

ACKNOWLEDGEMENTS

I am indebted to my supervisor, Mr. M. Harris (Civil Engineering, Aston University) for his help and encouragement during the work contained in this thesis. I am extremely grateful to Dr. J. W. Raine (Institute for Local Government Studies, Birmingham University) for his interest and voluntary commitment to the project. Thanks are also due to Dr. W. H. Jones and Dr. D. VanRest (both Aston University) for their supervisory contributions.

I acknowledge the staff of the Transportation and Engineering Department of the West Midlands County Council, in particular Mr. J. Simpson and Mr. E. Humphries. Special gratitude is also extended to Ms. K. Wright for her assistance with the computing. In connection with the typing of the thesis, I would like to thank Mrs. J. Jones, Mrs. K. Sanders and Mrs. F. Tooke.

Finally, I acknowledge the Science Research Council and West Midlands County Council for jointly funding the project and the Birmingham Careers Service for providing access to unemployed school leavers.

THE INFLUENCE OF ACCESSIBILITY ON THE JOB SEARCH PROCESS:

A Cognitive - Behavioural Study of
Unemployed School-Leavers

VOLUME I

DEREK JOHN QUINN

Thesis submitted for the Degree of Doctor of Philosophy
at the University of Aston in Birmingham

November 1982

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Summary

This thesis responds to the urgency underlying recent local authority employment initiatives and focusses on the importance of accessibility on the job search behaviour of the unemployed. It was argued that job seekers would not cite transportation as a problem if they were not aware of job opportunities in an area of the city they did not even consider; It was relevant therefore to adopt a 'cognitive-behavioural' approach to the study of job search. A survey was carried out in two stages. The first stage collected data on awareness of the city and job aspirations of a sample of unemployed at the outset of their job search. School-leavers recruited from one 'suburban' and three 'inner-city' Careers Offices provided the necessary sample. The second stage was a diary survey which examined the decision-making and locational aspects of subsequent search behaviour. A conceptual model of the job search process was postulated and used as a framework for analysis, and the 'standard deviational ellipse' technique was used to summarize and compare locational patterns.

The results of the survey verified the central hypothesis that the pattern of job search is closely related to geographical awareness of the city. This suggests that transport policies which aim to improve 'accessibility' per se may not be the most effective method of assisting the job search process. Instead a policy of improving public transport services in conjunction with increased urban awareness could be a more positive approach to helping the most vulnerable groups search for employment.

Key Words:

Awareness Space, Inner-City, Public Transport,
Search Activity Space, Standard Deviational Ellipse,

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CHAPTER ONE

INTRODUCTION

1.1 THE ORIGIN OF THE RESEARCH

This project originated in a period of increased concern by Central Government and Local Authorities that 'inner city' areas and the people who live and work in them face serious problems. In 1978 the two levels of government joined together in a combined effort to try and resolve these problems by establishing "Inner City Partnerships", which prepare programmes of action for a period of up to ten years. The West Midlands County Council considered that there was an absence of research into the role of public transport in the 'inner areas'. Consequently, it was decided to initiate a research project to investigate "the public transport needs of inner city residents and workers". Funds were made available through the Birmingham Inner City Partnership Programme (B.I.C.P.P.).

The original brief (September 1978) suggested that the research should look at some or all of the following:-

- (a) The public transport needs of inner city residents and workers.
- (b) Methods by which conventional stage-carriage services could be adapted to improve the service to inner city residents and workers.
- (c) Any unconventional public transport services ("paratransit") that might be suitable.
- (d) The ways in which rail transport can assist.

It was immediately apparent that the project was primarily one of defining the travel needs or requirements of residents living in the inner areas of Birmingham, and that it should therefore concentrate on section (a) of the original brief. The ways in which any travel needs, identified by this research could be met, should

then follow. (ie section (b), (c) and (d).

In order to understand public transport "needs" it is necessary to consider the nature of the inner city. The nature and the causes of problems in British cities have been investigated in a number of major reports, such as the 'Community Development Project - Inter Project Report (1972); the three 'Inner Area Studies' of Birmingham, Liverpool and Lambeth - Home Office (1977) and in the West Midlands, by the County Council's report (1976), "The Economic Problems of the Inner Areas". The Government's White Paper "Policy for the Inner Cities" (1977) and the subsequent 'Inner City Partnership Programmes' have also reviewed the nature and causes of the problems.

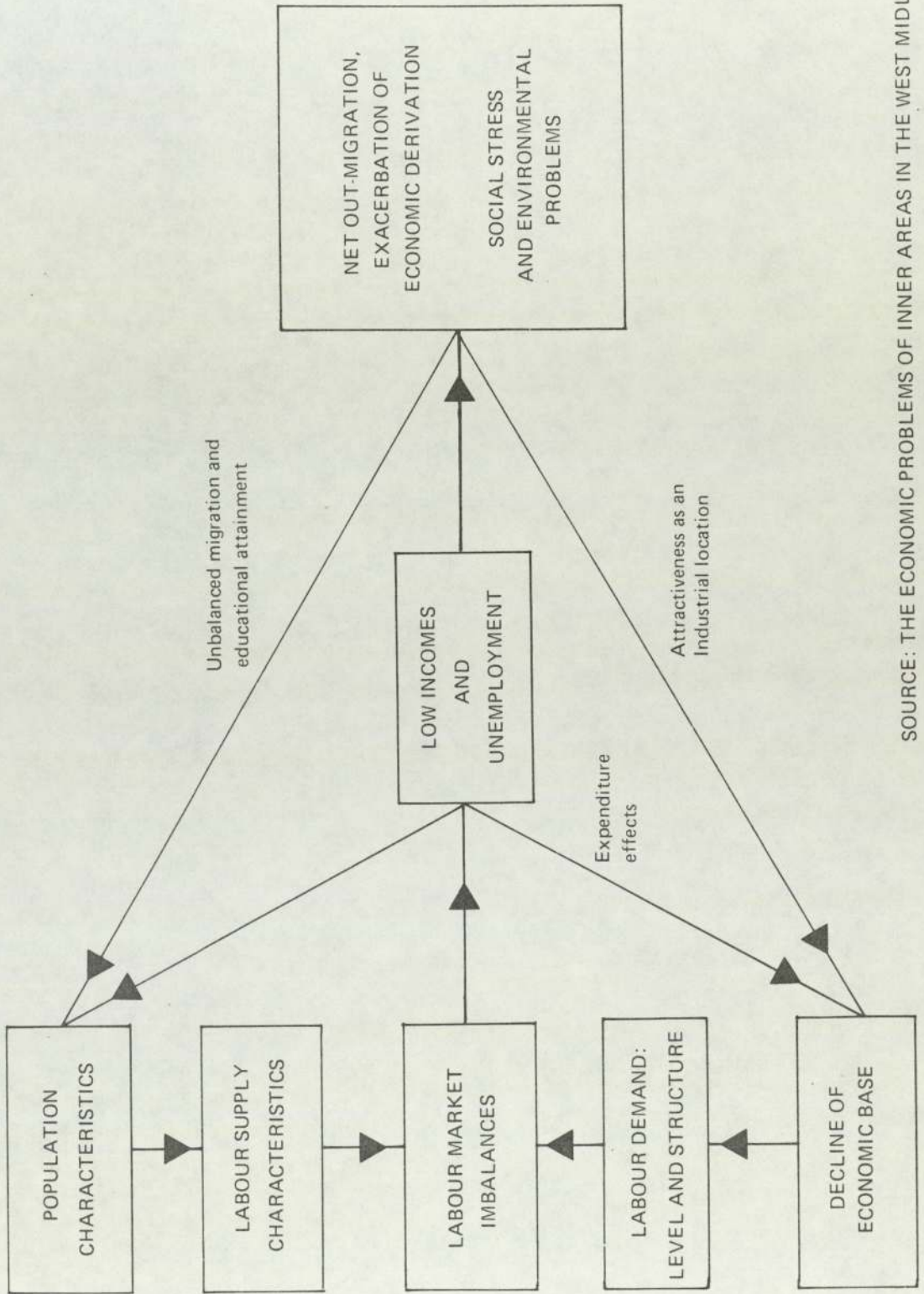
The origin of current problems associated with the 'inner city' was initially attributed to the rapid increase in population and urban development during the nineteenth century. However, over the past decade, research has recognised that the problems are not exclusively the result of poor housing and cannot be solved simply by redevelopment and rehabilitation of the housing stock. The situation is far more complex and it is realised that many areas suffer from multi-deprivation, which includes poor housing, lack of amenities, overcrowding, poor health records, high dependence on state benefits, low incomes and disproportionately high rates of unemployment. Government intervention into urban problems reflect the recognition of the complex and serious nature of these issues. Appendix A1 reviews the history of Government attempts at intervention, which illustrates this multi-deprivation.

TABLE 1.1 UNEMPLOYMENT IN BIRMINGHAM 1961, 1971, 1981

	Economically Active	1961 Unemployed	Unemployed Rate	Economically Active	1971 Unemployed	Unemployed Rate	Economically Active	1981 Unemployed	Unemployed Rate
Core Inner Area	218370	7420	3.4%	137100	11630	8.5%	121154	28686	23.7%
Rest of Birmingham	451440	6560	1.9%	364760	18870	5.2%	471787	42957	9.1%
Total Birmingham	569810	13980	2.5%	501860	30500	6.1%	592941	71643	12.1%

Sources: B.I.C.P.P. 1979-83 and 1981 census OPCS (HMSO Publication)

FIGURE 1.1 FACTORS REINFORCING THE LABOUR MARKET IMBALANCES IN THE INNER AREAS



SOURCE: THE ECONOMIC PROBLEMS OF INNER AREAS IN THE WEST MIDLANDS COUNTY 1976

Recent Government policy has emphasised the need to regenerate the economic base of the inner areas by attracting industry into the area, and by raising levels of income and reducing unemployment. This policy is directed at the imbalance in the labour market (i.e. excess of labour supply over labour demand). Figure 1.1 shows the main factors reinforcing the labour market imbalances which result in high levels of unemployment. (Appendix A2 reviews in detail the decline of employment in metropolitan areas). Table 1.1 shows that levels of unemployment have increased in the census year from 1961.

The WMCC report (1976) "The Economic Problems of the Inner Areas" shows that the imbalance is considerable amongst the secondary labour market (i.e. those workers with the least skills), and that there is a disproportionate number of these people living in the inner areas of the West Midlands County. It is noted from table 1.1 however that unemployment is also increasing in the outer areas. On the labour demand side, the relative unattractiveness of the inner areas as industrial locations has led to a shrinking industrial base. In the Birmingham 'Partnership Area' a loss of 53,000 manufacturing jobs between 1971 and 1976 was balanced only by an increase of 1,000 in other sectors. Inner Area industrial sites are often too small for single storey factories and buildings are often outmoded, hence new industry has tended to locate on the periphery of the city rather than replace the closed manufacturing firms in the inner areas.

Over the last decade, Local Authorities have expressed increased concern about local employment problems and a greater interest in ways of tackling them. Initiatives have been made by local authorities in the supply of jobs and in the supply of labour.⁽¹⁾ Initiatives on the supply of jobs include the allocation of land for industrial and commercial purposes, the provision of sites, the provision of access facilities to site, the relocation of non-conforming uses and the provision of new or refurbished premises. A local authority also had the power to increase the supply of finance to local firms, and it can encourage industry to locate in its area by industrial promotion and advocacy activities. Finally, a local authority may make a direct initiative by increasing its own level of employment.

The initiatives a local authority might make on the supply of labour, include an increase in the availability of labour, and in the quality of labour. The latter initiative is the responsibility of the Manpower Services Commission (M.S.C.) which has the task of training and retraining the labour supply to match the changes in the nature of employment and match the skills of workers with type of jobs which other initiatives are attempting to create. The M.S.C. also provides information and advice on job vacancies. Finally, the local authority may take an initiative to increase the number of employment opportunities accessible to workers. This can be achieved, for example, by providing houses, and/or assisting home movements for workers in 'key sector' industries. Another possible approach, but one which has received

Note 1 Local Authority Employment Initiatives are explained comprehensively in Appendix A.3.

little attention, is a transport initiative to improve the accessibility for labour (especially areas with high unemployment) to a wider geographical area of employment opportunities.

In view of the original research brief and the urgency underlying recent Local Authority employment initiatives, it is appropriate that this present research should primarily investigate the fundamental issue of "Access to employment".

An investigation of access to employment should include suburban as well as inner city residents, given the high rate of national unemployment which represents a problem to all residents of a city, and as a means of assessing the relative problems of the inner city. However, emphasis on the inner city is justifiable because of the concentration of unemployment and the resulting downward spiral of the local economy and environment, caused by 'collective deprivation'.

1.2 ACCESS TO EMPLOYMENT

A large proportion of inner area residents, who are employed, are engaged in manufacturing industry. (See table 1.2) In Birmingham this employment is further concentrated on the manufacture of vehicles and its associated industries.

TABLE 1.2 TYPE OF EMPLOYMENT IN A WEST MIDLANDS INNER AREA
EXAMPLE - SMALL HEATH, 1974

	<u>Number</u>	<u>Per Cent</u>
All currently employed	1,167	100%
Primary and Manufacturing	606	52%
Construction	82	7%
All Service Industries	432	37%
No Information	47	4%

Source: Birmingham Inner Area Study 1977

Advances in manufacturing technology have meant that many traditional skills are no longer required and some skilled workers have been forced to move into less skilled jobs, while others have been forced out of work. Moreover, manufacturing industry located in the inner city requiring skilled labour has disappeared (because of decentralisation, redevelopment or liquidation) at a faster rate than population can move out. The problem has been further compounded by a decline in manufacturing jobs per se. Table 1.3 illustrates the decline in the level of skills required for the jobs held by local labour force in an inner area of Birmingham.

TABLE 1.3 CHANGES IN SKILL LEVELS OF JOBS HELD BY ECONOMICALLY ACTIVE MALES IN A WEST MIDLANDS INNER AREA
EXAMPLE - SALTLEY 1966 AND 1971

	1966		1971	
	No.	%	No.	%
Professional workers	470	9.5	240	4.95
Foremen, skilled manual, self-employed	2150	44.5	1810	37.4
Personal Services, Semi-skilled	1310	26.6)	1390	28.7)
Unskilled	790	16.0	980	20.25)
)42.6%)49%
<hr/> Total	4720	96.6	4420	91.3

Source: Saltley Community Development Project.

Therefore the inner city jobs no longer provide the wage and prestige levels of the past and the location of work places is no longer in the local vicinity for inner city residents. This is particularly relevant to workers entering the job market such as immigrants, the unemployed and school leavers. Smith, B (1976) argues that inner city unemployment becomes most severe when "urban areas size has passed the point at which travel to work from inner to outer areas present difficulties". Smith analysed 1971 census journey to work data for Birmingham inner area residents.

Table 1.4 shows that the highest percentage of inner area residents working outside Birmingham is in the manufacturing and construction industries.

TABLE 1.4 PERCENT WORKING OUTSIDE BIRMINGHAM BY INDUSTRIAL SECTOR, 1971

	<u>Inner Areas of Birmingham</u>	<u>Rest of Birmingham</u>	<u>Total</u>	
Manufacturing	12.4%	10.7%	11.2%	
Construction	15.3%	15.7%	15.6%	
Utilities, transport	7.1%	12.8%	11.3%	
Distribution & Services	5.2%	8.2%	7.5%	
Government	6.2%	9.0%	8.5%	
<hr/>				
All Industries	10.2%	10.2%	10.2%	(1971 Census)

Source: B Smith (1976)

Travelling to manufacturing employment located outside Birmingham is proportionately higher from inner areas than from outer suburban areas. With the decline of all types of employment in the inner city, it is expected that inner area residents entering the job market will have to search and compete for job vacancies outside their 'home area'. Indeed the Small Heath Survey (1974) claimed that "Younger People and West Indian Immigrants tend to have longer journeys than other workers". Because these groups have more recently entered the labour market, it implies that current job seekers living in the inner city must extend their area of search.

