches other than during the last job.

manufacturing is greatest from allocative services -- indeed it represents the bulk of the total outflow from this branch. Allocative services recruit more employees from manufacturing than other tertiary branches, so that the greatest exchange across sectoral boundaries takes place between allocative services and 'light' or food industry. These branches also share in common more frequent disactivization of their workers.

In contrast to the allocative branch, most inter-generational outflow from social services (as well as from finance and administration) is directed to other services, not to manufacturing. Inflow to these branches is also greater from other services than from the secondary sector. Since mobility between finance, administration and social services can be considered as short distance mobility, these findings are not surprising. The exchange between 'light' and food industry and allocative services is similarly short distance in character. Work in transportation, which dominates male employment in allocative services, or in trade, which dominates among women, is more similar to work in industry than health, education, administration or other such services, as far as educational requirements, the social standing of jobs and the character of work are concerned.

These findings confirm that social mobility between positions located close to one another in socio-economic space is easier and more frequent than mobility between positions located in very different parts of the socio-economic structure. It concerns not only inter- but also intra-generational mobility.

In general, there is substantially less career outflow from social services than from other tertiary and secondary branches, a finding which supports the thesis of relatively stable jobs in this part of the Australian economy. Second, the intragenerational outflow coefficients do not differ between particular industries as much as the intergenerational ones, but still there is a somewhat greater outflow to services from 'light' and food industry than from other secondary branches, and smaller outflows to industry from social than from all other services. As far as inflow coefficients are concerned, the findings are similar to

those concerning intergenerational mobility. The inflow from services constitutes the greater part of the total inflow to 'light' and food manufacturing than to other industries, while the inflow from industries is relatively more important in allocative than other services, especially social services.

Are these differences sufficient to contradict the conclusion that the general pattern of intra- and intergenerational mobility in allocative services is more similar to flows in the secondary sector, or is 'light' and food industry more similar in this respect to services than to other manufacturing branches? The application of a modified Wroclaw taxonomy, the clustering method elaborated by the Polish mathematicians Perkal and Steinhaus, can provide an answer. Wroclaw taxonomy is a method resulting from drawing a dendrogram which presents in two-dimensional space links and distances between the most similar observation units (economic branches in our case). Each observation unit is linked to another one on the basis of degree of similarity. The procedure, as applied to a typology of countries by employment structure, has been described by Hellwig (1972), and its brief description as well as an application in comparing socio-demographic structures in different regions has been presented by Zagórski (1978).

Normally, the taxonomic distance between two observation units is calculated as the square root of the sum of squared normalised differences for particular variables. The matrix of the distances between all units is calculated and each unit is linked with its nearest neighbour. Depending on the reciprocity, pairs or groups of similar units are obtained. These groups or pairs are successively linked with each other by the analogical principle of nearest neighbourhood. The principle applies consecutively first to individual units, then to groups which are connected by the links between most similar units from different groups. These linkages constitute the complete dendrogram and the aggregation is displayed in two dimensional space.

To obtain relatively homogeneous groups, the longest distances in the dendrogram are truncated. Some researchers form groups by aggregating units with distances smaller than the average one. This criterion was used here. The taxonomy was applied to an analysis of similarities between different economic branches in respect of inflow percentages of intergenerational and intragenerational mobility from all other branches. The method was somewhat modified because Pearsonian correlation coefficients served as a measure of similarities between branches.

The question is: which branches are most similar to one another from the viewpoint of intergenerational recruitment patterns? If branches defined by last or current job are treated as observation units, and if the percentages of self-recruitment or inflows from other branches (economic activation included) are treated as the variables (indicators), the correlations would indicate how much recruitment from one branch (or economic activation or immobility) is related to recruitment from another one, rather than how similar are the recruitment patterns in particular branches. To answer the latter question the branches from which inflow takes place (i.e. parental and first job branches) were treated as observation units, and correlations were computed between inflow percentages into the last or current job branches. The results show how similar branches are to each other in this respect.

Since the distance metaphor is applied in the taxonomic construction of the dendrogram, it was necessary to convert correlation coefficients so that higher values reflect greater dissimilarity. It was done in a very simple way by calculating the distances as one minus the correlation coefficient. Distances between all branches of economy were obtained in this way, and complete dendrograms were reconstructed for the total labour force, as well as for men and women separately (see fig 4-6).

All three dendrograms indicate that Australian agriculture and mining have recruitment patterns very different from other branches, as well as from each other. The dendrograms confirm also that allocative services are more similar in this respect to industrial branches than to other services. The existence of a coherent cluster consisting of