This means therefore the type and quality of transport available is a critical factor in the job search process.

An examination of car ownership among households in the inner areas for 1966 and 1971 (see table 1.5) reveals that ownership rates decreased in the inner areas compared with an increase for the whole of Birmingham.

TABLE 1.5 HOUSEHOLDS WITH NO CAR IN BIRMINGHAM (1966 AND 1971 CENSUS)

	1966 (Census) %	1971 (Census) %	Change between 1966 and 1971
Median value for Birmingham Inner Areas	74.7	75.8	+1.4
BIRMINGHAM	59.9	57.7	-3.7

This fact is particularly important because a general increase in car ownership rates and its impact on personal mobility has been a significant factor in the relative decline of the inner areas. A more recent analysis of a section of the inner city (Inner Area Study: The West Midlands Passenger Transport Executive, 1979 - see table 1.6) shows that 80% of families in socio-economic group DE (semi and unskilled) were without a car. Sixty per cent of the total sample surveyed were in this socio-economic group and of the 1,060 unemployed, in the sample, 857 were in this group. Hence, for inner city residents, public transport is of paramount importance in journey to work, and more importantly, for journeys by the unemployed, in their search for work.

TABLE 1.6 SOCIO-ECONOMIC GROUP AND CAR OWNERSHIP IN HANDSWORTH
AND LOZELLS, 1979

<u>Socio-Economic Group</u> ¹	<u>None</u>	<u>Car Ownership</u>		<u>Total</u>
		<u>One</u>	<u>Two+</u>	
AB Professional	33%	66%	*	100
C1 White Collar	50%	50%	*	100
C2 Skilled Manual	38%	55%	7%	100
DE Semi-unskilled	80%	19%	*	100

Of course, high dependence on public transport is not restricted to 'inner city' residents. For instance, a car-owning individual may be unable to afford to maintain a vehicle during a spell of unemployment. Further, school leavers are likely to be highly dependent on public transport in order to extend their search for employment beyond walking distances, irrespective of residential location. However, urban public transport has declined since the upsurge in car ownership. Hence the same forces that have helped cause employment problems now threaten to hinder any possible solutions to the problems.

Two main factors have contributed to the decline of urban public transport. The most obvious reason is simply the increase in level of car ownership. This is exemplified in the Government's Transport Policy: A Consultation Document Vol. 2. 1977 (H.M.S.O. : 1977).

"Twenty years ago public transport dominated private transport for all lengths of journeys, both business and pleasure. During the period since 1957, inland travel in terms of passenger kilometres has doubled, whilst that of Public Transport has declines by a quarter."

Note 1 Socio-economic classification used by West Midlands Passenger Transport Executive.

These trends, of course, reflect the marked increase in income. Post war real increases in incomes has made car ownership possible for more people. The main implication here is that there is one third of the population that will never own or have access to a car. These people include the very old, sick, blind, disabled and the poor, (i.e. including the young and the unemployed). Secondly, the 'real price' of fares has increased over the past decade. Except for the introduction of 'one-man operation', productivity has failed to improve sufficiently to counter the escalating costs of public transport. This is because the bus industry is labour intensive, and wage costs account for over 70% of all bus costs.

Black (1971) has described the 'vicious circle' by which falling passenger demand leads to a fall in level of service and a rise in fares, which themselves lead to further falls in passengers. If the process is allowed to continue, then it will probably leave many groups of individuals and more especially the unemployed, with possible transport problems in the process of job search.

The question of the appropriate level of subsidy for public transport has long been argued, but has received special attention recently in the light of London Transport's financial problems. Although the primary objective of a transport policy is an efficient system, at the lowest cost of resources, many would argue that it cannot be left solely to market forces because the Government has responsibility for social, environmental and resource objectives. The Government's White Paper on 'Transport Policy' (HMSO 1977) makes special reference to inner city areas and employment problems. Most

significantly, the paper states that "the cost of travel may discourage inner city residents from applying or accepting new job opportunities." Public transport provision has often failed to adapt to changing patterns of travel and urban structure and this may render it impossible for some residents to take advantage of new job opportunities. The Liverpool inner area study noted that many unskilled workers walk to work and for those who live in the dockside area, the 'time' and 'cost' of travel by public transport, and their lack of cars, effectively put the growing centres of new employment beyond their reach".

It is concluded that with the changing distribution of workplaces, many individuals attempting to enter the labour market would require considerably improved transport services to persuade them to take-up jobs away from their residential areas. In view of the constraints on increased personal transport to certain groups, it is argued that public transport improvements will be necessary to meet the needs of city residents in enhancing their access to employment.

In order to study empirically the public transport needs and travel problems of the unemployed, it is necessary to understand the process of job search. Hence literature on 'job search' is reviewed with attention to any 'travel problems' identified in previous studies.

1.3 THE PROCESS OF JOB SEARCH

Studies of the process of job search can be divided into Economic Theory and Empirical Studies. Both approaches have generally progressed independently of each other. Although 'Economic Theory' studies are of relevance to this thesis, they are not central to the research brief. Consequently, this 'theoretical' literature is reviewed in Appendix A4. Empirical studies of job search behaviour are, on the other hand, dealt with below.

Most empirical studies of employees' job search practices have focused on the performance of the Employment Service Division (ESD) of Manpower Services Commission (MSC) on the job market. Hence, these studies have mainly been concerned with the use and efficiency of the Employment Office (superseded in 1973 by "Job Centres") in relation to other sources of job vacancy information. A number of studies have investigated other aspects of the job search process, including the minimum acceptable wage, the cost of search and the problems in the search process.

1.3.1 Information Sources

Several studies have investigated the role of information sources in job search. These studies include 'A National Survey of the Unemployed' by W. Daniel (1974); North Tyneside Inner Area - Community Development Report (1978); the General Household Survey (1977); and the National Job Seekers Survey by the National Opinion Polls (NOP) (1977)

In Daniel's survey, those respondents who attained a new job after a period of unemployment, were asked how they first heard of their job. The 'employment exchange' was the most common source of new jobs. However, table 1.7 shows that this was not the most effective method.

TABLE 1.7 SUCCESS RATES OF INFORMATION SOURCES

<u>INFORMATION SOURCE</u>	<u>RATE OF SUCCESS</u>
Friends/Relatives	39%
Direct Approach to Employer	31%
Employment Exchange	31%
Advertisements	20%

Source: Daniel W. (1974)

As far as the proportion who found a job was concerned, the most 'successful' method was informal contacts. Daniel also found that respondents who had found their jobs through personal contacts were least likely to continue job search and most satisfied with them, as table 1.8 shows.

TABLE 1.8 SATISFACTION WITH JOB OBTAINED AND INFORMATION SOURCE

<u>SOURCE OF INFORMATION</u>	<u>PROPORTION STILL LOOKING FOR JOB</u> %	<u>PROPORTION 'VERY SATISFIED'</u> %
Friends/Relatives	25	44
Direct Approach to Employer	25	29
Employment Exchange	34	35
Advertisement	35	48

Source: Daniel W. (1974)

The North Tyneside Community Development Project (CDP) obtained data on information sources in the search for work for an unemployed as well as a recently employed sample. It was found that speculative visits to firms were the 'most important method of search' for both the unemployed and employed samples. The NOP survey also used 'employed' and unemployed' samples. The order of use of each information source was the same for both groups. The difference was that the unemployed sample made greater use of all sources but they were also less likely to have followed-up a job vacancy and less likely to have been offered a job from each source. (See table 1.9).

TABLE 1.9 JOB SEARCH METHODS COMPARED: BASED ON THE EXPERIENCES OF UNEMPLOYED JOB SEEKERS

JOB SEARCH METHOD	USAGE %	% OF USERS FOLLOWING UP JOBS	% RECEIVING JOB OFFER
Local Press	93	65	6
Private Agency	13	27	12
Friends/Relatives	79	44	6
National Press	38	28	4
Trade Mags	17	-	-
Direct Approach	54	-	12
Careers Office	11 (54% of U-25's)	30	
Jobcentre	63	s/s - 27 Int - 13	s/s - 4 Int - 5
Employment Office	44	s/s - 10 Int - 18	s/s - 2 Int - 3

Source: NOP 1977

s/s = self service
Int = interview

Employer-based surveys have tended to give higher placing rates for the 'Jobcentres' (ESD) than the job seekers survey. For example, the National Survey of Engagements and Vacancies (NSEV) by MSC (1977) put the ESD share of total placements at 23%. (See also the Employer Recruitment Practices by Social and Community Planning Research; 1977). Several employee-based surveys, (i.e. The General Household Survey 1977; and the National Opinion Polls 1977) asked about the method of recruitment for the present job to job seekers who had changed job at least once in the preceeding year, hence engagements by the 'unemployed' were omitted and multiple job changes were not considered. (These two surveys put the ESD share at 13% and 9% respectively). Both the NOP and CDP reports have placed considerable emphasis on the role of informal approaches to firms and "tip offs" from friends and relatives, and both reports suggested that these sources are probably under represented.

1.3.2 The Minimum Wage¹

The National Survey of the Unemployed by Daniel (1974) investigated the qualities sought in jobs with reference to the "minimum" acceptable wage. Daniel concluded that over-selectiveness and over-demanding criteria in relation to new jobs were not a general reason for people being out of work. Only 31% of the sample reported that they had turned down any job offer. The chief reason given by these respondents was the level of pay

Note 1 The minimum acceptable wage (or reservation wage) is a fundamental concept in theoretical models of job search. Kiefer & Neumann have examined the cocept and their work is included in Appendix A5.

offered. Table 1.10 shows the breakdown of reasons for rejecting job offers.

TABLE 1.10 REASONS FOR TURNING DOWN JOB OFFERS

Reasons (398 job offers rejected)	Total (%)
Pay too low	41
Nature of Work Unsuitable	19
Too far to travel/would have to move house	12
Hours unsuitable/shift work	11
Not fit/strong enough (Health Reasons)	9
Don't like people/Employer	2
Family Commitments	2
Others	100

Source W Daniel (1974)

It is interesting to note that a 'travel' reason was relatively important, which implies that transport factors could significantly influence that locational pattern of job search behaviour. Further it is suggested that this factor might assume greater importance in an examination of reasons for rejecting an interview offer and in the reasons behind a decision not to follow up a known job vacancy. Travel factors, therefore, represent a substantial "cost" which is likely to influence decision making by an unemployed job seeker.

1.3.3 The Cost of Job Search

Rosenfield (1977) has investigated time and distance factors in the 'cost' of job search. It was reported that (in the United States) job seekers spent an average of seventeen

hours per week searching for work. Several factors were seen to influence the length of time spent searching. For example those searchers who primarily relied on letter-writing, telephoning and answering newspaper advertisements, only searched for a few hours each week. Rosenfeld argued that time spent searching depended upon the area in which individuals were prepared to look for employment, and he concluded that

"only by expanding search into surrounding areas can they fruitfully spend much more time in their quest for a job."

This implies that improved accessibility could make certain job seekers more competitive in the labour market, by facilitating travel to further destinations.

Rosenfeld discovered that over 40% of the sample had only searched within 10 miles of home (this figure is for the United States).

The table below shows the breakdown of distances for men and women.

TABLE 1.11 DISTANCE TRAVELLED IN SEARCH OF WORK (ROSENFELD 1977)

	Total	Men	Women
Total Reporting	5,854,000	3,198,000	2,656,000
Didn't travel to look for work	448,000	169,000	280,000
Did travel " " " "	5,406,000	3,030,000	2,376,000
	%	%	%
10 miles and less	41	32	52
11-25 miles	32	32	53
26-50 miles	15	19	11
Over 50 miles	12	16	5

Source: Rosenfeld (1977)

He concluded that:

"Residents of central cities in Metropolitan areas might not have searched far from home because many employers might be clustered in their area, in addition, many of them might have had TRANSPORTATION PROBLEMS which prevented them from extending the area of job search."

He further explained that this 'transport problem' might affect the distance the job seeker would be willing to commute to a job. An exploratory study 'Transport for the disadvantaged in Glasgow' by Mil Research Ltd. (1976) has shown that many of the unemployed respondents were not prepared to travel long distance and incur monetary and time expense, on the "off chance" of getting a job. However, if the job was guaranteed, then the respondents claimed that in the majority of cases they would have been prepared to travel the distance to work to the firm offering the job. Hence it appears that transportation factors can represent an important obstacle to 'effective' job search.

1.3.4 Problems in Job Search

In order to identify the problems and difficulties encountered in finding new jobs, Daniel (1974), asked a sample of recently unemployed how difficult they thought it would be to find another job. He also asked those who had been unemployed for over six months how likely they thought that they would find a job within the next month, and why.

Table 1.12 shows that personal handicaps (especially age) were expected to be the chief source of difficulty.

TABLE 1.12 REASONS FOR EXPECTING DIFFICULTIES IN JOB SEEKING

(Base: All those expecting difficulty)

Base no. for percentages	814	
	%	
Age	25)	
Ill health/lack of fitness/disability	19)	49
Personal problems/prison record/ alcoholism etc.) 5)	
Shortage of jobs in my line/trade	17)	
Shortage of jobs in general	14)	42
Shortage of jobs of type wanted - well paid, light etc.) 11)	
Lack of skills/training/qualifications	5	
Time of year	3	
Family/domestic problems	1	
	—	
	100	

Source: Daniel (1974)

Hence, half of those who expected problems in finding a new job set out on job search with the belief that they had certain personal characteristics which would make it particularly difficult for them to find work. The second general source of expected difficulty was perceived shortage of jobs. Younger workers were more likely to expect difficulties on account of the general state of the job market, while older workers expected their personal characteristics, especially age, to be the key problem. "The more difficulty these people expected, the less frequent were their job applications" (Daniel). Daniel explained that this is not to imply that the expectation of problems linked with age and ill-health became a self-fulfilling prophecy, but simply that it reduced motivation and accentuated the difficulty of finding a job.

The length of time people had already been unemployed was closely and directly related to their expectations of finding a job within six months. The longer they had been out of work the less likely they thought it was that they would find a job. This trend was particularly marked among the older age groups.

The Report of the NOP survey (1977) revealed that in the sample unemployed job seekers compared to the employed job seekers were comprised of a higher proportion who left school at 15 of individuals with some reading difficulty and of people with no qualifications. (See Table 1.13). These factors may make finding a job more difficult but it can not be concluded that these factors put the unemployed job seekers at a disadvantage in search behaviour.

TABLE 1.13 COMPARISON OF UNEMPLOYED PEOPLE AND WORKING JOB SEEKERS

<u>Education</u>	<u>Working Job Seekers (%)</u>	<u>All Unemployed (%)</u>
leaving school under 15	10	19
with GCE 'O' levels	29	23
no qualification	42	58
<u>Race</u>		
White	96	95
<u>Reading</u>		
with problems	2	5
<u>Housing</u>		
owner occupier	48	36
council tenant	41	55
with telephone	58	53
with car or motorbike	49	31

Source: NOP Survey (1977)

It is noteworthy that a greater proportion of the 'unemployed' sample lived in council housing. This group may be unwilling (or unable) to take up work which involves moving house, because of fears as to whether or not they could obtain equivalent council housing elsewhere. Individuals can increase their job opportunities by improving their skill levels or by increasing 'mobility', either by moving house or being able and prepared to travel further to work from the present home location. If council house tenancy, low income or attitudes preclude the moving house option, then it is essential that the job seeker has maximum accessibility. Also unemployed job seekers living in council houses are less likely to have access to private transport. The NOP survey found that of the unemployed, generally, only 31% had a car or motorbike compared with around 50% of the sample of already employed job seekers. Furthermore, the NOP survey revealed that 73% of the unemployed job seekers had not even considered moving house to obtain a job; and over three fifths (63%) wished to travel no more than 10 miles to their work place. A sizeable group among the unemployed is thus likely to use only those job search methods which yield information on jobs in their local area, or jobs perceived to be accessible by public transport.

In conclusion, 'transport' factors are an important problem consideration to many job seekers. The 'cost' incurred by journeys to interviews and speculative visits to firms is clearly a major contributor to the total costs of job search. Therefore it is surprising that specific measures to reduce the large

'transport' element in these 'costs' has generally remained a neglected option in this country. In the United States this has not been the case and several experiments have attempted to find a transport solution to inner city employment problems.

1.4 TRANSPORT SOLUTIONS TO EMPLOYMENT PROBLEMS

Most of the experiments in the United States were based on an assumption that unemployed blacks are trapped in job scarce ghettos, unable to reach suburban plants where many good positions are waiting to be filled. Twelve transportation experiments were established in North American cities in the early 1970's based on this reasoning. Virtually all of these experiments failed. Goering and Kalacheck (1973) suggest that four incorrect assumptions were made.

1. Jobs are not available in the inner city
2. Suburban employers want to employ inner city blacks
3. Blacks want to travel to a 'white' area for employment
4. Public transport can be provided on a regular fixed-route basis

If the differences between American and British cities are recognised and the same incorrect assumptions are avoided then further research into the ways in which public transport can provide the unemployed with access to a wider range of job opportunities should not be ignored. Clearly research of this nature in the United Kingdom must initially attempt to understand, fully, the public transport 'needs' of job seekers.

V. Marando (1974) has presented data from the United States Census which tends to reject the hypothesis that transportation factors present a barrier between unemployed residents of low income city neighbourhoods and the employment opportunities available in other areas. Only 0.5% of a sample of central city, long-term unemployed gave transportation as a reason for not looking for employment. The point should be made that Marando dealt with 'discouraged workers' who may well have personal reasons for not actively searching for a job. Also as the NOP report suggests, residents of low income areas generally seek employment near to their homes and it may well be argued that jobseekers are not aware of employment opportunities elsewhere; hence they would not cite transportation as a problem if they are unaware of job opportunities located in an area of the city which they do not even consider.

Thus it can be hypothesised that job seekers will either not discover, or decide not to follow-up vacancies situated in unknown or unfamiliar locations; which means that individuals are probably not aware of transport problems which might actually affect them. This becomes more significant if knowledge (and availability) of the public transport network is inter-related with those locations 'known' by an individual. It is quite likely that large sections of a city which offer job opportunities are not considered by job seekers because the jobs are located beyond the job seeker's knowledge of the city, irrespective of physical accessibility.

Obviously a standard transportation questionnaire cannot adequately tackle this issue. An approach is required which will measure the locational pattern of urban awareness and investigate

its relationship with the locational aspect of subsequent search behaviour. This type of approach comes under the heading of "cognitive - behavioural geography".

1.5 COGNITIVE-BEHAVIOURAL GEOGRAPHY

'Cognitive-behavioural' studies have emerged from developments in the field of "Behavioural Geography". Instead of just analysing broad statistical patterns of movement, geographers have attempted to explain WHY certain patterns of movement occur by investigating an individual's DECISION-MAKING. Hence a school of geographical research has moved away from the question of how movement patterns differ between areas to the investigation of how individuals find out about and decide between places to visit. In particular, behavioural geography has investigated the process of decision making by individuals in the search for certain commodities, such as houses, shops and recreational amenities. However, few of these studies have actually measured 'environmental perception' at the outset of search. Rather, many of these 'behavioural' studies have concluded that the locational patterns of search behaviour, probably reflected the locational patterns of the 'urban image' (i.e. environmental perception). Similarly, the studies of 'environmental perception' have failed to empirically measure subsequent search behaviour and these 'perceptual' studies have also tended to make the same, but reverse, conclusion (i.e. that the 'urban image' might influence subsequent search behaviour).

1.5.1 Some Cognitive - Behavioural Studies

Reviews of literature on both 'environmental perception' and 'behavioural geography', which is relevant to this present study, is included in Appendix A5 and Appendix A6 respectively. However, several specific implications emerge from this literature review, which will be considered here.

Orleans P (1973) measured the 'urban image' of Los Angeles by aggregating sketch maps of the city drawn by residents from four distinctive locations. The study demonstrated how ethnic minority groups resident in inner city areas produced impoverished 'urban image' compared to white suburban residents. Public transport features such as the 'bus depot' and the 'station' were particularly evident in the maps drawn by the 'inner city' groups. (See Appendix A6 for detailed description of this study.)

Appleyard (1973) noted that subjects dependent upon public transport could not draw as coherent mental maps of the city as car owners. Appleyard concluded that automobile dominant travellers developed their cognitive maps more broadly, relying less on individual routes while bus travellers kept very much to repeated sequential journeys.

This demonstrates that travel mode is an important variable in the structure of 'mental images' of a city, and suggests that those dependent upon public transport possess a limited knowledge of the entire city and its transportation network, and therefore at more distant destinations. It is postulated that job seekers will only apply for vacancies situated in comparatively 'familiar' locations. In order to test this postulation, it is necessary

to understand decision-making behaviour in the process of job search.

A basis for many 'behavioural studies' has been the conceptual model of decision-making in the search for a new home introduced by Brown and Moore (1971). The model (described in Appendix A6) suggests that when search commences, each individual possess an 'Aspiration Region' defined as the minimum requirements that the searcher is prepared to accept and the maximum that he/she aspires to find. Aided by various information sources the searcher discovers possible vacancies within his/her 'search space'. The vacancies found are then compared to the 'Aspiration Region'. This represents a cognitive - behavioural approach to the process of house search.

1.5.2 Criticisms of Cognitive-Behavioural Studies

The study by Brown and Moore in fact only collected data on the house search activities (i.e. behavioural component) and like other studies, only extrapolated from the data that the "urban image" might have influenced the empirically measured search behaviour. Few studies have actually used a truly cognitive-behavioural method where the 'image' at the outset of search is measured and gauged against subsequent behaviour. The studies by Green (1974) on industrial location and Elson (1976) on recreation travel have both tried to test the inter-relationship between image and behaviour. However, both studies have taken samples from different stages in the decision making process for their investigations. Difficulties

arise in comparing 'images' of different groups at different stages in the search process which may be further exacerbated by memory and recall inadequacies. A comprehensive 'cognitive-behavioural' approach should therefore collect data on the images and aspirations of individuals at the outset of search and then monitor the subsequent decisions made by the same individuals in the search process.

1.6 A COGNITIVE-BEHAVIOURAL STUDY OF JOB SEARCH

The above discussion of previous studies and the more detailed descriptions in Appendices A5 & A6 of previous studies has shown that a 'cognitive-behavioural' approach can be, but has not yet been, applied to a study of job search. A need has also been identified for comprehensive 'cognitive-behavioural' studies which go beyond the general and inferential conclusions that a measure of one component (e.g. behavioural) is influenced by the other (e.g. cognitive) and vice-versa; and for studies which investigate the entire decision-making process, from the outset of search for the same sample over a given time period.

The aim of this study therefore is to investigate the thesis that; "The pattern of job search is related to the pattern of awareness of the city (i.e. The Mental Map)."

CHAPTER TWO

THE RESEARCH OBJECTIVES
AND HYPOTHESES

2.1 INTRODUCTION

This research adopted a 'cognitive-behavioural' approach to a study of the job search process. A conceptual model shown in figure 2.1 was developed to represent the job search process in a cognitive-behavioural context. The description of the model, which follows, identifies and defines a number of stages (i.e. concepts) in the search process. These stages provided the framework for the research objectives and hypotheses and hence, the structure of the survey and subsequent analysis and hypotheses testing.

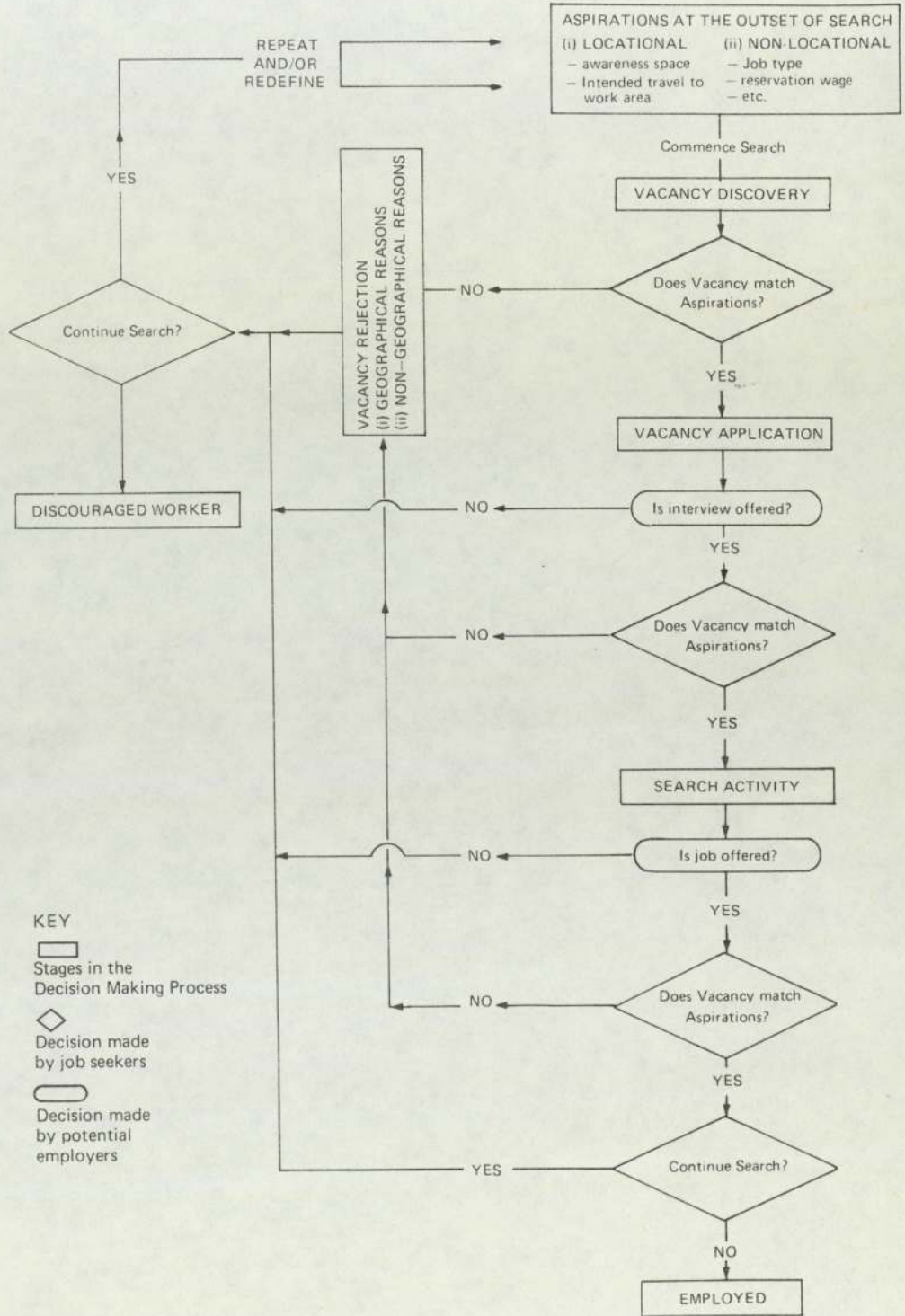
This chapter describes the conceptual model and outlines the research objectives. The techniques used to achieve the objectives and the research hypotheses are also clearly defined.

2.2 A CONCEPTUAL MODEL OF JOB SEARCH

2.2.1 Job Aspirations - Upon commencement of job search, and at later stages in a spell of unemployment, an individual is presumed to possess Job Aspirations defined as "the minimum level of a job's attributes required by a job seeker and the maximum level he or she expects to find". The Aspirations have both a non-locational and a locational component.

(a) The Non-locational Component includes the type of work required, working conditions and a variety of other preferred job characteristics. It also includes the "Reservation Wage" which is the minimum wage acceptable to the individual at each stage in the spell of unemployment.

FIGURE 2.1 A CONCEPTUAL MODEL OF THE JOB SEARCH PROCESS



(b) The locational Component includes a set of possible job locations that are considered to be acceptable by each job seeker. This set of locations is the result of a complex process based on urban knowledge, attitudes to travel and motivation to search. It is expected that this locational component will change as a result of search experience.

An important factor in the locational component is urban knowledge or "Awareness Space" which is defined as "all locations in a given geographical area about which an individual has some information even if he or she has not visited each and every location."

Implicit in the above definition of "Awareness Space" is a subdivision into those locations visited and those locations that have never been visited. These two divisions can be termed Activity Space and Indirect Awareness Space.

(i) Activity Space - includes all locations ever visited by an individual. This 'Space' can be divided still further based on the frequency of visit to each location, whether daily, weekly or yearly.

(ii) Indirect Awareness Space - includes all locations in the geographical area which the individual has never visited but at least obtained some information. (Districts of the city which the individual has no information, i.e. 'never heard of', are outside the awareness space).

Note 1 For the purpose of this study the geographical area has been defined as the continuously built up area of Birmingham. The locations within the area have been defined as the 'Districts' which make-up the whole city.

For the purposes of this study it has not been necessary to explicitly measure the distinction between 'Activity Space' and 'Indirect Awareness Space.' However any measure of 'awareness space' will, of course, include both of these concepts.

Another factor in the locational component of job aspirations is attitudes to travel. Job seekers are presumed to have opinions on how far and how long they intend to travel to work. A combination of Awareness Space and attitude to travel define a set of locations which have been termed the "Intended Travel to Work Area" (ITWA).

2.2.2 Decision-Making - The model postulates that a series of decisions are made in the search process based on a comparison of the characteristics of the Aspirations (both locational and non-locational) with the corresponding characteristics of a discovered vacancy.

(a) Vacancy Discovery - is comprised of all the job vacancies discovered by a job seeker. Once a vacancy and its details have been established the individual then decides whether or not to follow-up the vacancy.

(b) Vacancy Rejection - represents those vacancies the individual decides not to apply for. This stage can be divided into those vacancies rejected for 'locational' reasons and those rejected for 'other' reasons.

(c) Vacancy Application - represents the vacancies that an individual decides match his or her Aspiration Level (both locational and non locational components). The job seeker then makes an application to the firm for the vacancy. (Note 1).

Once an individual has applied for a certain job vacancy it is then the decision of the potential employer whether or not to offer an interview. If an interview is offered the job seeker then decides whether or not to accept the interview.

(d) Search Activity - represents all the firms visited by a job seeker for a job interview. This can also include those firms that are visited 'on spec' without the job seeker previously receiving a formal invitation to an interview.

The potential employer then decides whether or not to offer the job to the applicant. The job seeker who receives a job offer then decides whether or not to accept the offer.

As indicated in the diagram of the decision-making model, another decision must be made at the end of the decision-making process. This fourth decision, "whether or not to continue search " is especially relevant to the study of the duration of unemployment. If the individual decides to continue search then he or she may simply repeat the process with another discovered vacancy, or redefine the job Aspiration characteristics and then repeat the process.