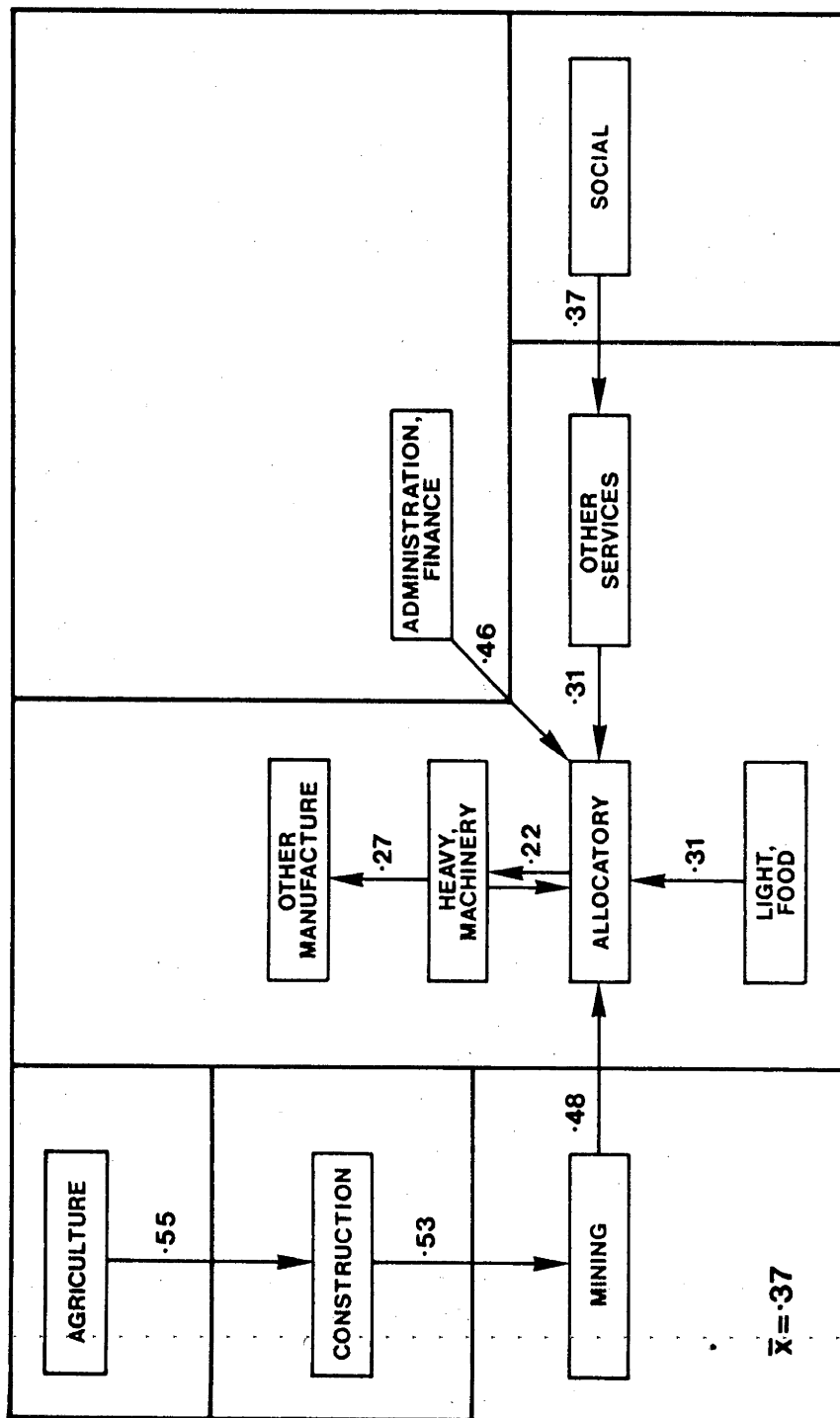


Fig.4. Taxonomy of Distances Between Economic Branches in Respect of Their Inter- and Intragenerational Inflow Coefficients (Total Work Force).

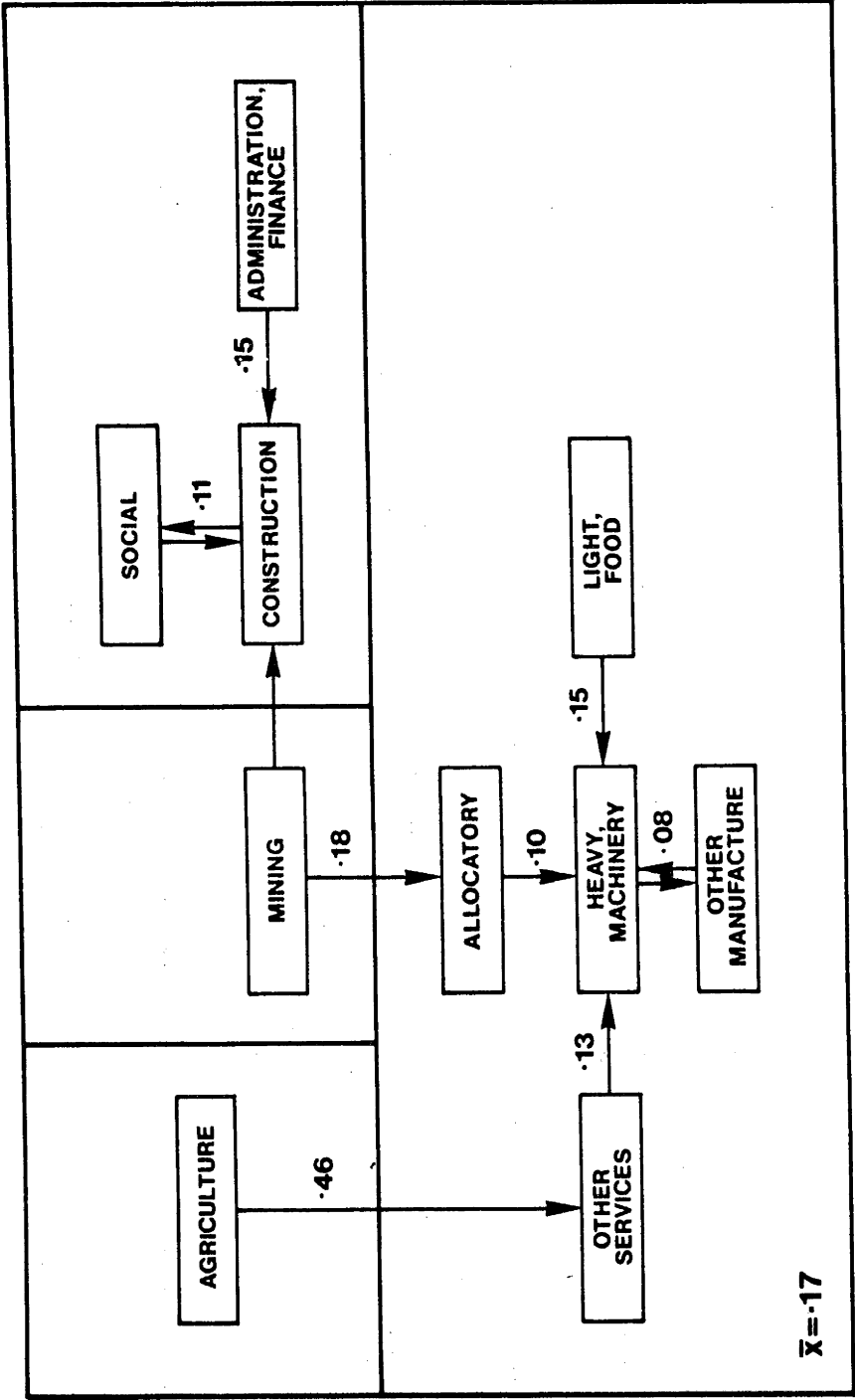


Fig.5. Taxonomy of Distances Between Economic Branches in Respect of Their Inter- and Intragenerational Inflow Coefficients (Male Work Force).