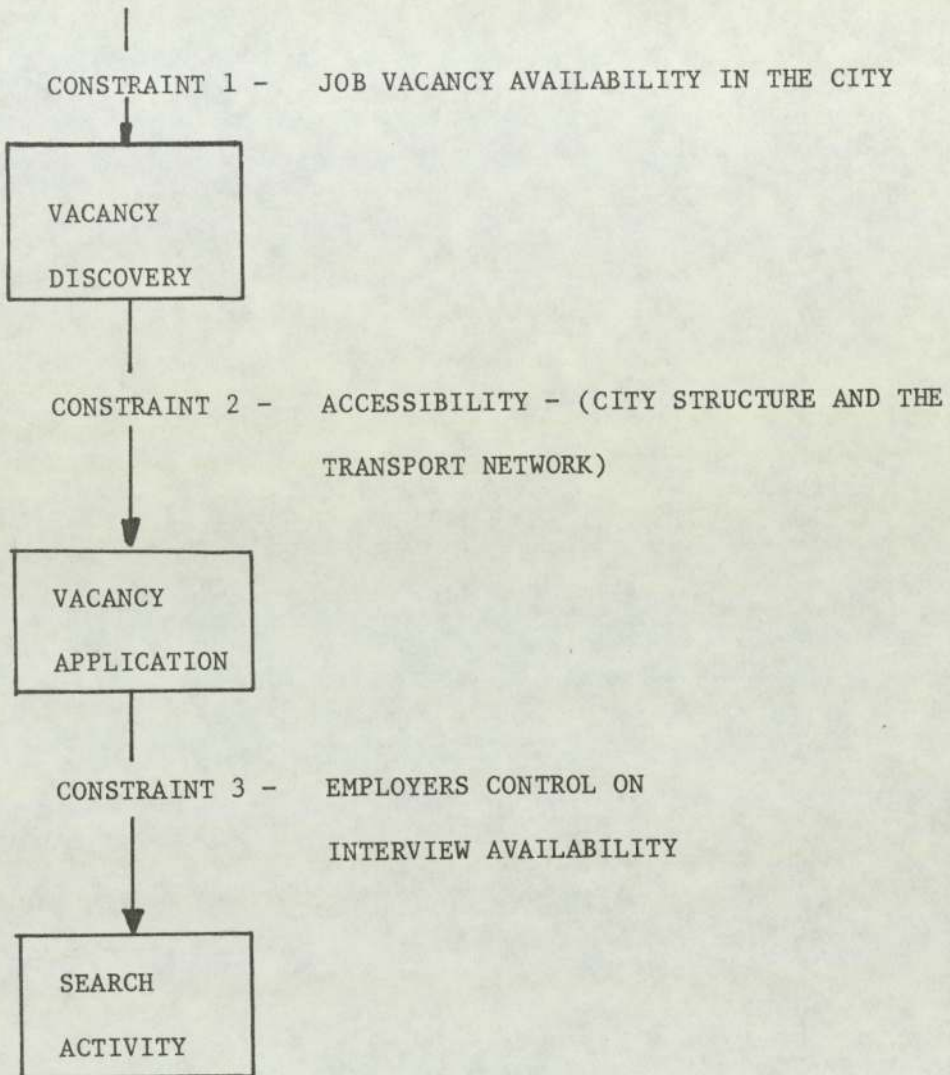
Note 1 A job seeker may decide to follow-up a vacancy simply to discover more details. When the details are discovered the individual then decides to either reject or apply for the vacancy.

2.2.3 External Constraints

This research has investigated the decisions made by individual job seekers. However, as the model and above discussion indicate, each stage in the search process is subject to possible external constraints. These include the availability of job vacancies, the city structure and its transportation system (i.e. 'accessibility') and employers recruitment practices.

Figure 2.2 shows the stages in the search process which might be influenced by each constraint. Each constraint would have some influence on all stages because job search is a continuing process. For example experience of employers' control on interview availability could feed-back to affect the rates at which vacancies are subsequently discovered and followed up by a job seeker.

FIGURE 2.2 - CONSTRAINTS ON THE JOB SEARCH PROCESS



While the research has studied the decision-making by individual job seekers these external constraints on the search process have not been ignored. Hence the discussion of the results of the survey has given reference to the possible influence of these constraints by inference from data on job seekers' decisions.

2.3 THE RESEARCH OBJECTIVES

2.3.1 The Main Objectives ('Cognitive-Behavioural') -

The MAJOR OBJECTIVE of the research was;

.....to determine the locational pattern of awareness of the city (i.e.'cognitive') and to examine its influence on the locational pattern of each stage in the job search process (i.e. 'behavioural').....

In order to achieve this objective it was necessary to understand the decision-making by job seekers. It was also necessary therefore to consider, briefly, the non-locational aspects of the relationship between job aspirations and subsequent job search behaviour, as well as the locational aspects of this relationship. By way of emphasising that the research was primarily concerned with the geographical patterns of the search process, the expressions 'space' and 'area' can be added to the 'behavioural' concepts (i.e. Vacancy Discovery Space, Vacancy Application Space, Vacancy Rejection Space and Search Activity Space) and to the 'cognitive' concepts (i.e. Awareness Space and Intended Travel to Work Area) in the 'Conceptual Model' shown in Figure 2.1.

This approach has been used because it facilitated an examination of the contention, discussed in Chapter One, that job seekers rarely cite transportation problems because they generally do not discover or fail to consider job vacancies located in unknown or unfamiliar districts of the city. Another aim therefore was to investigate the influence of the available and 'perceived' transport infrastructure and accessibility on urban awareness and subsequently on job search travel behaviour.

2.3.2 The 'Cognitive' Objectives - The aim of the 'cognitive' component was to examine the job aspirations of unemployed individuals at the outset of job search. Information was required on the non-locational (e.g. nature of work) as well as the locational characteristics of the jobs sought.

It was important to establish the maximum distance and time that job seekers were prepared to travel to work, and to establish the locations in the city to which these individuals were prepared to travel for work purposes (ie. the intended travel to work area (I.T.W.A.)). The aim was to compare the locations accessible within the maximum intended time and distance to work within the ITWA. The purpose of this comparison was to test the contention that the ITWA is the result of complex factors rather than simple accessibility. It was argued that ITWA represents 'perceived' accessibility, and is therefore closely related to 'Awareness Space' (see definition in Section 2.2). Consequently a further requirement was to develop an adequate 'Index of Familiarity' in order to define patterns of 'awareness space' and to facilitate a comparison of data on the locational aspects with subsequent search behaviour.

Another aim of this project was to establish job seekers' knowledge of the bus network at the outset of search and examine its relationship with patterns of 'awareness space' and subsequent job search behaviour.

In Chapter One it was revealed that previous studies have identified several variables which influence environmental perception(eg. car ownership and residential location.) This research has considered these possible variables in the investigation of patterns of both 'awareness space' and search

behaviour. The home location of job seekers is an especially important variable because it is generally inter-related to other socio-economic factors and because each location has a distinctive pattern of accessibility. Hence, another objective was to define 'awareness space' for groups of individuals, based on the relative proximity of their home locations to each other. Special attention was given to 'inner city' and suburban differences.

2.3.3 The 'Behavioural' Objectives - The aim of the 'behavioural' component was to understand the entire decision-making process from the outset of job search and so test the validity of the 'conceptual model' as a useful framework for studying job search. While emphasis was placed on studying the 'choices' made by individuals, the possible influence of external 'constraints' was also considered. (See Figure 2.2). A more specific aim was to measure the locational pattern of each conceptual stage (e.g. 'Vacancy Application Space') in the search process in order to achieve the MAJOR OBJECTIVE.

The research was concerned with both the use of information sources to discover job vacancies and the 'effectiveness' of each source to produce interview and job offers. It was important to measure the locational pattern of discovered vacancies (i.e. 'Vacancy discovery space') because of possible spatial biases in the availability and acquisition of vacancy information. Particular attention was given to the reasons why job seekers did not apply for (i.e. 'rejected') discovered vacancies because it was therefore possible to establish the nature and relative importance of 'locational'

and 'transport' reasons. Obviously, it was possible that vacancies were 'rejected' purely because of non-locational reasons (e.g. unacceptable wage offer). However, as the model suggests, a discovered vacancy must satisfy both the non-locational and locational characteristics of a job seekers 'aspirations' before it is followed-up. Hence 'vacancy application space' can be expected to have a distinct geographical pattern. A measure of this conceptual stage was an important aim because it indicated the motivation of an individual to find work (i.e. the frequency of applications) and it represented the possible journey to work destinations acceptable to a job seeker after a given period of search.

A comparison of the locational pattern of interview offers and 'vacancy application space' was expected to show the probable influence of 'employers recruitment practices' on employees search process. An objective therefore was to measure the spatial distribution of journey-to-interview destinations (i.e. 'search activity space'). A further purpose of the project was to analyse job search travel behaviour (i.e. journeys to interviews and 'speculative visits' to firms) in terms of modal split and the average time, distance and cost spent in the search for employment. This facilitated an examination of the transportation factors in the process of job search. 'Search activity space' represents the actual travel behaviour which resulted from a series of decisions in the search process. The research looked at the importance of travel modes to relatively distant and/or less 'familiar' locations in the city. Therefore a comparison of the use of bus routes with a job seekers knowledge of the bus network was required. It was also relevant to establish whether travel information was obtained prior to journeys to interviews.

Another important 'behavioural' objective was to study job take-up rates during a given period in order to reveal possible differences in the background details of 'employed' versus 'still unemployed' job seekers. It was also considered important to investigate differences in the decision-making process and in the 'cognitive-behavioural' relationship between those individuals successful and those unsuccessful after the first few weeks of job search (i.e. the survey period). The final area of research was to study the affects of the duration of unemployment on job search behaviour.

- 2.3.4. Objectives on the Duration of Unemployment - The research studied the development of job search behaviour from the outset of a first-ever spell of unemployment. A longitudinal approach was preferred in order to avoid the difficulties of memory and recall for survey participants and the problems involved in comparing behaviour of various groups with different lengths of a current spell of unemployment. The 'longitudinal' approach facilitated a more meaningful understanding of the effect of continuing unemployment because it monitored decision-making of a given set of individuals over a given period of job search. The research was particularly concerned with the relative importance of transport factors and possible changes in the locational patterns of job search during the first few weeks of unemployment. Hence, the specific research aims under this general topic were to investigate possible changes with the duration of unemployment in (a) decision-making, (b) relationships between 'cognitive' and behavioural' components and (c) the locational patterns of each stage in the job search process.

2.4 TECHNIQUES

In order to understand the job search process in the context of the 'decision-making model', simple summary statistics (e.g. means and standard deviations) and standard statistical tests (e.g. 'Z' test, students 't' test and chi-squared) were considered useful. However a more sophisticated approach was needed to facilitate a comparison within and between the locational patterns, in the job search process. Hence, while it was necessary and informative to be able to compare graphically the locational patterns of the cognitive and behavioural components, it was also essential to be able to test statistically possible relationships between the different locational patterns.

2.4.1 Graphical Techniques - The most obvious graphical approach for summarizing location patterns is the Shaded Map. The frequency distribution of data was divided into classes and a set of locations (or areas) was each assigned a class depending on the frequency of occurrence of data at that location (or area). Each class was represented by different shading. Therefore 'Shaded Maps' were used to summarize patterns of 'Awareness Space' and 'Intended Travel to Work Area' (ITWA) as well as the locational aspects of job search behaviour (i.e. Vacancy Discovery Space, Vacancy Application Space, Vacancy Rejection Space and Search Activity Space).

An additional technique for summarising geographical patterns is the "Standard Deviation ellipse" (SDE). The SDE is a 'centrographic technique' which measures the mean centre of a point distribution and the degree of dispersion. In otherwords, it is a graphical representation of statistics used

to summarize numerical frequency distributions. The main advantage of this technique is that it simultaneously measures sectoral, directional and distance biases in a point distribution. Most other techniques for summarizing geographical patterns (e.g. nearest neighbour analysis) only measure one spatial bias at a time. It was important to measure simultaneously these biases because one spatial bias might distort another and conditions resulting from spatial bias would not occur independantly. The spatial biases in a distribution summarised by the SDE are"

- (i) The overall volume of interaction as defined by the area of the ellipse.
- (ii) The degree of spatial concentration (i.e. distance) as expressed by the dimensions of the major and minor axis.
- (iii) The general shape of the distribution (i.e. sectorality) as expressed by the coefficient of circularity (dividing minor axis by major axis).
- (iv) The directional bias as indicated by the tilt of the major axis.

The main limitation of the SDE technique is the restricted range in shape and inevitable symmetry of the resultant ellipses. However, calculating ellipses to summarise point distributions does allow analysis to reach beyond the limits of simple descriptive terms such as 'clustered', 'random' and 'uniform'. The technique has a wide potential not only for comparing patterns but for generating further hypotheses about point distributions.

(The method of calculating the SDE, and examples of how the technique has been used in other studies are presented in Appendix B1). Comparison of SDE's quickly show differences and similarities in the general characteristics of two spatial distributions while shaded maps facilitate a more detailed, yet more cumbersome comparison. The SDE's and shaded maps for each of the concepts defined in the model have been made into a 'Map Supplement'. The Map Supplement has been designed to facilitate an easy comparison of locational patterns between the cognitive and behavioural components in the search process.

2.4.2. Statistical Tests - In order to test statistically possible relationships between locational patterns it was necessary to convert the graphical summaries of the locational patterns into numerical frequency distributions. This was achieved by defining the boundaries of the city and dividing it into standard districts. This facilitated a comparison of different sets of figures for each district of the city which therefore lent itself to statistical testing (e.g. chi-squared). This made it possible to put forward specific hypotheses about the job search process. Furthermore any dissimilarities and similarities between locational aspects of job search identified by the 'Map Supplement' could be tested to levels of statistical significance.

2.5 Hypotheses

The structure of the conceptual model of job search is used to present the research hypotheses in tables 2.1, 2.2 and 2.3. Table 2.1 outlines the hypotheses with respect to each stage in the decision-making process and the cognitive-behavioural relationships behind these decisions. Hypotheses about differences in the search process between successful and unsuccessful job seekers are presented in table 2.2. Finally, table 2.3 defines the hypotheses regarding possible changes in the search process with the duration of unemployment. The structure of these hypotheses (i.e. the conceptual model) has been used to organise and present the analysis of the survey results in chapters five and six.

TABLE 2.1
HYPOTHESES ON THE PROCESS OF JOB SEARCH

STAGES IN THE
 CONCEPTUAL
 MODEL

DECISION-MAKING

COGNITIVE-BEHAVIOURAL RELATIONSHIP

1. There is no statistically significant difference in the frequency of skill levels of the jobs preferred between 'inner city' and 'suburban' respondents.
2. There is no statistically significant difference between the frequency of respondents in the four groups who are prepared to consider job vacancies other than the type of work most preferred.

NON-LOCAL ASPECTS

1. There is no statistically significant difference in the maximum time respondents are prepared to spend on a journey to work between each of the locational divisions of the sample.
2. There is no statistically significant difference in the distance respondents are prepared to travel to work between each of the locational divisions of the sample.

LOCAL ASPECTS

1. There is no statistically significant difference between the distribution of awareness scores assigned to those districts included and those not included in the Intended to Travel to Work Area.
2. There is no statistically significant correlation between the frequency which respondents consider a district to be accessible by bus and the sum of awareness scores assigned by respondents to each district.

JOB ASPIRATIONS

TABLE 2.1 (CONTINUED)

STAGES IN THE CONCEPTUAL MODEL	DECISION-MAKING	COGNITIVE-BEHAVIOURAL RELATIONSHIP
1. There is no statistically significant difference between the frequency of vacancies discovered through each information source.	1. There is no statistically significant difference in the frequency distribution of vacancies discovered by awareness score between each information source.	1. (a) There is no statistically significant difference between the frequency distribution of vacancies discovered in districts assigned to each awareness score. 1. (b) There is no statistically significant difference in the frequency distributions of vacancies discovered in districts assigned to each awareness score between the four groups.
1. There is no statistically significant difference between the frequency distributions of vacancies discovered by respondents in each of the four groups.	1. There is no statistically significant difference between the rate of applications per vacancies discovered in locations assigned to each awareness score.	2. There is no statistically significant difference between the rate of applications per vacancies discovered in locations assigned to each awareness score.
2. There is no statistically significant difference between the rates of applications per vacancies discovered by respondents in each of the four groups.	3. There is no statistically significant difference between the proportion of locational reasons for rejecting vacancies located in districts assigned to each awareness score.	3. There is no statistically significant difference between the proportion of locational reasons for rejecting vacancies located in districts assigned to each awareness score.

TABLE 2.1 (CONTINUED)

STAGES IN THE CONCEPTUAL MODEL	DECISION-MAKING	COGNITIVE-BEHAVIOURAL RELATIONSHIP
BEHAVIOURAL COMPONENT	1. There is no statistically significant difference between the frequency distributions of vacancy applications by respondents in each of the four groups.	1.(a) There is no statistically significant difference between the frequency distribution of vacancy applications to firms located in districts assigned to each awareness score.
	2. There is no statistically significant difference between the rates of interviews offered per applications by respondents in each of the four groups.	1.(b) There is no statistically significant difference in the frequency distributions of vacancy applications to firms located in districts assigned to each awareness score between the four groups.
VACANCY APPLICATION	2. There is no statistically significant difference between the rates of interviews offered per applications by respondents in each of the four groups.	2. There is no statistically significant difference between the rate of interviews offered per application to firms located in districts assigned to each awareness score.



TABLE 2.1 (CONTINUED)

STAGES IN THE
CONCEPTUAL
MODEL

DECISION-MAKING

COGNITIVE-BEHAVIOURAL RELATIONSHIP

1. There is no statistically significant difference between the frequency distributions of job search journeys by respondents in each of the four groups.

1(a) There is no statistically significant difference between the frequency distribution of job search journeys to destinations in districts assigned to each awareness score.
1(b) There is no statistically significant difference in the frequency distributions of job search journeys to destinations in districts assigned to each awareness score between the four groups.

2. There is no statistically significant difference between the modal split of job search journeys by respondents in each of the four groups.

2. There is no statistically significant difference between the modal split of job search journeys to destinations in districts assigned to each awareness score.

3. There is no statistically significant difference between the rates of job offers per interviews attended by respondents in each of the four groups.

3. There is no statistically significant difference between the rate of job offers per interviews at firms located in districts assigned to each awareness score.

1. There is statistically no significant difference in the rate of job take-up during the survey between a breakdown of the sample into the following characteristics: Age, Sex, Ethnic Group, Car Ownership, Exams, S.E.G., previous employment and area of residence.

1. There is no statistically significant difference between the frequency distributions of jobs obtained at firms located in districts assigned to each awareness score.

SEARCH ACTIVITY

BEHAVIOURAL COMPONENT

EMPLOYMENT

TABLE 2.2 HYPOTHESES ON THE DIFFERENCES IN THE JOB SEARCH PROCESS BETWEEN RESPONDENTS 'EMPLOYED' AND CONTINUING 'UNEMPLOYED' AT THE END OF THE SURVEY

STAGES IN THE CONCEPTUAL MODEL	DECISION-MAKING	COGNITIVE-BEHAVIOURAL RELATIONSHIP
COGNITIVE COMPONENT OF THE CITY AWARENESS	1. There is no statistically significant difference in the proportion of vacancies rejected for locational reasons between the 'employed' and 'unemployed' respondents.	1. There is no statistically significant difference in the frequency distribution of districts assigned to each awareness score between the 'employed' and 'unemployed' respondents.
VACANCY DISCOVERY	2. There is no statistically significant difference in the proportion of vacancies rejected for locational reasons between the 'employed' and 'unemployed' respondents. 3. There is no statistically significant difference in the proportion of vacancies rejected for locational reasons between the 'employed' and 'unemployed' respondents.	1. There is no statistically significant difference in the frequency distribution of vacancies discovered in districts assigned to each awareness score between the 'employed' and 'unemployed' respondents.
VACANCY APPLICATION	2. There is no statistically significant difference in the rates of interviews offered per applications between 'employed' and 'unemployed' respondents.	1. There is no statistically significant difference in the frequency distribution of vacancy applications to firms located in districts assigned to each awareness score between 'employed' and 'unemployed' respondents.

TABLE 2.3 HYPOTHESES ON THE CHANGE IN THE PROCESS OF JOB SEARCH WITH THE DURATION OF UNEMPLOYMENT

STAGES IN THE CONCEPTUAL MODEL	DECISION-MAKING	COGNITIVE BEHAVIOURAL RELATIONSHIP
VACANCY DISCOVERY	<p>1. There is no statistically significant difference between the frequency distributions of vacancies discovered in the first and the second fortnight of unemployment.</p> <p>2. There is no statistically significant difference between the rates applications per vacancies discovered in the first and the second fortnight of unemployment.</p> <p>3. There is no statistically significant difference between the proportion of vacancies rejected for locational reasons in the first and the second fortnight of unemployment.</p>	<p>1. There is no statistically significant difference in the frequency distributions of vacancies discovered in districts assigned to each awareness score between the first and the second fortnight of unemployment.</p>
VACANCY APPLICATION	<p>1. There is no statistically significant difference between the frequency distributions of vacancy applications in the first and the second fortnight of unemployment.</p> <p>2. There is no statistically significant difference between the rates of interviews offered per applications in the first and the second fortnight of unemployment.</p>	<p>1. There is no statistically significant difference in the frequency distributions of vacancy applications to firms located in districts assigned to each awareness score between the first and the second fortnight of unemployment.</p>
SEARCH ACTIVITY	<p>1. There is no statistically significant difference between the frequency distributions of interviews offered in the first and the second fortnight of unemployment.</p>	<p>1. There is no statistically significant difference in the frequency distributions of job search journeys to destinations in districts assigned to each awareness score between the first and the second fortnight.</p>

CHAPTER THREE

THE SURVEY

3.1 INTRODUCTION

This chapter describes the survey carried out in the summer of 1980. The appropriate sample and the nature of the survey required to accomplish the research objectives are defined in the opening sections. A process of extensive piloting was necessary in order to design the most pertinent data collection and survey method. The series of pre-tests and the pilot survey itself are fully documented in Appendix C1, while the main points are included in this text. The final survey method and questionnaire which resulted from this lengthy piloting are explained at the end of the chapter. Specimens of the questionnaires can be found in Appendix C2.

3.2 THE TARGET SAMPLE

The type of sample appropriate to the objectives of this research was unemployed school leavers. This population was chosen because the individuals had no previous experience of unemployment (1) and because a sample could be recruited (through the Careers Service) at the beginning of job search. This criteria was important because the sample facilitated an examination of the original attitudes and aspirations of job seekers prior to the possible influence of previous experience of full-time job search. This meant that the entire decision-making process could be studied within the context of

Note 1 It is accepted that unemployed school leavers may have attended a small number of interviews before leaving school. The questionnaire was designed to collect data on possible search which occurred prior to individuals leaving school.

the 'conceptual model' postulated in chapter 2. It also meant that the locational aspects of each stage in the search process could be investigated over the period of the survey with confidence that only minimal expenditure had occurred on previous search costs (in particular travel costs). Hence, a sample of school leavers was most likely to demonstrate the effect of transport factors because it facilitated an investigation of decision-making from the starting point of a first ever spell of unemployment.

Furthermore, unemployed school leavers afforded a sample highly dependent on public transport. Measures of 'awareness space', intended travel, and subsequent patterns of search behaviour were all expected to be strongly controlled by availability and 'knowledge' of the public transport system. Therefore, the recruitment of school leavers supplied a relatively homogeneous sample of the unemployed which was apposite to the original brief and the fundamental objectives of the thesis.

The main shortcoming of a school leavers sample was that it did not, by its very definition, provide a cross section of all types of unemployed. Accordingly it excluded comparisons of search behaviour between groups such as the repeatedly unemployed versus the first-time unemployed; the employed versus the unemployed; and the 'long term' and 'between jobs' unemployed. Another possible shortcoming was that school leavers were unlikely to have the same degree of pressure to obtain work as experienced by a head of household, and some individuals might

view leaving school as any other summer holiday. In order to avoid this problem the sample was clearly defined to exclude those individuals who were considering further education. Also with 'youth unemployment' currently rising at comparatively high rates it is likely that school leavers deciding against further education will take job search very seriously.

3.2.1 Choice of Careers Offices - Youth Unemployment is a problem of growing concern in in this country. In a period of rapid increase in unemployment, the rate of increase in the number of 16 to 18 year olds without work is particularly noticeable (Note 1). Although unemployment has traditionally been concentrated in the inner city, it seems sensible to assume that those individuals, such as school leavers from a suburban area to contract with school leavers resident in the inner city. The Careers Service was used to acquire the desired sample. The Sutton Coldfield Careers Office provided access to recruitment of school leavers resident in the northern suburbs of Birmingham. The rest of the sample was recruited through the City, Aston and Handsworth offices. The city centre office catchment area includes districts of the city closest to the city centre which are within the Birmingham Inner City Partnership Programme (B.I.C.P.P.) defined 'core area' (Note 2). The Aston careers office (C.O.) has a catchment area which includes a district in the B.I.C.P.P. defined 'Partnership

Note 1 See chapter one for discussion of unemployment problems.

Note 2 For a definition of the B.I.C.P.P. 'core area' and 'partnership areas' see Appendix A1. Generally 'partnership' areas have less acute problems than the 'core' areas.

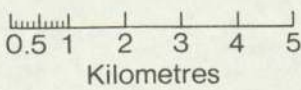
Area' (Note 2) (i.e. Erdington) and a peripheral council estate built to rehouse residents of redeveloped inner areas (i.e. Castle Vale). The Handsworth Careers Office was also chosen for two reasons. Firstly, the author had previously carried out analysis and written the report for the West Midlands Passenger Transport Executive (W.M.P.T.E.) travel survey in 'Handsworth and Lozells' (Note 1) and secondly, because the catchment area of the careers office includes one of the highest concentrations of ethnic minorities in Birmingham and indeed Britain. Figure 3.1 shows the Birmingham Inner City Partnership Area, and the districts of the city. The four Careers Offices used for recruitment are located in the following districts, Aston, City Centre, Handsworth and Sutton Coldfield (Centre).

Note 1 A copy of the 'Handsworth and Lozells' report of survey is included in the Appendices (Annex I). This experience of a standard transportation survey provided the author with an insight into some of the travel needs of inner city residents and workers (i.e. the original brief). It also provided an essential step towards clearly defining the objectives of this research (described in Chapter 2) which subsequently, determined the nature of the survey.

Birmingham inner city partnership area

Figure 3.1

- Partnership area
- - - Core area
- ||||| Areas with most severe social problems



3.3. NATURE OF THE SURVEY

The objectives and hypotheses of the research outlined in Chapter Two, dictated that the survey should be in two stages. The first (i.e. 'cognitive') stage was comprised of an initial interview which was designed to collect data on background details, job aspirations, search intentions and other 'cognitive' attitudes (including 'awareness space') held by an individual at the outset of job search. The second (i.e. 'behavioural') stage was to monitor as closely as possible decisions made in the process of job search. A 'Diary' survey undertaken as soon as possible after a decision had been made by a job seeker was considered the most suitable method of data collection. The 'diary' had the advantage of not only allowing for the collection of data on decisions but it was also designed to collect data on the reasons behind each decision. Another advantage was that a diary survey was a good method for studying attitudinal and behavioural changes because it is more precise than studying a series of independent samples at different stages in the search process. Further, the 'diary' approach shows the temporal ordering of variables.

The main disadvantage of a diary survey is the possible high rate of non-response. Specific problems are that respondents become more 'self-aware' whilst completing the

diaries and may consequently act differently. Diary entries may be incomplete because of low educational level, low motivation and survey fatigue and finally, a diary survey can be expensive if a high and accurate level of response is to be achieved.

To avoid some of the above disadvantages of a diary survey, the following measures were taken. Firstly, respondents were offered a financial incentive to complete the diaries (1). Secondly, trained interviewers were used to explain the diary format and to visit each respondent once a week to ensure that entries were correct and continuous. The problem of 'self-awareness' can not be easily overcome because of the impracticability of obtaining equivalent data from a 'control' group not given a diary. However, it was preferable that the format of the diary should assist rather than hinder job search.

3.3.1 The Pilot Survey - The nature of the survey meant that extensive piloting was necessary to ensure that the diary adequately collected data on the decision-making process. It was also essential that an 'awareness scale' (i.e. "familiarity index") was clearly defined to facilitate a meaningful comparison with specific decision-making behaviour. The response rate for the diary survey was tested using several methods which included postal response, paid versus unpaid, and between weekly, fortnightly, monthly and no visits by interviewers. Several different diary formats were also tested, and modified during the pilot survey. Similarly, the 'awareness scale' was thoroughly tested. The pre-tests and

Note 1 Payment was made at the end of the survey to avoid the possible influence of increased income on search behaviour.

pilot survey are fully explained in Appendix C.1. The rest of this chapter describes the final data collection and survey methods which were developed from the 'pilot' and used in the main survey.

3.4 DATA COLLECTION

The survey, as indicated above, was divided into two stages, an initial questionnaire and a diary survey. Copies of both are included in Appendix C2.

3.4.1 Initial Questionnaire - In the initial interview at the careers office, school leavers were asked questions on background details, job aspirations, search intentions and a series of 'cognitive' questions.

(a) Background Details - The research into 'environmental perception' (reviewed in Appendix A4) showed that a wide variety of factors can influence awareness of the city. It was desirable therefore to collect data on most of these variables. Information was also required on other factors which might influence unemployment and search behaviour. Hence, the initial questionnaire collected data on age, sex, qualifications, residence, socio-economic group, ethnicity, length of residence, access to a car and previous part-time work experience.

Data on previous interview experience was also elicited and the question was left to the end of the interview because it provided an introduction to the diary survey.

(b) Job Aspirations - The job aspirations were divided into non-locational and locational aspects. Questions on the former asked for details of the type(s) of job sought and other desired job details such as hours of work, shifts, holidays and

the minimum acceptable wage. While it was necessary to cover non-locational aspects the main emphasis was an investigation of the locational aspects. Therefore, questions were asked on the intended mode of travel and the maximum distance, time and cost (if travelling by bus) respondents were prepared to travel to work each day.

(c) Search Intentions - Respondents were asked whether or not they would leave home in order to take-up work. Obviously, the search by respondents wishing to remain at home is constrained by the ability to move daily from the home. Respondents were asked to indicate the sources of information which they might use in job search. Questions were also asked on how much money a respondent considered he/she would be able to spend each week on job search. Finally, data was required on 'Travelcard' possession because of its possible influence on job search activities.

(d) Cognitive Component - This was the most important section in the initial Questionnaire (i.e. first-stage of the survey) because the information was used to test the central hypothesis of the research. Data was collected on individuals' awareness of all districts of the City. The 'awareness space' question was designed so that locational data on job search behaviour (i.e. the "Diary") could be directly related to awareness space. In other words, it was possible to assign an awareness score to the location of each vacancy discovered by a job seeker.

As already indicated an important aim of the research was to examine the relationship between 'bus route knowledge', 'awareness space' and job search travel behaviour (i.e. 'Search Activity Space'). For this purpose respondents were asked to list all the bus routes that they could think of and indicate the districts of the city the bus travels to and from and name any districts in between through which the bus travels.

The final question in this 'cognitive component' section was addressed to the concept mentioned earlier: 'Intended Travel to Work Area' (ITWA). Previous questions asked for information on the maximum time, cost and distance individuals were prepared to travel to work. In this "ITWA" question the same individuals were asked to indicate the districts to which they were prepared to travel to for work purposes. It was suggested that the aggregate patterns of the ITWA for a given group would be more closely related to 'awareness space' than to the patterns of accessibility defined by the maximum time and distance respondents were prepared to travel.