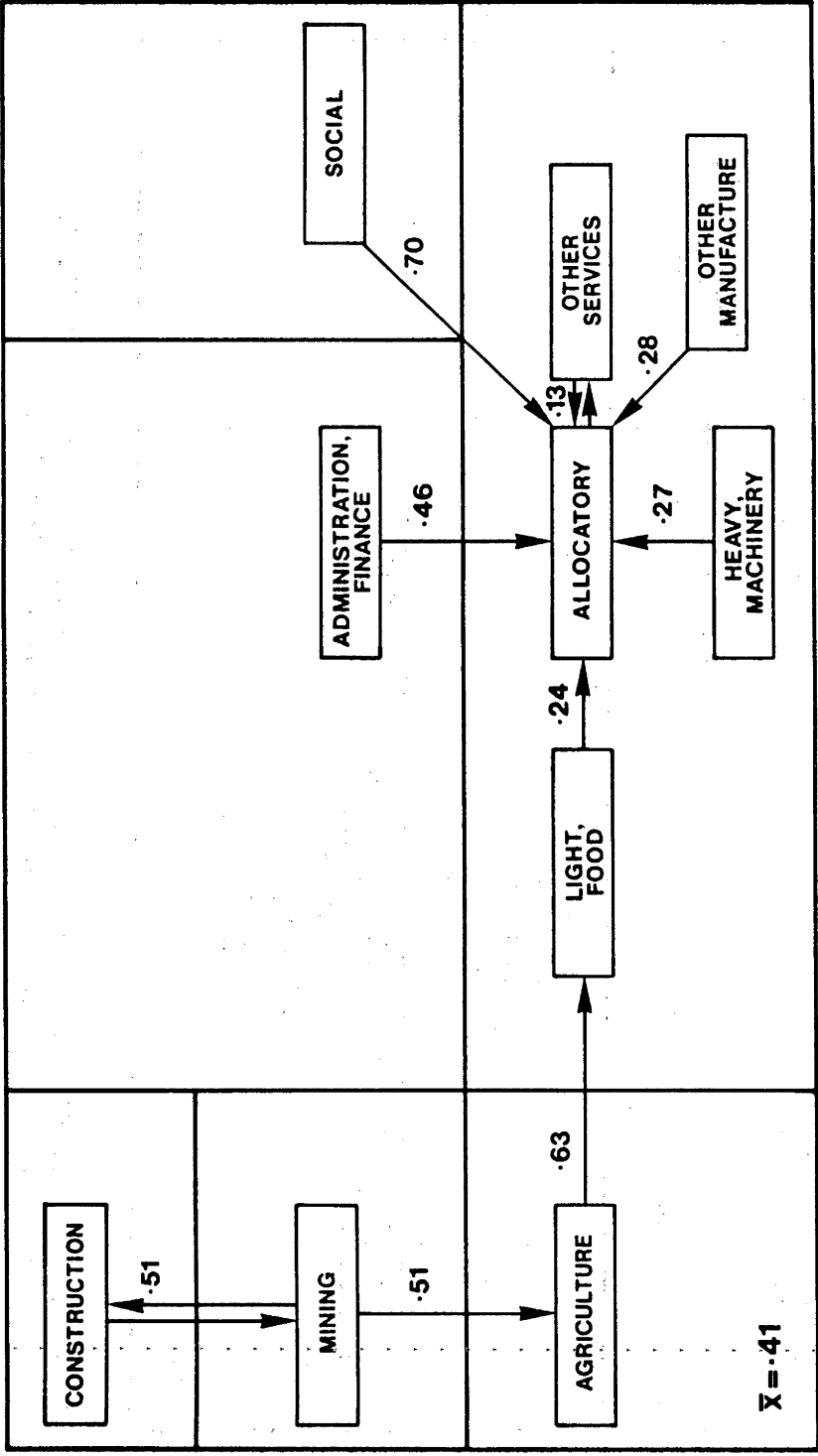


Fig.6. Taxonomy of Distances Between Economic Branches in Respect of Their Inter- and Intragenerational Inflow Coefficients (Female Work Force).

three manufacturing branches, plus allocative as well as 'other' services is shown. 'Other' services include personal and household ones as well as the police, armed services and protective services, besides some smaller unclassified groups, so the fact that this branch is more similar to secondary and allocative branches than to social, administrative and financial services needs no explanation.

Those service industries most important from the viewpoint of the post-industrial thesis, namely social services and finances and administration, are at some distance from other branches in terms of their recruitment patterns. Both in the total and in the female population they are quite different, not only from the remaining part of the economy, but also from each other. In the male population they form a separate group, supplemented, somewhat surprisingly, by building and construction.

To conclude, the secondary sector (with the exception of building and construction) includes branches sharing similar patterns of social mobility between different segments of the economy. Allocative services are in this group also, manifesting a similar pattern. Agriculture and mining on one hand, and social services and administration and finance on the other, differ very much in this respect, both between themselves and from the industrial-allocative cluster. The substance of these differences was discussed above. The analyses have shown that the differences are significant and that the tertiary sector does not constitute a homogeneous part of the economy but is differentiated both in the social functions of its parts and in its patterns of social mobility.

The analysis of the whole correlation matrix, which constituted the basis for constructing the final dendrogram concerning the total population, shows interesting relationships. It confirms that all differences between the mobility patterns of branches constituting the industrial manufacturing group (allocative and 'other' services included) are really much smaller than between them and the remaining branches as well as among remaining branches alone.

TABLE 24. PEARSON'S COEFFICIENTS INDICATING CORRELATIONS BETWEEN PARTICULAR INFLOW PERCENTAGES TO VARIOUS BRANCHES OF ECONOMY FROM ALL OTHER BRANCHES (ECONOMIC ACTIVATION INCLUDED)^a

Pearson's Correlations (Branches' Numbers the Same as on the Left Side)									
Branches of Economy	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Social Services (1)	.34	.50	.63*	.53*	.35	.35	.02	.15	.09
Administration and Finance (2)		.54*	.51*	.47	.40	.52*	.20	.26	.18
Allocative Services (3)			.69**	.69**	.78**	.69**	.33*	.52*	.24
Other Services (4)				.67**	.56*	.51*	.13	.24	.13
"Light" and Food Industry (5)					.64**	.52*	.15	.27	.22
"Heavy" and Machinery Industry (6)						.73**	.35	.39	.20
Other Manufacturing (7)							.39	.48	.33
Construction (8)								.47	.45
Mining (9)									.44
Agriculture (10)									

^a "Resource" branches defined by parental and first job (economically unactive parents treated as a separate "resource" group). Percentages reflecting inter and intragenerational inflow to particular "destination" branches (defined by current or last job) from "resource branches" treated as variables. "Resource" branches treated as observation units. The matrix is reordered to reveal correlation clusters. Significance: * = 0.1 level; ** = .001 level.

Out of ten correlation coefficients indicating similarities between mobility into the branches constituting the manufacturing group, as many as seven are significant at .001 level and three are significant at .01 level. There is no coefficient significant at .001 level outside this group and only six out of thirty five remaining coefficients are significant at .01 level.

The Wroclaw taxonomy yields an aggregation of various branches into one large group defined by a similar mobility pattern. The examination of complete correlation matrix shows also that the taxonomy separates branches (social services, administration and finances as well as agriculture among them) which are actually very different from each other and from the core group, so far as their recruitment pattern is concerned.

CHAPTER VI

MOBILITY BETWEEN ECONOMIC SECTORS AND CLASS RELATIONS

1. Theoretical framework and hypotheses.

The concentration of economic organization associated with the growth of large companies, often multinational in character, leads to several important changes in such aspect of social structure as ownership and managerial relations, which in turn are crucial in determining the class structure. The aim of this analysis is not to define or describe particular classes existing in Australian society. It is aimed rather at distinguishing several socio-economic groups, each one being a particular class in the classical meaning. The flows between such groups will be analyzed in relation to mobility between economic sectors.

Two approaches to such problems may be distinguished in contemporary sociology. Some authors stress that, since the class structure is determined by the configuration of ownership, political, and managerial relations, only these relations are of primary importance for an analysis of social structure. According to this approach the basic problem therefore should be the nature of such relations in a given society rather than the flows between social positions defined by them or the recruitment patterns to particular settings. Both the number and the social composition of people occupying particular class positions are also supposed to be much less important than the determinants of these positions.