3.4.2. The Diary - The diary was divided into two parts. The first part of the diary collected details of all vacancies discovered by a respondent, while the second part of the diary obtained further information on each vacancy 'followed-up' (i.e. applied for).

(a) Part One - In this first part of the diary respondents listed all vacancies discovered which were suitable for school leavers. The critical information was the location (i.e. address) of each firm offering a job vacancy. This data could therefore be used to map the locational patterns of 'vacancy discovery space', 'vacancy application space' and 'search activity space' (See Conceptual Model).

It was also useful to collect data on non-locational aspects of each job vacancy. Part-one of the diary required details on the 'type of vacancy' and the information source. In the final column of the part-one schedule respondents were required to indicate whether or not they decided to apply for (i.e. follow-up) the vacancy. If the vacancy was not followed-up (i.e. 'Rejected') then from a 'LIST OF REASONS' card the respondent was required to indicate in order of importance all the reasons for the decision to reject the discovered vacancy, in rank order of importance.

If a discovered vacancy was applied for, then respondents were required to answer part-two of the diary. (Respondents were only given part-one of the diary to encourage "LISTING" of all vacancies discovered. Hence an interviewer asked 'part-two' of the diary for each vacancy followed-up at the weekly meeting with the respondent.)

(b) Part Two - Part-two of the diary included two points at which the process of following-up a job vacancy could end. The first point is when a potential employer does not offer an interview or when a job seeker refuses to accept an interview offer. (in the latter case respondents were asked to indicate, from the 'LIST OF REASONS' card, the reason for his/her decision). The second point is when, after an interview, the potential employer does not offer the applicant a position with the firm or when an applicant rejects a job offer.

At both of these 'cut-off' respondents were clearly instructed to return to part-one of the diary. The final possible decision made by a job seeker was whether or not to continue search.

Other information collected in the second part of the diary was concerned with the method of contacting a firm, and further details acquired about the vacancy. If an interview was offered (or the respondents made a speculative visit to the firm) then details were obtained on travel behaviour. The details included mode of travel and the time and cost of the journey. (The distance travelled was calculated from the home location of the respondent and the location of the firm). A further question was included to provide an indication of the frequency and type of travel information obtained by an individual in order to make a journey to a firm.

The structure of the second part of the Diary was designed to facilitate data collection in the case of 'speculative visits' to the firm. Whenever this method of contact was employed by the respondent then travel details were entered in questions 5 to 11. See Appendix C.2 for copies of both parts of the diary and the initial questionnaire.

3.5 THE SURVEY METHOD

3.5.1 Recruitment - A sample of school leavers was recruited from four careers offices in the City of Birmingham. Recruitment commenced on June 23rd 1980. This week was selected following advice from the Careers Service that this was the first week when young people leaving school without work, or a place in further education, first registered at a Local Careers Office. Each school leaver had to visit the Careers Office at least once to receive authorisation to collect 'Social Security' from the Department of Health and Social Security. Therefore recruiting during this period was likely to provide a representative sample of unemployed school leavers.

A memorandum was circulated around each Careers Office informing officers of the presence of the survey interviewer(s) and the nature of the sample required. Careers Advisors were requested to introduce school leavers to the interviewer, who in turn asked the school leaver for his or her co-operation in answering an initial Questionnaire and in a "paid" Diary survey of job search behaviour. To avoid sampling biases survey interviewers recruited 10 respondents each day. Six interviewers were used to recruit 300 school leavers (50 per interviewer). Respondents who were willing to co-operate in both stages of the survey were fully briefed on the information required in the 'Diary' survey after completing the initial Questionnaire. All six interviewers owned a car which enabled them to visit each respondent every week during the survey. In some cases (particularly Asian girls) the interviewer met the respondent at the Careers Office at a pre-arranged time, each week.

The 50 respondents assigned to each interviewer was considered to be a manageable workload (see Pilot survey in Appendix C.1) which allowed adequate time for repeated visits to a respondent's home should they have been absent at a pre-arranged time.

3.5.2 Length of the Survey - The length of the survey had to be weighed against the sample size within the confines of the £8,000 survey budget. In order to decide upon the duration of the survey it was necessary to gain some understanding of the probable rate at which school leavers leave the unemployment register (i.e. leave the survey). Department of Employment figures for (July 1979), the year before the survey revealed that the medium duration of 16-18 year olds was four weeks.

Therefore the 'pilot' survey lasted four weeks. The results of the pilot showed that the rate of job take-up was 20% during the four week period. As a result of the pilot the main survey period was increased to five weeks because an extra week ensured that the diary format was clearly understood by all respondents.

3.5.3 Sample Size - Given the survey budget and the preferred length of survey it was necessary to establish the sample size required for statistical testing of any differences in the survey results. The rate of job take-up, which could be predicted for the survey, was used to determine the sample size. The pilot survey indicated that the rate of job take-up was likely to be 20%. Hence, a sample size of 300 respondents provided data which could be tested for statistically significant differences at the 95% confidence level.

3.5.4 Cost of the Survey - The pilot survey (described in Appendix C1) demonstrated that a rate of pay of £2.00/week to respondents was required to ensure satisfactory completion of diaries. Each individual was paid a total sum at the end of the survey to avoid the possible effect of increased income on search behaviour. Also individuals obtaining work before the end of the survey were paid the total sum to avoid possible fabrication of responses by individuals pretending to continue search once employment was obtained simply to obtain further payment. Table 3.1 shows a breakdown of the costs of the survey.

TABLE 3.1 THE COST OF THE SURVEY

<u>Item</u>	<u>Rate</u>	<u>Cost</u>
1. Interviewers (six interviewers were required for six weeks - 1 week of initial interviewing 5 weeks of diary survey)	£70/week	£2,100
2. Interviewers mileage allowance	£50/week	£2,100
3. Respondents Diary for 5 weeks (300 respondents)	£2/week	£3,000
		<u>TOTAL COST £7,620</u>

The Birmingham Inner City Partnership Programme agreed to fund the survey cost to a maximum of £8,000. Additional costs of data processing and computer time were paid for by the West Midlands County Council.

CHAPTER FOUR

THE SAMPLE AND JOB

TAKE - UP RATES

4.1 INTRODUCTION

This chapter describes the characteristics of the sample recruited from four Careers Offices in Birmingham which included inner city offices at Aston, City and Handsworth and a suburban office, Sutton Coldfield. It is important to initially establish the representativeness of the sample and the differences within the sample before a detailed analysis of job search behaviour. Hence, it is useful to start the analysis of the job seekers survey with examination of the rate at which respondents obtained employment and the differences and similarities in the characteristics between respondents. Having considered briefly job take-up rates the chapter examines ways of sub-dividing the sample for a detailed investigation of the decisions made by individuals in their attempt to gain employment.

4.2 RECRUITING A SAMPLE OF SCHOOL LEAVERS

4.2.1 Possible Sampling Bias

Some school leavers might have decided not to visit the Careers Office for several weeks, especially if they intended to continue their education then changed their mind, and some unemployed school leavers might have chosen never to visit the Careers Office. However, the 'typical' unemployed school leaver was most likely to have been recruited in the first week after leaving school, because school leavers had to visit the careers office at least once after leaving full-time education in order to register for social security. Therefore recruitment of school leavers commenced 23 June 1980 .

Another possible sampling bias is associated with the day of the week respondents were recruited. Those school leavers who visited a Careers Office on a Monday may have been more anxious to obtain employment than those who visited, say, on a Friday. Hence, recruitment was spread over a whole week. Similarly the time of day individuals were recruited may reflect attitudes towards obtaining employment. For instance, school leavers who visited the Careers Office at 9.0 a.m. may have been more anxious to obtain employment than those who visited at 4.30 p.m. Recruitment was therefore continuous throughout the day. A further potential bias is selective introductions by Careers Officers, who may have decided not to introduce a school-leaver to the survey interviewers because the person was considered, by the Officer, to be unco-operative. To combat this potential bias a memorandum explaining the recruitment method and sample requirements was circulated to all Careers Officers.

In the three smaller offices (Aston, Handsworth and Sutton) selective introductions by Careers Officers were most unlikely because the survey interviewers were accepted and indeed (as far as the school-leavers visiting the Careers Office for the time were concerned) integrated into the system. After repeated reminders many officers in the City Centre Office failed to introduce school-leavers to the interviewer (1). It is here, if anywhere that a sampling bias

Note 1 - The City Centre Careers Office is large and less personal, with interviewing offices located throughout the building. In fact only the Senior Officer introduced school leavers to interviewers while other officers were clearly ignoring the request to recruit a sample. Consequently 50 respondents were obtained and a further 50 were recruited from the smaller Aston Careers Office.

may have occurred but it is likely to be small because the majority of the required number of school leavers were eventually introduced by the Senior Careers Officer who was conversant with the sampling requirements.

4.2.2. Non-Response

School leavers could of course refuse to co-operate in the survey at two stages. They could refuse to answer the initial questionnaire, and after initial questionnaire, refuse to co-operate in the diary survey.

TABLE 4.1 RATES OF NON-RESPONSE

AREA	TOTAL NUMBER	TOTAL NUMBER	TOTAL NUMBER			
	CONTACTED (1)	INTERVIEWED (2)	IN DIARY SURVEY (3)			
	No.	No.	2/1	No.	3/1	3/2
Aston	56	52	92.9%	50	89.3%	96.2%
City	51	49	96.1%	46	90.2%	93.9%
Handsworth	102	93	91.2%	70	68.6%	75.3%
Sutton	111	103	92.8%	98	88.3%	95.2%
TOTAL	320	297	93.1%	264	82.5%	88.6%

(a) Refusal to Answer Initial Questionnaire - Refusals at this stage were few because school leavers probably could not distinguish between 'official' Careers Office system and the survey. Table 4.1 shows that the rate for initial interviews obtained per school leaver contacted (i.e. introduced by the Careers Service) was very high, over 90%. For all areas, except City, the response rate was approximately 93%. The 'City sample' response rate was slightly higher at 96%. and may indicate a small bias caused by Officers being selective in their introductions.

(b) Refusal to keep diary - Table 4.2 shows a breakdown of those respondents who, after answering the initial questionnaire refused to co-operate in the second stage of the survey (i.e. keeping a diary of search behaviour). These respondents will be called 'non-diary' respondents.

4.3 THE SAMPLE

A comparison of the characteristics of the 'non-diary' and 'diary' (i.e. the sample) respondents (table 4.2) indicate that there was almost no difference in the proportions of each group with previous part-time work experience and experience of living elsewhere in the city. Only small and not statistically significant differences between the two groups are shown in table 4.2 for the variables, car ownership, sex, socio-economic group and exams taken. However, the differences are statistically significant for the remaining variables which are ethnic group, age and area of residence. It is apparent that non-whites and 17 year olds had lower rates of response as well as respondents recruited from the Handsworth Careers Office. (The differences in the characteristics between the respondents recruited from the four Careers Offices are examined later).

TABLE 4.2 - CHARACTERISTICS OF NON-RESPONDENTS AND RESPONDENTS

VARIABLE	NON-DIARY RESPONDENTS		DIARY RESPONDENTS (ie THE SAMPLE)		CHI-SQUARED TEST
	No.	(%)	No.	(%)	
1. SEX					
Male	19	(57.6)	129	(48.9)	The chi-squared value is 0.92 with degree of freedom. Therefore the null hypothesis that there is no statistically significant difference between the frequency of respondents of each sex in the two groups is accepted.
Female	14	(42.4)	135	(50.1)	
Total	33	(100.0)	264	(100.0)	
2. AGE					
16 years	14	(42.4)	135	(51.1)	The chi-squared value is 5.43 with degrees of freedom. Therefore the null hypothesis that there is no statistically significant difference in the frequency of respondents in each age category between the two groups is rejected at the 90.0% confidence interval.
17 years	17	(51.5)	92	(34.8)	
18 years	1	(3.0)	37	(15.1)	
Total	33	(100.0)	264	(100.0)	
3. ETHNIC GROUP					
Asian	7	(21.2)	18	(6.8)	The chi-squared value is 6.37 with 2 degrees of freedom. Therefore the null hypothesis that there is no statistically significant difference between the ethnic mix in each of the two groups is rejected at the 15.0% confidence interval.
West Indian	16	(48.5)	93	(35.2)	
White	10	(30.3)	153	(58.0)	
Total	33	(100.0)	264	(100.0)	
4. CAR IN HOUSEHOLD					
None	11	(33.3)	116	(43.9)	The chi-squared value 1.34 with 1 degree of freedom. Therefore, the null hypothesis that there is no statistically significant difference between the frequency of household without a car in each of the two groups is accepted.
One or More	22	(66.7)	148	(56.1)	
Total	33	(100.0)	264	(100.0)	
5. EXAMS TAKEN					
None	3	(4.1)	14	(5.3)	The chi-squared value is 0.41 with 2 degrees of freedom. Therefore the null hypothesis that there is no statistically significant difference between the frequency of each type exam taken by respondents in each of the two groups is accepted.
CSE	23	(69.7)	206	(78.0)	
'O' and 'A' Level	7	(21.2)	44	(16.7)	
Total	33	(100.0)	264	(100.0)	

6. SOCIO-ECONOMIC GROUP

Skilled & Prof. (ABC)	17	(51.5)	156	(59.0)
Semi & Unskilled (DE)	16	(48.5)	108	(41.0)
Total	33	(100.0)	264	(100.0)

The chi-squared value is 0.99 with 1 degree of freedom. Therefore the null hypothesis that there is no statistically significant difference between the frequency of respondents in each broad SEG category for the two groups is accepted.

7. PREV. PART TIME WORK

No	20	(60.6)	160	(60.6)
Yes	13	(39.4)	104	(39.4)

Chi-squared test was not used because clearly there is no significant difference between the two groups terms of previous part time work experience.

8. LIVED ELSEWHERE

No	14	(42.4)	120	(45.5)
Yes	19	(57.6)	144	(54.5)
Total	33	(100.0)	264	(100.0)

Chi-squared test was not used because clearly the difference between the two groups in terms of previous residence is very small.

9. AREA OF RESIDENCE

Aston	3	(9.1)	50	(18.9)
City	3	(9.1)	46	(17.4)
Handsworth	22	(66.7)	70	(26.6)
Sutton	5	(15.1)	98	(37.1)
Total	33	(100.0)	264	(100.0)

The chi-squared value is 22.5 with 3 degrees of freedom. Therefore the null hypothesis that there is no statistically significant difference between the frequency of respondents in the four areas for each of the groups is rejected at the 99.9% confidence interval.

4.4 THE REPRESENTATIVENESS OF THE SAMPLE

In order to measure the statistical representiveness of the sample data had to be obtained on the population from which the sample was recruited. 'Youth Unemployment' figures were considered inappropriate because they included, as well as school leavers, 16 to 18 year olds who were unemployed after a spell of full-time employment. The only details available on the characteristics of the population from which the sample was recruited were the Department of Employment "Careers Service Monthly Flow Statistics" and "Statistics of unemployed registrants who were born in or whose parents were, or one of the parents was born in a specified country of the Commonwealth or Pakistan".