Some other sociologists would like to include the flow (mobility) patterns among the criteria delimiting social classes or, at least they perceive interclass mobility as an important characteristic of the society, indicating its openness and crystallizing its structure.

Mobility will not be used here as a criterion for delimiting classes. Changes in a modern economy must however be considered as being associated with many flows between groups defined by ownership and managerial relations. The whole map of these relations may change in a course of such flows. This should not be neglected in an analysis of transformations in the sectoral composition of the economic structure.

Several more detailed problems may be raised in this connection. Sociologists close to the tradition of thinking stimulated by 'managerial revolution' theory emphasize the growing social importance and size of the managerial group as compared with the declining importance and number of the capitalists as traditionally defined, i.e. business owners who both own and manage their enterprises. Others, closer to the Marxist tradition, turn their attention to the 'proletarianisation' of small business, 'petty bourgeoisie' and so called 'free professionals', swallowed up by big companies and converted into employees. The theoreticians of post-industrial society and the advocates of 'new class' theory would talk not only about the growing importance of professionals, especially outside material production, but also about the growing role of managers in great non-industrial or non-profit organizations, including the State.

All these viewpoints lead jointly to the formulation of several hypotheses concerning social mobility.

- (i) Since employment in agriculture, dominated by small ownership, and in manufacturing, which constituted the basis of classical large and small scale capitalism, is declining in absolute and/or relative terms, this decline may be associated with social mobility from the group of big owners to the managerial and employee groups. Mobility in these directions is expected to be greater than that from employees and managers to the business group.
- (ii) The process of economic concentration may reinforce the effect on social mobility described above, irrespective of sectoral changes in the employment structure.
- (iii) The growing number of professionals performing managerial functions outside manufacturing may be connected with relatively high mobility into this group from other social categories, including those on lower rungs of the social ladder.
- (iv) The outflow from the small group of agricultural owners is expected to be directed more often to the working class or to salaried personnel than the outflow from small non-agricultural owners, which is expected to be directed relatively more often to the managerial strata.

(v) Those socially mobile between economic sectors are expected to experience more mobility between groups defined by ownership and managerial status than those intersectorally immobile. This may be specially visible so far as the outflows from both owners' groups are concerned.

(vi) Economic activization of women whose mothers did not work is expected to contribute mainly to the growth of the non-managerial employee stratum.

(vii) Recruitment patterns to different groups defined by ownership-managerial status (owners, managers and employees) may differ no more than recruitment patterns of the same groups in different economic sectors. It is difficult to predict which dimension (ownership-managerial status or economic sector) has the greater differentiating power, as far as inflow mobility is concerned.

The classification of socio-economic groups defined by class related criteria can be applied in order to test these hypotheses. Four such groups were distinguished:

(a) Large and medium businesses: people working in their own business (family business or partnership included), employing 25 or more persons.

(b) Small businesses: as above but employing fewer than 25 persons (or none).

(c) Managers: persons performing managerial roles not in their own (family) business.

(d) Employees/workers.

The distinction between large, medium and small business was made according to the number of persons employed. It is a rather crude and simplifying distinction, but the only one which could be made using existing empirical data. Some very wealthy people may employ very few workers or even none at all. There are not many of them, anyway, so the number of their employees reflects, though only approximately, a basic distinction between the large and the small business. There are also perhaps some shareholders who do not work in 'their' enterprises and who as a result are included among employees rather than in the

business group. Their relatively small number probably also does not affect the overall results. It should be kept in mind, however, that the business group or stratum is defined here very traditionally. All findings concern this group in a meaning appropriate for classical capitalist relations.

2. Compounds of changes in socio-economic structure.

The data confirm that the proportion of large and small owners diminishes in the Australian social structure in favour of both the managerial and employee groups. There are half as many of them in the recent employment structure as in the structure of social origin defined by parental affiliation.

Small owners decline in number both in the male and the female population, but the large owners' group seems not to change its size among men. The percentages for the latter group are, however, so small that any observed difference is not statistically reliable.

Specific sectors differ substantially in respect of the number of owners, managers and workers in their employment structure. As many as 80 percent are owners in agriculture, as few as about 20 percent in the secondary and 25 in the tertiary sector. It seems not to be true, in light of these figures, that services as a whole constitute a sector less 'capitalist' than manufacturing. There are relatively more owners and managers in the tertiary than in the secondary sector, the latter being the working class core.

The relative proportion of owners, managers and employees in the total work structure may change over time, simply because of sectoral differences, even if the share of particular socio-economic groups did not change in each sector, but only the proportions of people engaged by sectors changed. Theoretically it is also possible for the sectoral structure to remain the same but for percentages of socio-economic groups to change due to changes in ownership-managerial relations within a particular sector. It may also happen that both factors contribute equally or in differing proportions to the total class transformation.

TABLE 25. DIFFERENCES BETWEEN SOCIO-ECONOMIC ORIGIN AND SOCIO-ECONOMIC STRUCTURE DURING THE LAST JOB

Socioeconomic Groups	Socio-economic Structure		Structural Differences		
	Parents ^a	Sons and daughters ^b	Caused by changes in:		
			Total	sectoral distribu- tion	ownership- managerial relations
Total					
Large/Medium Business	2.1	1.7	-1.0	0.0	-1.0
Small Business	35.0	17.7	-17.3	-8.2	-9.1
Managers	3.4	5.4	+2.0	+0.9	+1.1
Employees	59.5	75.8	+16.3	+7.4	+8.9
Total	100.0	100.0	x	x	x
Men					
Large/Medium Business	1.8	1.8	0.0	+0.3	-0.3
Small Business	37.0	21.9	-15.1	-7.3	-7.8
Managers	4.1	8.8	+4.7	+0.8	+3.9
Employees	56.9	67.4	+10.5	+6.3	+4.2
Total	100.0	100.0	x	x	x
Women					
Large/Medium business	2.3	0.3	-2.0	-0.4	-1.6
Small Business	29.7	13.1	-16.6	-10.3	-6.3
Managers	1.6	1.6	0.0	+0.4	-0.4
Employees	66.4	85.0	+18.6	+10.2	+8.4
Total	100.0	100.0	x	x	x

^a Working parents only (fathers of sons and mothers of daughters).

^b Irrespective of recent employment status (recent job of those who work and the last job of those already non-working).

Three distributions reflecting socio-economic structure can be compared to investigate such issues. The first relates to the social background (origin) of the current population. The second is of a hypothetical character, calculate on the assumption that the percentages of large owners, small owners, managers and workers in particular sectors remain the same as in the parental generation but the sectoral structure has the shape of the current proportion. The third structure should fully reflect the actual, current situation. A comparison of these three structures permits a decomposition of changes in ownership-managerial structure into two parts, one caused by sectoral changes of the economy and the second by changing social (ownership-managerial) structure in particular sectors.

The results of such a decomposition fully confirm the expectations that the changes in socio-economic structure as defined by class related criteria occurred in Australia both because of structural sectoral transformations of the workforce and because of the changing nature of ownership-managerial relations in particular sectors. Moreover, both factors are more or less equally important, and influence all socio-economic groups. There are no major differences in this respect between men and women. It must be assumed that both factors influence not only the shape of social structure but also social mobility.

3. Mobility between socio-economic groups

The large and medium business stratum is a very small group. It could be assumed that this group, diminishing in number but possessing many resources which can be directly or indirectly inherited, is the one with a very strong self-recruitment pattern. This is not true, however, since only 10 percent of large and medium owners are from families belonging to the same social category. Australian large and medium business constitutes a group experiencing very high exchange mobility. On the other hand, the chance to belong to this group is eight times as great among people whose parents belonged there than it is in the total population.

TABLE 26. INTERGENERATIONAL MOBILITY BETWEEN SOCIO-ECONOMIC GROUPS

Parents' socio-economic groups	Sons' and Daughters' Recent or Last Job ^a			
	Large/Medium Business	Small business	Managers	Employees
				Total
	Outflow percentages			
Large/Medium Business	8.3	38.5	2.0	51.1
Small Business	1.2	31.2	6.5	61.1
Managers	2.2	18.0	23.6	56.3
Employees	1.3	13.9	6.2	78.6
Non-working	0.4	12.2	2.6	84.7
Total	1.1	17.7	5.4	75.8
				100.0
	Inflow percentages			
Large/Medium Business	10.4	3.0	0.5	0.9
Small Business	25.1	40.5	27.9	18.5
Managers	4.4	2.3	9.8	1.7
Employees	47.1	30.6	44.9	40.5
Non-working	13.0	23.7	16.9	38.4
Total	100.0	100.0	100.0	100.0

^a Recent job of those who work and the last job of those already non-working.

It was expected that many persons from wealthy owners' families may work as managers if they do not remain in the stratum of their social origin. This is actually also not true, since more than half those from such background work as employees having no managerial positions. Moreover, people from other social origins, employees included, perform managerial functions more often than the persons from big and middle owners' families. The second most common destination of intergenerational outflow from large business is to the small owners' group.

It was also expected that intergenerational mobility from the small owners' group is in most cases directed into workers' and managerial groups. Actually the outflow from small business to large business and the managerial group is very low and does not exceed the outflow to these groups from the employee/workers' stratum.

Managers, who constitute a rapidly increasing group in size, experience, contrary to expectation, greater intergenerational outflow mobility than small businessmen. Most of this outflow is directed to the employee/worker stratum, but a quite remarkable flow is also directed to both capitalist groups. The outflow from the managerial to the large owners' category is even greater than that from small owners.

It was expected that the decline in size of both capitalist groups and the parallel growth of the managerial stratum would result in relatively great percentages of persons with bourgeois social origins among managers. Contrary to such an expectation, the relatively small group of persons from big owners' families (who constitute only 1.4 percent of the total Australian workforce) is one-third this figure among managers (0.5 percent). The relative number of persons from large capitalist social origins in the managerial group is only half the size it is among employees (though these differences are statistically insignificant because of small numbers).

Almost 80 percent of sons and daughters of middle and lower level employees remain in their parents stratum of origin. Surprisingly, those who are mobile change their positions by becoming small owners rather than managers.

TABLE 27. INTERGENERATIONAL MOBILITY OF MEN AND WOMEN OF SELECTED SOCIO-ECONOMIC BACKGROUNDS

Socio-economic Groups (Recent or Last Job) ^a	Daughters of Small Businesswomen	Sons of Small Businessmen	Daughters of Employee Women	Sons of Employee Men
Large/Medium business	0.3	1.5	0.2	1.8
Small Business	23.3	33.6	12.1	14.6
Managers	1.8	8.0	1.7	8.2
Employees	74.6	56.9	85.9	75.4
Total	100.0	100.0	100.0	100.0

^a Recent job of those who work and the last job of those already non-working.

The outflow from employees to the managerial group is, however, not smaller than the outflow in the same direction from small business.

A large exchange between employees on one hand and managerial or capitalist groups on the other is perhaps best displayed by the fact that people originating from non-owner and non-managerial working strata constitute almost half the strata of large owners and managers, and about one third of small owners.

Persons 'newly activized', mostly women whose mothers did not work, in a great majority of cases worked as middle or lower level employees. Very few of them are large owners or managers. As we know from the analysis presented above, they often work in social services, so that we can conclude that even if they have stable, secure and highly esteemed professional positions, they rarely reach managerial levels. Of course there is much more economic activization among women than among men (actually this is an almost exclusively female phenomenon).

The exchange mobility that occurs between large or medium owners and the employee group may indicate relatively weak or fluid class boundaries. Such mobility is quite high in Australia. More than 50 percent of people from families of large owners work as middle or lower rank employees and, on the other hand, nearly half of those who own and work in a big business come from non-managerial employee families. These findings perhaps concern medium-size rather than large businesses, since the former are more numerous than the latter. Nonetheless, the large and medium business stratum exchanges, during the generational shift, a majority of its members for persons from other social groups.

There are too few large-scale businesswomen and managers in the female sample to present as detailed data on female mobility. But two remarkable gender differences in mobility should be mentioned. There is much less inheritance of small business positions among women than among men. At the same time men experience greater mobility from this stratum to the large business and managerial groups, while almost all female outflow is directed toward

the employee stratum. As far as mobility from the latter group is concerned, women much more often inherit their mothers' positions as employees, while men are often socially mobile, especially into the managerial group.

4. Status and sectoral dimension of social mobility

Patterns of mobility to and from various socio-economic groups may be further fragmented by economic sector. Since the sample size does not allow a three-dimensional cross-tabulation of parental and current group by sector, a more aggregated analysis is necessary.

Owners of large and small businesses are aggregated into one group and a few agricultural managers are included with agricultural employees. Mining, manufacturing and construction are also aggregated into one non-agricultural sector of material production.

It might be assumed that sons and daughters of business owners tend to stay in the sector of their parents even if they are not owners themselves. The ownership of a business may facilitate the start and further work of daughters and sons in the same part of the economy. It proved to be true only in agriculture, but not in other sectors. Between 40 and 50 percent of persons whose parents worked in the secondary sector stay in the same sector, virtually irrespective of the social position of their parents. In services, this number amounts to about 60 percent, again without any difference caused by parental position.

Intergenerational outflows from the secondary and tertiary sectors to Australian agriculture are almost non-existent but in the few cases where it does occur children of businessmen have a greater chance to become agricultural owners than children of managers. The latter have, in turn, a greater chance to enter farming than sons and daughters of employees. The numbers are so small, however, that the differences are statistically insignificant.