4.4.1 Ethnic Mix - Table 4.3. shows for each of the four Careers

TABLE 4.3 - ETHNIC MIX AND THE REPRESENTATIVENESS OF THE SAMPLE

CAREERS OFFICE	ETHNIC MIX	SAMPLE RECRUITED BY 4/7/80		SAMPLE UNEMPLOYED AT END OF SURVEY 8/8/80		DEPARTMENT OF EMPLOYMENT COUNT 14/8/80	
		NO.	(%)	No.	(%)	No.	(%)
ASTON	Non-White	19	(38.0)	13	(35.1)	212	(32.0)
	White	31	(62.0)	24	(64.9)	451	(68.0)
	Total	50	(100.0)	37	(100.0)	663	(100.0)
CITY	Non-White	33	(71.7)	22	(71.0)	770	(69.4)
	White	13	(28.3)	9	(29.0)	340	(30.6)
	Total	46	(100.0)	31	(100.0)	1110	(100.0)
HANDSWORTH	Non-White	58	(82.9)	55	(82.1)	616	(88.5)
	White	12	(17.1)	12	(17.9)	80	(11.5)
	Total	70	(100.0)	67	(100.0)	696	(100.0)
SUTTON	Non-White	1	(1.0)	1	(1.4)	8	(1.7)
	White	97	(99.0)	71	(98.6)	453	(98.3)
	Total	98	(100.0)	72	(100.0)	461	(100.0)

offices used in the survey, the Department of Employment (i.e. DE) count of non-white and white school leavers and the ethnic mix of the sample recruited (4/7/80) and of the respondents who were still unemployed at the end of the survey (8/8/80). The count by the DE was made on 14th August 1980. The statistic is only counted four times each year, at the end of the relevant monthly count by the careers office. The count for 11th July to 14th August 1980 was exactly one week out of phase with the survey. The DE figures for each careers office were affected by the number of school leavers joining as well as those leaving the register during the period (Note 1). The figures for the sample "still unemployed" at the end of the survey was obviously affected by those respondents gaining employment (hence leaving the survey), but unemployed school leavers who registered after the period of recruitment (i.e. 4th July 1980) were not included in the figures. With this cautionary note it was possible to compare the figures for each careers office. Table 4.3 shows that the differences are relatively small.

Although ethnic mix was unfortunately the only variable which could be used for a comparison between the sample and the population, it is however an important variable if there are possible hidden or open prejudices in employers recruitment practices. Therefore it is concluded that an acceptably representative sample was obtained for the purposes of this survey.

Note 1 A breakdown of the ethnic mix of school leavers entering and leaving the careers office register between 11th July and 14th August was not available.

4.5 CLUSTER ANALYSIS

Cluster analysis was used because it was considered necessary at the outset of the analysis to identify groups of respondents who were most similar in terms of the variables discussed above. The locational characteristics were removed from the analysis to see if clusters could be produced which included respondents from a cross section of locations (see Note 1).

Using the nine variables listed in table 4.4 six distinctive clusters were identified using 'Wards' (note 1) method, a description of each cluster, including its size and locational characteristics, is also presented in the table.

Table 4.4 shows that even when locational characteristics are excluded from variables used in cluster analysis the clusters still show approximate locational patterns. Chi-squared tests show that the suburban/inner city proportions could not have occurred by chance in any of the clusters, with the exception of cluster B - which only has seven respondents. The main distinctions appear to be that cluster E is concentrated in Sutton and accompanied with clusters A and C while the biggest cluster, F, is in the inner areas as well as Cluster D. The inner area clusters generally comprise respondents of C.S.E. or no exams, high proportion of non-whites and low levels of cars in household.

Note 1 - A description of the technique and the various methods (e.g. Wards) produced for the sample of school leavers is included in the Appendix D1.

The conclusion is that special attention should be given to the residential location of the respondents and to the characteristics associated with respondents from each location. Sample differences between areas of recruitment are discussed next and followed by a brief examination of rates of job take-up by location, other variables, and clusters.

TABLE 4.4 - CLUSTER ANALYSIS OF THE SAMPLE CHARACTERISTICS

LIST OF VARIABLES

1. Year of Birth
2. Ethnic Group
3. Driving Licence
4. Car Available for own use
5. Car in Household
6. Socio-Economic Group
7. Exams Taken 1980
8. Previous Part-Time Employment
9. Other Areas lived in Birmingham

(Male/Female excluded because this simply doubles the number of clusters)

<u>Cluster</u>	<u>Number of respondents</u>	<u>Description of clusters characteristics (1)</u>	<u>Locational characteristics</u>
A	2	White, with driving licence, use of a car, and 'A' level exams	Entirely in Sutton
B	7	Mixed ethnic groups, with driving licence, no use of car but car in household, and C.S.E. exams	Mixed locations
C	24	Mixed ethnic groups, no driving licence, car in household, and sat 'O' and 'A' level exams	71% in Sutton
D	51	Exclusively non-white, low SEG, sat C.S.E. and no exams, and tend to be older, few with car in household	All inner areas with 53% in Handsworth
E	87	All with car in household, mainly white household, mixture of exams tend to be younger and few lived elsewhere in City	63% in Sutton (Inner City with car in household includes some non-whites)
F	93	Low SEG, C.S.E. or no exams mixed ethnic group and very few with car	82% in inner areas

Note 1 If a variable is not mentioned in the description of a cluster, then assume that no pattern was found in that variable.

Table 4.5 shows that no statistically significant differences were found in the age and sex structure of the samples from the four areas and no significant differences in the proportions of respondents with part-time work experience. Differences in exams taken were statistically significant with Sutton respondents having taken proportionately more 'O' and 'A' level exams. A significant difference was found to exist in the proportion of respondents who had lived in other areas of Birmingham. Over 70% of the Aston and City samples had lived elsewhere compared to under 50% for the other two areas. This two-fold division may be explained by the presence of redevelopment areas in both City and Aston catchment areas; most notably an area known as Castle Vale in the latter.

The three most significant differences in the characteristics of samples from the four areas were socio-economic group, car in household and ethnic mix. As far as socio-economic groups are concerned (SEG) City had a relatively high proportion (71.7%) of respondents from SEG's D and E households while Sutton has a relatively low proportion at 19.4%. In terms of 'car in household' Sutton proved different from the other three areas. Sutton had 83.7% of respondents from households with at least one car, while the corresponding figures for the three inner areas ranged between 30.0% and 45.7%. It is in terms of ethnic group that the widest differences were noted. The Sutton sample comprised only 1% non-white respondents while the Handsworth sample included 83% non-whites. The Aston sample had a proportion of 38.0% non-white which was nearer the Sutton figure, while the City Sample was more similar to the Handsworth sample in terms of ethnic mix.

The differences between the samples recruited from each office generally reflect the major differences between the various clusters produced by Cluster Analysis. The largest differences for these variables is between the Sutton sample and the remaining inner area samples, but significant differences may exist between the inner area groups.

Table 4.5 SAMPLE DIFFERENCES BY AREA OF RECRUITMENT

VARIABLE	AREA	BREAKDOWN OF VARIABLE (NUMBER AND PERCENTAGE)			CHI-SQUARED TEST
		Male	Female		
1. <u>Sex</u>	Aston	20 (40.0%)	30 (60.0%)		Chi-squared value is 2.84 with 3 degrees of freedom. Therefore the null hypothesis that there is no significant difference between the proportions of males and females in each of the four groups is accepted.
	City	21 (45.7%)	25 (54.3%)		
	Handsworth	35 (50.0%)	35 (50.0%)		
	Sutton	53 (54.1%)	45 (51.1%)		
			<u>129 (48.9%)</u>	<u>135 (51.1%)</u>	
2. <u>Age</u>	Aston	<u>24(48.0%)</u>	<u>17(34.0%)</u>	<u>9 (18.0%)</u>	Chi-squared value is 3.58 with 6 degrees of freedom. Therefore the null hypothesis that there is no significant difference between the age of the respondents in each of the four groups is accepted.
	City	24(52.1%)	16(34.8%)	6(13.1%)	
	Handsworth	31(44.3%)	28(40.0%)	11(15.7%)	
	Sutton	56(57.2%)	31(31.6%)	11(11.2%)	
		<u>135(51.1%)</u>	<u>92(34.9%)</u>	<u>37(14.0%)</u>	

(continued)

		White	Non-White
<u>3.Ethnic Group</u>	Aston	31 (62%)	19 (38%)
	City	13 (28%)	33 (72%)
	Handsworth	12 (17%)	58 (83%)
	Sutton	97 (99%)	1 (1%)
		<u>153 (58%)</u>	<u>111 (42%)</u>

Chi-squared value is 154.2 with 3 degrees of freedom. Therefore the null types thesis that there is no significant difference proportion of white and non-white respondents in each of the four groups is rejected at the 99.9% confidence interval.

		No Car	Car
<u>4.Car in Household</u>	Aston	35 (70.0%)	15 (30.0%)
	City	37 (58.7%)	19 (41.3%)
	Handsworth	38 (54.3%)	32 (45.7%)
	Sutton	16 (16.3%)	82 (83.7%)
		<u>116 (43.9%)</u>	<u>148 (56.1%)</u>

Chi-squared value is 80.4 with 3 degrees of freedom. Therefore the null hypothesis that there is no significant difference in the proportion of respondents from car owning and non-car owning households in each of the four groups is rejected at the 99.9% confidence interval.

		None & CSE	'O'&'A'Level
<u>5.Exams</u>	Aston	44 (88.0%)	6 (12.0%)
	City	43 (93.5%)	3 (6.5%)
	Handsworth	59 (84.0%)	11 (16.0%)
	Sutton	74 (75.5%)	24 (24.5%)
		<u>220 (83.3%)</u>	<u>44 (16.7%)</u>

Chi-squared value is 9.30 with 3 degrees of freedom. Therefore the null hypothesis that there is no significant difference between the proportion of respondents who sat none/CSE exams and those who sat O/A levels in each of the four groups is rejected at the 99.9% confidence interval.

(continued)

		ABC	DE
<u>6.Socio- Economic Group</u>	Aston	32 (64.0%)	18 (46.0%)
	City	13 (28.3%)	33 (71.7%)
	Handsworth	32 (45.7%)	38 (54.3%)
	Sutton	79 (80.6%)	19 (19.4%)
		<u>156 (59.1%)</u>	<u>108 (40.9%)</u>

Chi-squared value is 41.3 with 3 degrees of freedom. Therefore the null hypothesis that there is no significant difference between the proportion of respondents in two SEG categories in each of the four groups is rejected at the 99.9% confidence interval.

		No	Yes
<u>7.Part- time Employment</u>	Aston	30 (60.6%)	20 (40.0%)
	City	33 (71.7%)	13 (28.3%)
	Handsworth	46 (65.7%)	24 (34.3%)
	Sutton	51 (52.0%)	47 (48.0%)
		<u>160 (60.6%)</u>	<u>104 (39.4%)</u>

Chi-squared value is 6.17 with 3 degrees of freedom. Therefore the null hypothesis that there is no significant difference between the proportion of respondents with and those without previous part-time employment in each of the four groups is accepted.

		No	Yes
<u>8.Lived elsewhere in B'ham.</u>	Aston	12 (24.0%)	38 (76.0%)
	City	13 (28.3%)	33 (71.7%)
	Handsworth	40 (53.1%)	30 (46.9%)
	Sutton	55 (56.1%)	43 (43.9%)
		<u>120 (45.5%)</u>	<u>144 (54.5%)</u>

Chi-squared value is 23.3 with 3 degrees of freedom. Therefore the null hypothesis that there is no significant difference between the proportion of respondents who have and have not lived elsewhere in the city in each of the four groups is rejected at the 99% confidence interval.

- The total numbers for each area are Aston = 50, City = 46
Handsworth = 70 and Sutton = 98

4.7 RATES OF JOB TAKE-UP

During the survey there might have been significant difference in the frequency distributions of job take-up for some of the variables. It is useful before analysing the decision making process to see if any of the characteristics of the sample proved directly related to respondents who gained employment during the survey.

From table 4.6 it is clear that within the weeks of the survey there were no significant differences in job take-up rate between males and females, between respondent's age, between white and non-white respondents, between respondents sitting 'O' and 'A' level exams and those sitting C.S.E. and no exams. Neither did school leavers who had previous part-time employment obtain permanent work more quickly than those who had never worked part-time.

There proved to be a few variables, however, that did yield statistically significant differences in job take-up rate. Respondents from car-owning households obtained significantly more jobs than respondents from non-car-owning households. A division of socio-economic groups showed that respondents from SEGs D and E class households obtained less jobs than respondents from class A, B and C. Differences in job take-up also occurred between respondents having lived elsewhere in the City and those who had not (but only with 90% confidence could this be said to be a significant difference).

TABLE 4.6 DIFFERENCE IN JOB TAKE-UP BY EACH CHARACTERISTIC OF THE SAMPLE

VARIABLE	OBTAINED EMPLOYMENT		CONTINUED UNEMPLOYMENT		TOTAL RESPONDENTS		CHI-SQUARED TEST
	No.	%	No.	%	No.	%	
1. SEX							
Male	30	23.3	99	76.7	129	100.0	Chi-squared value is 0.40 with 1 degree of freedom. Therefore the null hypothesis that there is no significant difference in job take-up between males and females is accepted.
Female	27	20.0	108	80.0	135	100.0	
Total	57	21.6	207	78.4	264	100.0	
2. AGE							
16 years	10	27.0	27	73.0	37	100.0	Chi-squared value is 1.38 with 2 degrees of freedom. Therefore the null hypothesis that there is no significant difference in job take-up between 16, 17 and 18 year olds is accepted.
17 years	17	18.5	75	81.5	92	100.0	
18 years	30	22.2	105	71.8	135	100.0	
Total	57	21.6	207	78.4	264	100.0	
3. ETHNIC GROUP							
Non-white	20	18.0	91	82.0	111	100.0	Chi-squared value is 1.47 with 1 degree of freedom. Therefore the null hypothesis that there is no significant difference in job take-up between whites and non-whites is accepted.
White	37	24.2	116	75.8	153	100.0	
Total	57	21.6	207	78.4	264	100.0	
4. CAR IN HOUSEHOLD							
No Car	18	15.5	98	84.5	116	100.0	Chi-squared value is 4.51 with 1 degree of freedom. Therefore the null hypothesis that there is no significant difference in job take-up between respondents from non-car owning households and car owning households is rejected at the 95.0% confidence interval.
One car or more	39	26.4	109	73.6	148	100.0	
Total	57	21.6	207	78.4	264	100.0	
5. EXAMS TAKEN							
None and 'CSE'	48	21.8	172	78.2	220	100.0	Chi-squared value is 0.04 with 1 degree of freedom. Therefore the null hypothesis that there is no significant difference in job take-up between respondents who sat no exams/CSE and those who sat 'O'/'A' levels is accepted.
'O' and A level	9	20.5	35	79.5	44	100.0	
Total	57	21.6	207	78.4	264	100.0	

(continued)

	OBTAINED EMPLOYMENT		CONTINUED UNEMPLOYMENT		TOTAL RESPONDENTS		CHI-SQUARED TEST
	No.	%	No.	%	No.	%	
6. SOCIO-ECONOMIC GROUP							
None							Chi-squared value is 4.37 with 3 degrees of freedom. Therefore the null hypothesis that there is no significant difference in job take-up between respondents in each of the four SEGs is accepted.
B Professional							
1 Managerial	4	22.2	14	77.8	18	100.0	
2 Clerical & Administrative	11	30.6	25	69.4	36	100.0	
3 Skilled Manual	25	24.5	77	75.5	102	100.0	
4 DE Semi and unskilled	17	15.7	91	84.3	108	100.0	
Total	57	21.6	207	78.4	264	100.0	
7. PREVIOUS PART-TIME EMPLOYMENT							
None							Chi-squared value is 3.68 with 1 degree of freedom. Therefore the null hypothesis that there is no significant difference in job take-up between respondents in SEG ABC and those in DE is rejected at the 90.0% confidence interval.
ABC	40	25.6	116	74.4	156	100.0	
DE	17	15.7	91	84.3	108	100.0	
Total	57	21.6	207	78.4	264	100.0	
8. OTHER AREAS OF RESIDENCE							
None							Chi-squared value is 0.59 with 1 degree of freedom. Therefore the null hypothesis that there is no significant difference in job take-up between those respondents with and those without previous part-time employment is accepted.
One and More							
Total	57	21.6	207	78.4	264	100.0	
9. AREA OF RESIDENCE							
Aston	13	26.0	37	74.0	50	100.0	Chi-squared value is 16.27 with 3 degrees of freedom. Therefore the null hypothesis that there is no significant difference in job take-up between those respondents recruited from each Careers office is rejected at the 99.9% confidence interval.
City	15	32.6	31	67.4	46	100.0	
Handsworth	3	4.3	67	95.7	70	100.0	
Sutton	26	26.5	72	73.5	98	100.0	
Total	57	21.6	207	78.4	264	100.0	

	OBTAINED EMPLOYMENT		CONTINUED UNEMPLOYMENT		TOTAL RESPONDENTS		CHI-SQUARED TEST
	No.	%	No.	%	No.	%	
Inner City	31	18.7	135	81.3	166	100.0	Chi-squared value is 2.21 with degree of freedom. Therefore, the null hypothesis that there is no significant difference in job take-up between 'inner city' and 'suburban' residents is accepted.
Suburban	26	26.5	72	73.5	98	100.0	
Total	57	21.6	207	78.4	264	100.0	

4.7.1 Car Ownership and Area of Residence

The most significant differences in job-take-up rates were between the area of residence and between levels of car ownership. It is possible however that the differences in car ownership simply reflected the differences in area of residence, especially as car ownership has already been shown to be higher in the suburban area. Table 4.7 shows the differences in rates of job take-up by levels of car ownership within each group of respondents recruited from the four careers offices. The chi-squared test on the differences demonstrate that a statistically significant difference between job take-up for car owning and non-car owning respondents recruited from the City and Sutton careers offices did not exist.