TABLE 28. INTERGENERATIONAL MOBILITY BETWEEN ECONOMIC SECTORS AND SOCIO-ECONOMIC GROUPS

Sectors and Groups of Parents	Sons' and Daughters' Recent or Last Job ^a									
	Agriculture		Mining, manufacturing ^b				Services		Total	
	Owners	Employees	Own Business	Managers	Employees	Own Business	Managers	Employees		
Outflow percentages										
Agriculture owners	25.8	4.1	3.7	0.9	25.0	8.1	2.7	29.8	100.0	
employees	8.7	9.5	4.5	2.0	33.7	4.8	5.4	31.4	100.0	
Mining and manufacturing ^b own business	3.3	1.6	14.8	2.0	29.0	13.7	5.4	30.1	100.0	
managers	2.3	2.4	13.2	14.6	25.6	5.4	15.3	21.3	100.0	
employees	1.5	1.1	6.4	2.3	41.1	8.1	3.6	35.90	100.0	
Services own business	3.8	1.6	4.9	3.1	27.0	18.3	6.8	34.6	100.0	
managers	3.4	1.1	3.4	8.2	24.1	13.5	11.9	34.4	100.0	
employees	1.1	1.5	4.2	2.0	30.6	9.2	4.7	46.6	100.0	
Non-working	2.3	1.6	2.0	0.6	25.9	8.2	2.0	57.4	100.0	
Total	5.3	2.1	4.2	1.7	29.3	9.3	3.7	44.4	100.0	
Inflow percentages										
Agriculture owners	61.4	24.4	11.2	6.5	10.7	10.9	9.0	8.4	12.6	
employees	5.2	14.2	3.4	3.8	3.6	1.6	4.5	2.2	3.1	
Mining and manufacturing ^b own business	2.3	2.8	12.9	4.3	3.6	5.3	5.3	2.5	3.6	
managers	0.3	0.8	2.1	5.7	0.6	0.4	2.7	0.3	0.6	
employees	4.2	7.8	22.2	19.9	20.3	12.6	13.9	11.7	14.5	
Services own business	5.9	6.3	9.6	15.3	7.5	16.0	14.9	6.4	8.2	
businessmen	1.0	0.8	1.3	7.8	1.3	2.7	5.0	1.2	1.6	
managers	4.2	14.7	20.2	24.0	20.9	19.6	25.5	21.0	20.0	
employees										
Non-working	15.6	28.2	17.2	12.8	31.6	31.3	19.3	46.3	35.8	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

^a Recent job of those who work and the last job of those already non-working.

^b Construction included.

TABLE 29. SOCIO-ECONOMIC GROUPS OF PERSONS WORKING IN SECONDARY AND TERTIARY SECTORS BY THEIR SOCIO-ECONOMIC ORIGIN

Economic Sector and Socio-economic Groups of Parents	Sectors and Socio-economic Groups During their Recent or Last Job ^a							
	Mining, manufacturing, construction				Services			
	Own business	managers	workers	total	Own business	managers	workers	total
Agriculture owners	12.5	2.8	84.7	100.0	19.8	6.6	73.6	100.0
workers	11.7	5.0	83.3	100.0	11.5	13.1	75.4	100.0
Mining, manufacturing, construction								
Own business	32.1	3.8	64.1	100.0	28.2	10.6	61.2	100.0
managers ^b	x	x	x	x	x	x	x	x
workers	12.9	4.7	82.4	100.0	17.2	7.3	75.5	100.0
Services								
Own business	14.0	8.8	77.2	100.0	30.7	11.3	58.0	100.0
managers	11.1	22.2	66.7	100.0	22.7	20.5	56.8	100.0
workers	11.5	5.4	83.1	100.0	15.2	7.8	77.0	100.0
Non-working	7.0	2.1	89.9	100.0	12.1	3.0	85.3	100.0
Total	11.8	4.7	83.5	100.0	16.3	6.4	77.3	100.0

^a Recent job of those who work and the last job of those already non-working.^b Numbers too small for percentages calculation.

A similar regularity, supported by firmer statistical evidence, concerns social mobility into the secondary and the tertiary sectors. Sons and daughters of owners have relatively greater chances of owning a business in their new sector than children of managers. The latter become owners more often than those whose parents were only line employees. Also, children of service managers commencing work in manufacturing enter managerial positions much more often than other persons. Thus, social mobility across economic sectors does not entirely erase the tendency toward inheritance of parental social standing and, vice versa, parental position (with one exception of farm owners) does not limit the flows between sectors.

Those sons and daughters of workers who move from services to manufacturing or from manufacturing to services have, however, a slightly greater chance to become owners than those who remain in the same economic sector. On the other hand, those sons and daughters of business owners, who are socially mobile from the secondary to the tertiary sector (or in opposite direction), have less chance to remain owners than those remaining in the sector of their parents. There is thus some, albeit not very strong, correlation between mobility in socio-economic and sectoral space.

Is the social mobility of various socio-economic groups the same, irrespective of the group's sectoral setting, and is mobility for particular sectors similar irrespective of socio-economic status? Evidence provided by Tolbert (1983) shows that both dimensions have a differentiating power in this respect. He analysed social mobility in the USA between groups defined simultaneously by occupational status and core or periphery economic sector. Using multidimensional scaling he ordered these groups in a two-dimensional space, according to similarities in their detailed mobility flows. The two coordinates of the space concerned socio-economic status (defined rather loosely in this case) and core-periphery. Tolbert's results indicate that both dimensions have a differentiating impact on mobility: mobility patterns of particular groups differ according to both. Differences in mobility range similar socio-economic groups across the core-periphery dimension and, vice versa, various groups located in the same sector are spread across the socio-economic dimension.

The question may be posed: is the same true for the groups defined by ownership-managerial criteria and for the sectors defined by the character of economic activity. It is important also to establish if similarities in social mobility of groups defined simultaneously by both criteria are greater in the case of the same socio-economic status or the same economic sector. The Wroclaw taxonomic technique may be used to answer this question, by aggregating groups with similar mobility patterns. All eight groups were examined from this viewpoint (owners and employees in agriculture as well as owners, managers and employees in secondary and tertiary sectors.) The inflow indices presented in Table 26 served as the basis for determining similarities in mobility, as in the previous chapter.

Two groups have very distinctive mobility patterns, both from each other and from the rest of the population. They are agricultural owners and agricultural employees. It is interesting, however, that all other groups experience similar inflow mobility in the same economic sector rather than the same socio-economic status. All three groups distinguished in the secondary sector form one aggregate in this respect. The second aggregate is formed by service owners and service managers. Only service employees are separated.

The application of the analytical procedure described above to the female population considered separately is impossible because of the small size of both managerial groups in the female subsample. For that reason, together with interest in overall processes of socio-economic structural change, our attention has focussed on the total population. Nevertheless, the male mobility pattern can and should be examined separately.

The dendogram for the male population confirms all previous findings. The similarities in mobility patterns occur among groups different from the viewpoint of ownership or managerial status but located in the same economic sector rather than among the groups of the same status but located in different sectors. Various groups aggregate according to economic sectors instead of socio-economic status. The two aggregates, namely the material production and the services, are distinctive from each other respective of their

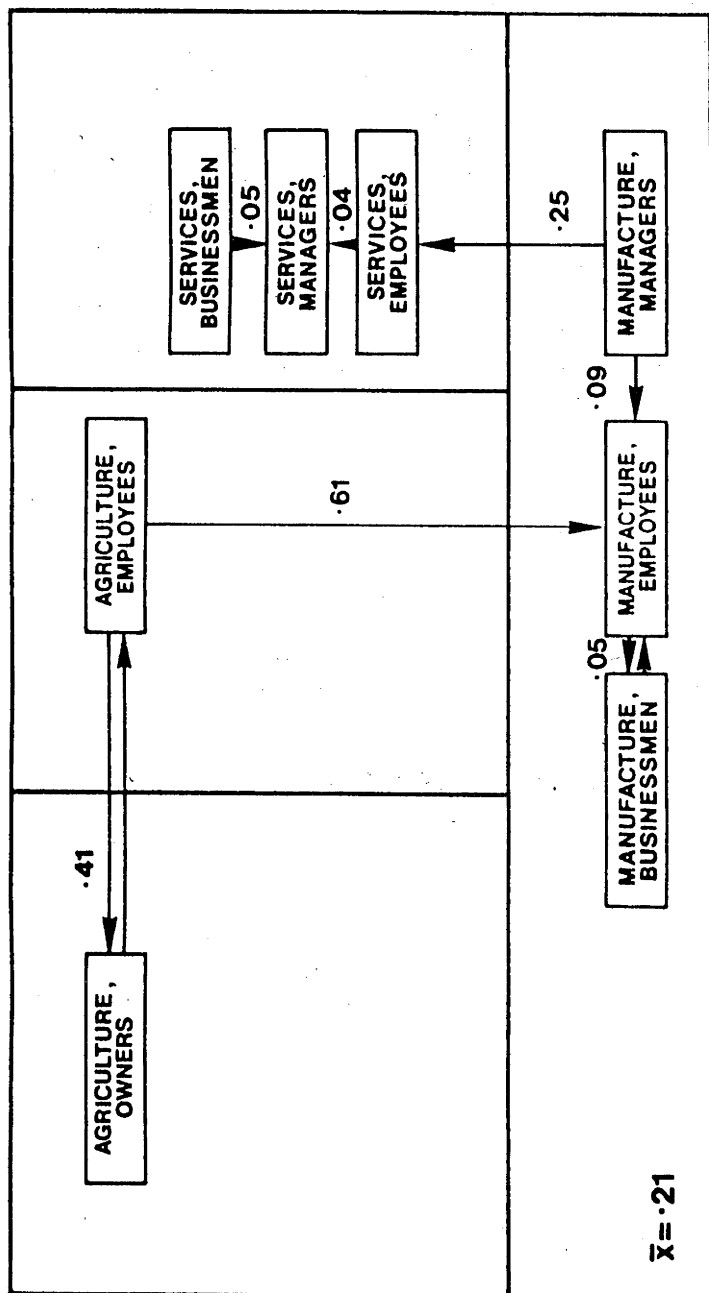


Fig.8. Taxonomy of Distance Between Socio-economic Groups in Particular Sectors in Respect of Their Inter- and Intragenerational Inflow Coefficients (Male Work Force).

mobility, but both include groups of very different socio-economic statuses with a similar mobility pattern within the sector.

A comparison of these findings with those concerning the total population indicates that the differentiating power of ownership-managerial status in respect of mobility patterns may be somewhat stronger among women than among men, but generally is not of great importance in the Australian society. Recruitment patterns of particular groups differ much less according to the socio-economic character of these groups than according to their location in economic sectors. Class related differences are weaker than might be expected.

CHAPTER VII

CONCLUSIONS: EMPLOYMENT STRUCTURE AND MOBILITY IN POST-INDUSTRIAL SOCIETY

Since the service sector in Australia employs more than 60 percent of the workforce, it must be considered as approaching the stage of post-industrial society. Due to its specific socio-economic history, service employment was, however, always high in Australia, so it is not a sufficient indicator of post-industrialism. In recent years, not only the percentage but also the absolute number of people employed in the Australian manufacturing sector as well as its share in the GNP began to decline. This trend may be the symptom of post-industrialism but it may also be simply the result of economic recession in the seventies. It is too early to pronounce on this process definitely.

Social services, constituting the core of the post-industrial economy, employ only half as much labour in Australia as allocative services and constitute only about one-fourth of total employment in services. Even if finance and administration are added to them, employment in this large grouping, not serving directly the primary or secondary sectors, is smaller than in allocative services. Since the latter are mostly directed to the distribution of raw materials and products of other sectors, they cannot be treated as the most typical for the post-industrial economy. The approach of the early post-industrial era in Australia may be indicated by the fact that the share of services in the employment structure is steadily growing, but more important is the fact that social services are growing much more rapidly than other industries both in terms of their employment and their contribution to the GNP, while allocative services have reached a stage of relative stagnation.

A reasonable hypothesis is that such structural changes are connected with mobility between economic sectors, or branches, from less to more 'modern'. This hypothesis is only partly true. Mobility in the modernising direction is indeed larger than the reverse flow, but almost exclusively because of the outflow from agriculture to the rest of economy as a whole. The inflow into services, supposedly a very important factor in the employment structure of post-industrialism, is actually almost entirely

balanced by an outflow in the opposite direction. The largest part of the structural transformation toward a post-industrial economy is caused not by the flows between sectors but by the economic activization of women.

Various service industries differ in this respect, since the greatest activization of women has occurred in social services, most typical for post-industrial structure, while finance and administration largely recruit their employees by way of mobility, mostly from other services but also, to a large degree, from industry and agriculture. On the other hand, there is a relatively large outflow from finance and administration to other services, so that the net growth is not as large as in social services, which gain more workers by way of activization.

The largest exchange across sectoral boundaries is short distance in character, since it takes place between allocative services in the tertiary sector and 'light' food industry in the secondary sector.

Contrary to expectation, the service sector overall contains no more temporary or casual jobs than manufacturing industry, once the data are analysed separately for men and women. In the tertiary sector social services constitute the setting in which the female employment is most stable and secure, in spite of a high activization ratio suggesting great turnover. Such turnover caused by instability of jobs and conventional work patterns, is greatest in 'light' and food industry and in allocative services, i.e. branches employing mainly unskilled women workers. Moreover, all differences in disactivization ratios involve women. Sectoral disactivization ratios (determined by unemployment and life patterns) and differences between them, are much smaller among men.

Men are more intergenerationally mobile than women, not because of different patterns of association but because of the different role of economic activization. Intra-generational mobility of women is smaller, mostly due to structural differences in marginal distributions. In fact male and the female intra-generational association patterns differ very little, or rather affect total mobility in very similar ways. The supposedly different association patterns

of men and women do not differ substantially and are much less important than the structural composition of both gender groups as a factor causing mobility differences between men and women.

A similar conclusion concerning the role of structural factors results from a comparison between intergenerational mobility of younger and older women, as a proxy for dynamic analysis. The increase in mobility among younger females (men do not differ in this respect) occurs almost exclusively as a result of the decline in relative numbers of newly activated women, in turn a consequence of the growth of employment among their mothers. Neither the intergenerational mobility of women nor the inter-generational mobility of men differ between older and younger groups when the differentiating role of economic activation is eliminated in the analysis. The joint impact of structural as well as endogenous (association) factors on the differentiation of social mobility takes place only in the case of male intra-generational mobility. Younger men are somewhat less mobile than older men, especially in the 'modernizing' direction, because of both structural differences and different association patterns.

Immigrants, who constitute a large part of the Australian workforce, experience somewhat greater economic activation and more inter- as well as intragenerational mobility, but the difference between them and the rest of the Australian workforce is not great in these respects. Immigration has only a slightly stimulatory effect so far as mobility is concerned, but this effect should not be ignored. Immigration plays a much more important role in the formation of secondary sector employment than in the growth of service industries. Up to now it has not accelerated the transition toward post-industrial economy.

It may be concluded that the modernizing role of social mobility between sectors and branches of the Australian economy comes about in a way more typical for industrial, or even industrialising, societies than for a post-industrial society. The emergence of post-industrial elements in the Australian economic structure occur almost exclusively as a result of activation of women in service industries, especially in social services, which constitute the core for post-industrial economic structure.

Similar data for other developed countries are difficult to find, but the Australian evidence is consistent with results of an analysis of the Swedish employment structure, mentioned earlier in this monograph (Berglund 1978). Now, the question can be raised if these results arise because both countries are at a relatively early stage in their post-industrial transition or because they reflect more general features of social mobility in post-industrial societies. If the second is true, then there is a structural transition toward a post-industrial employment structure, but there is not, and there will not be, any social mobility into it. If the first supposition is true, a substantive change in mobility patterns can be expected in the near future of the most developed societies.

Changes in sectoral employment structure, as well as in relations within particular sectors, have reduced the relative number of owners while increasing the relative number of managers and employees in the Australian economy. These changes were not associated only with one-sided outflow mobility from the business group. Mobility from this group, in spite of its negative net effect, still has an exchange character, indicating a relative openness in Australian society. A relatively great exchange takes place not only between the two business groups (actually there is not much mobility from small to large business), or between business and managerial groups, but also between owners and employees. It does not mean, however, that there is no tendency to remain in the group of social origin.

Persons from the stratum of business owners do not experience lower intergenerational outflows from the economic sector of parents, except in agriculture. Social mobility between socio-economic groups defined by ownership-managerial criteria and between economic sectors are positively related. They reinforce each other, though this relation is not very strong.

The conclusion that exchange flows between business and employee groups indicate a relative openness in Australian society is strengthened by the fact that the similarities between mobility patterns of different socio-economic groups within particular economic sectors (with the exception of agriculture) are greater than the similarities

between the mobility of the same group located in different sectors. It follows from such a situation that changes in Australian mobility are caused more by economic than by social transformations.

The reduction of the number and proportion of private owners in the non-agricultural part of the economy, associated with the growth of managerial as well as employee strata, is typical for all modern industrial and early post-industrial societies (if the latter exist). Since continuous changes in sectoral employment structure and in socio-economic relations within sectors contribute jointly to this reduction and will most probably persist in the future, the ownership, managerial and employee proportions will also be changed in future.

Until now these changes have not been associated with closure between particular groups. On the contrary, there is much exchange flow between all of them. Moreover, the pattern of these flows is determined more by the location in particular sectors of the economy than in different socio-economic groups.

The conclusion can be reached that in spite of changing class relations (or class proportions at least) neither the closure of classes or class-type groups, nor the differences in their mobility patterns, are great enough to reduce substantially the openness of the Australian society as a whole. There is one specifically Australian factor, moreover, contributing to this openness, namely immigration, which is still associated with somewhat greater social mobility.

ONLY STRUCTURAL
ANSWER TO ALL QUESTIONS

The growth of employment in the tertiary sector has been seen as a possible remedy for unemployment in manufacturing. All data from Australia and other developed societies indicate that female economic activation rather than flows from declining or stagnating manufacturing contribute to this growth. Unemployed industrial workers do not find jobs in services any more than service workers find jobs in the secondary sector. The same is true of flows which possibly could take place across generations. Such a situation will probably persist so long as female labour

reserves exist and can be activized in services. This activization contributes not only to the growth of services, but also to the growth of the employee stratum. The exhaustion of female labour reserves may contribute to a greater interclass downward mobility (provided that the employee stratum grows is expected) as well as to greater mobility from manufacturing to services.

Processes in the female labour market, crucial for initiating a post-industrial economic structure, will not lose their importance in the more advanced stages of post-industrial society. If mobility studies, irrespective of the social or economic dimension in which the flows are analysed, are expected to describe the processes relevant for the transition of socio-economic structure in modern societies, neither the female labour force nor the activization of women in modern economy should be left out of the analysis.

A reduction of unemployment in manufacturing industries induced by an increasing service sector has not yet occurred, contrary to the hopes of early authors interested in structural changes of economy. It may be possible at some future stage, after female work reserves are more fully utilized, but only if employment in the tertiary sector continues to grow. Its growth was facilitated up to now by the redistributive and the welfare functions of the state and other social organizations. The anti-taxation "revolt" taking place in some developed countries, and, consequently, - the policy of economizing on various social programmes, may slow the transition toward fully post-industrial societies. It seems that quite new and unconventional approaches to economic policy, work, unemployment benefits, the role of other welfare spending (perhaps even forgetting the word "welfare" and substituting for it "social") are needed. Is it better to pay unemployment benefits or to buy objects of art and finance art-related activities of the unemployed, as they do in the Netherlands? Where is the money for such programs to be found? Is the idea of reducing hours of work and work-sharing worth implementing, and how sufficient salaries to be provided in such a cases? Should education expand above the immediate needs of the economy? Would the growing demand for services assure further economic development, and if so. should this demand be stimulated? How can big industrial corporations contribute to the development of

non-material services, if they can contribute at all? The answers for such questions are not easy, but they are much more important than the arbitrary answer for a question: "Is Australia or USA or any other country a really post-industrial society or not?".

Changing employment structures and mobility patterns, the topics discussed in this book, are only two aspects of a complex socio-economic transformation towards post-industrial society. Most of the data analyzed in the book concern 1973. Since that year the economic recession has reached its deepest point and a recovery begun. Some structural changes were accelerated by the recession, so that the question has to be answered, how the changing economic situation influences current structural transformations and what trends will characterise the nearest future.

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