TABLE 4.7 - JOB TAKE UP AND CAR OWNERSHIP BY AREAS OF RECRUITMENT

	NO CAR IN HOUSEHOLD		AT LEAST ONE CAR IN HOUSEHOLD		CHI-SQUARED TEST
	No.	%	No.	%	
ASTON					
Obtained Employment	7	20.0	6	66.7	Chi-squared value is 2.18 with 1 degree of freedom. Therefore, the null hypothesis that there is no significant difference on job take-up between respondents from household with and those without a car in the Aston sample is accepted.
Continued Unemployment	28	80.0	9	33.3	
<u>Total</u>	<u>35</u>	<u>100.0</u>	<u>15</u>	<u>100.0</u>	
CITY					
Obtained Employment	7	25.9	8	42.1	Chi-squared value is 0.99 with 1 degree of freedom. Therefore the null hypothesis that there is no significant difference in job take-up between respondents from households with and those without a car in the City sample is accepted.
Continued Unemployment	20	74.1	11	67.9	
<u>Total</u>	<u>27</u>	<u>100.0</u>	<u>19</u>	<u>100.0</u>	
SUTTON					
Obtained Employment	3	8.7	23	28.0	Chi-squared value is 0.04 with 1 degree of freedom. Therefore, the null hypothesis that there is no significant difference in job take-up between respondents from households with and those without a car in the Sutton sample is accepted.
Continued Unemployment	13	81.3	59	72.0	
<u>Total</u>	<u>16</u>	<u>100.0</u>	<u>82</u>	<u>100.0</u>	

Note - Chi-squared test was not used on figures for the Handsworth sample because only 3 respondents obtained employment - which mean that more than one 'expected frequency' was less than 5.

It is clear from this table that the introduction of data for the Handsworth group influenced the total figures for car ownership between employed and continuing unemployed respondents. Therefore, it can be concluded that the single most important factor in affecting job take-rate during the survey was "location of residence" in particular the respondents recruited from the Handsworth Careers Office.

4.7.2 The 'Handsworth' Sample

Evidently 'Handsworth' respondents present a special case and detailed analysis of the whole process of job search in subsequent chapters will pay attention to respondents recruited from the Handsworth Careers Office. It is desirable to gain some indication that this low rate of job take-up for the Handsworth sample was not simply caused by an error in the data. The Department of Employment issues Monthly Flow Statistics for each Careers Office. The number leaving the Careers Office register each month is recorded and divided into three:

- (i) Number placed in employment by the Careers Service.
- (ii) Number who entered full-time courses of education or training.
- (iii) Number leaving the unemployment register for other reasons.

The third division does not necessarily mean that individuals had all obtained employment through their own efforts and use of vacancy information. Indeed many may have reached the age of 18 and transferred to the Job Centre's register, while others may have chosen to change before they are 18 years old. Some may have returned to school while

others may have simply left the Careers Office register without a job and without giving a reason. Consequently the number placed in employment by the Careers Service is the only figure that includes school leavers who definitely obtained employment. This figure can be used as a comparison with the job take-up rate for the sample shown in table 4.6. The counts by each Careers Office for the Period 11th July to 14th August 1980, (which includes most of the survey period) are shown in table 4.8.

Table 4.8 CAREERS SERVICE PLACEMENT OF
SCHOOL LEAVERS 1/7/80-14/8/80

<u>Careers Office</u>	(note 1) <u>Careers Service</u>	(note 2) <u>Number on register at Beginning of Period</u>
Aston	27 (3.8%)	719
City	33 (3.9%)	855
Handsworth	7 (1.1%)	651
Sutton	59 (11.0%)	534

Source: Department of Employment, Monthly Flow Statistics.

The figure for placement in employment through the Careers Service was found to be noticeably lower at the Handsworth Careers Office than at the other three Careers Offices. This pattern was reflected in the relatively low job take-up of the respondents recruited for the survey from the

Note 1 Placement by the Careers Service may include a vacancy initially discovered by the school-leaver but which the Careers Service subsequently helped to arrange an interview.

Note 2 This number includes school-leavers that may have been on the register several months previously.

Handsworth Careers Office, although the figures in table 4.8 could not be directly comparable to the figures for the sample, they do tend to verify the figures for the Handsworth sample and indicate that there may be difficulties in the process of job search peculiar to individuals from this district of the City.

4.7.3 The 'Clusters' - The two previous sub-sections have demonstrated that job take-up rates are most significantly different between groups of respondents based on the location of their residence. Table 4.9 shows that a chi-squared test failed to show any statistically significant difference in the rates of job take-up between the six 'clusters' established earlier by the 'cluster analysis' of the sample characteristics. (See section 4.5 for the definition of 'clusters').

TABLE 4.9 CLUSTER ANALYSIS AND RATES OF JOB TAKE-UP

Cluster	Obtained Employment		Continued Unemployment		Number of Respondents	
	No.	%	No.	%	No.	%
A	1	50.0	1	50.0	2	100.0
B	0	0.0	7	100.0	7	100.0
C	6	25.0	18	75.0	24	100.0
D	10	19.6	41	80.4	51	100.0
E	23	26.4	64	73.6	87	100.0
F	17	18.3	76	81.7	93	100.0
TOTAL	57	21.6	207	78.4	264	100.0

Chi-squared value is 2.62. Therefore the null hypothesis that there is no significant difference in job take-up rates between the 'clusters' is accepted.

For the purposes of disaggregating data in later analysis, division by areas of residence was preferred to divisions produced by 'cluster' analysis because of the significant difference in job take-up rate in the former and because the research was particularly concerned with the influence of locational factors including the public transport network and patterns of 'awareness space' on job search behaviour. It is concluded therefore that while 'cluster analysis' has helped clarify the nature of the sample it disguises the underlying importance of locational factors.

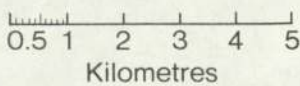
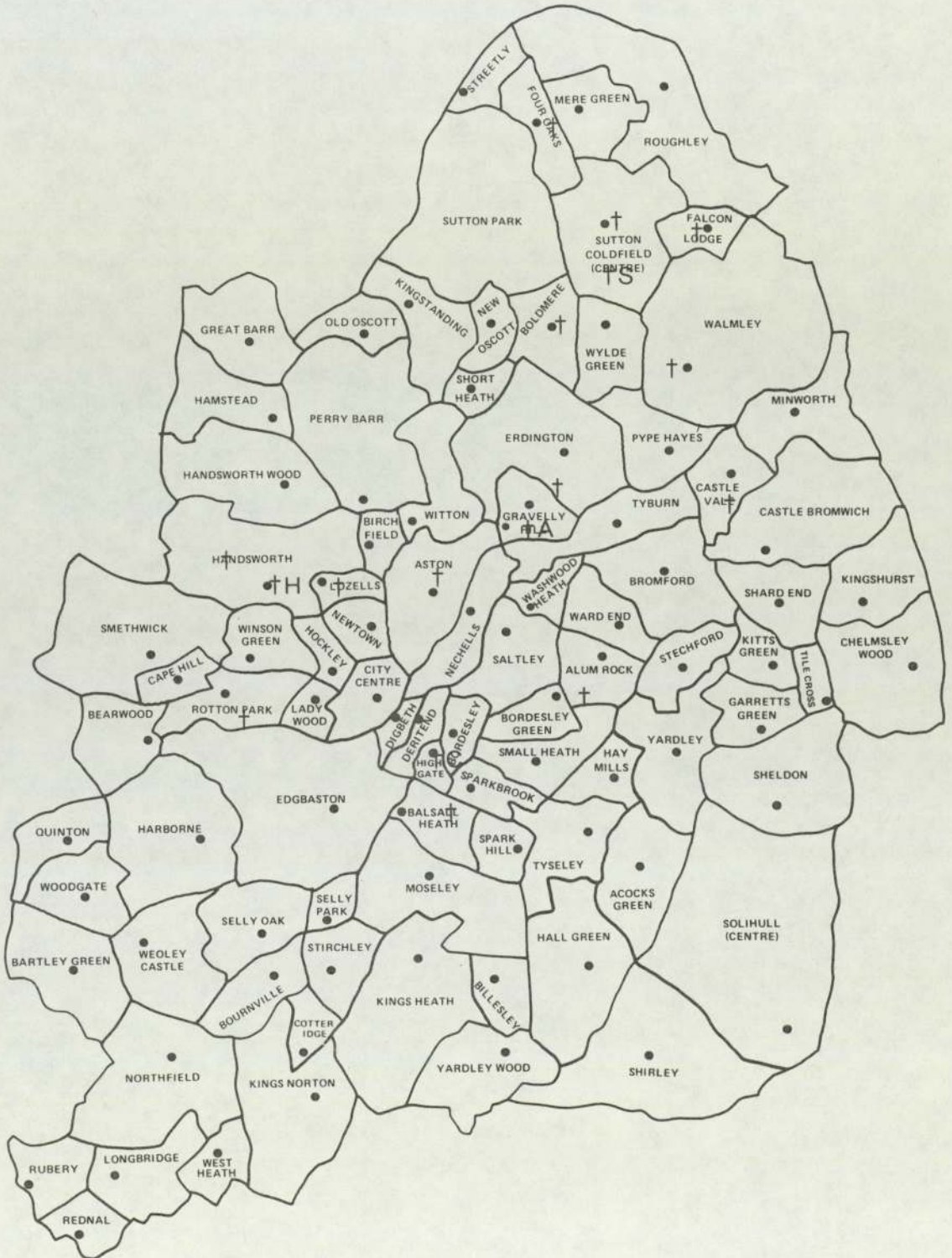
4.8 LOCATIONAL DIVISIONS

Differences were noted in both job take-up rates and in the characteristics of groups of respondents based on the locations of their residence. Hence, it was necessary to examine carefully the precise locations of the 264 respondents. Figure 4.1 shows how the respondents recruited from the four careers offices were divided still further based on home locations (These 'locational divisions' will be used later as the structure for disaggregating data for more detailed analysis). The divisions were based on the proximity of respondents' home location to each other and were simply made using 'eye judgements' supplemented by the researcher's knowledge of the socio- and spatial characteristics of the City. For much of the later analysis it was unnecessary to make the locational distinctions within the Sutton sample because of the ubiquity of the sample characteristics, and the type of housing stock in the area. It was important however, to divide the 50 school leavers recruited from the Aston Careers Office because clear

Mean centres of home locations

- †A = Total 'Aston' sample
- †C = Total 'City' sample
- †H = Total 'Handsworth' sample
- †S = Total 'Sutton' sample

Figure 4.1



divisions emerge; Aston (proper) is in the "core" inner area, Erdington is in the Birmingham Inner City Partnership Area and Castle Vale is a peripheral 'overspill' council estate. The catchment area of the City Centre Office is relatively large and covers "core" areas from all directions out from the City Centre. Hence these 46 respondents were divided into three groups based on the orientation of each individual's home to the City Centre. These divisions, wherever possible did not cross major 'barriers' in the urban structure such as railway lines or major radial routes out of the City. A fourth division of the City sample included ten respondents that would not be suitably placed in a single locational category. The school-leavers recruited from the Handsworth Careers Office lived in close proximity to the office in comparison with the other Careers Offices. A division was made, however, between 'Handsworth' (proper) residents and Lozells residents. A breakdown of some of the more important characteristics (note 1) of these locational divisions are presented in table 4.10.

Note 1. Those characteristics shown in table 4.10 have been selected because they were shown to have significant differences in job take-up rates in table 4.6.

4.8.1 Characteristics of Locational Divisions -

The twofold division of the respondents recruited from the Handsworth Careers Office proved not to differ widely in terms of socio-economic status, cars in household and ethnic mix. The four divisions of the sample recruited from the City Centre Office differed only slightly in the number of respondents from car -owning households. In terms of ethnic mix, the 'Rogue Core' division had noticeably more whites and higher SEG than the other 'core' areas. (N.B. This division is comprised of respondents whose home locations do not fit into a suitably geographical division). West Core differed slightly from East and South Core as West Core had larger proportions of whites and car -owning households. The West Core division included part of the middle-class area of Edgbaston, while East and South Core divisions included mainly terraced houses or redeveloped areas. Greater differences existed between the three divisions of the sample recruited from the Aston Careers Office. Differences were expected because of the distinctiveness of each division i.e. a 'core' area; a partnership area; and a peripheral council estate. The characteristics of Aston (proper) reflected those of other 'core' areas in terms of ethnic mix and car ownership. Erdington is more similar to Sutton in terms of S.E.G. and ethnic mix, but the Erdington respondents had a much lower proportion of households with cars. The Castle Vale also had low numbers of households with a car. The S.E.G. breakdown for Castle Vale was similar to 'core' areas but ethnic mix was different as it was totally white.

TABLE 4.10 - CHARACTERISTICS OF LOCATIONAL

DIVISIONS OF THE SAMPLE

CAREERS OFFICE	LOCATIONAL GROUP	BREAKDOWN OF VARIABLE		
<u>(1) Socio-Economic Group</u>				
		ABC	DE	Total
Sutton	Sutton	79 (80.6%)	19 (19.4%)	98
	Erdington	17 (76.8%)	7 (23.2%)	24
Aston	Castle Vale	5 (45.5%)	6 (54.5%)	11
	Aston (proper)	10 (66.7%)	5 (33.3%)	15
Handsworth	Handsworth	24 (47.1%)	27 (52.9%)	51
	Lozells	8 (42.1%)	11 (57.9%)	19
	South Core	5 (27.8%)	13 (72.2%)	18
City (note 1)	West Core	3 (30.0%)	7 (70.0%)	10
	East Core	1 (12.5%)	7 (87.5%)	8
	"Rogue" Core	4 (40.0%)	6 (60.0%)	10
Total		156 (59.1%)	108 (40.9%)	264
<u>(2) Car in House- Hold</u>				
		Yes	No	Total
Sutton	Sutton	82 (83.7%)	16 (16.3%)	98
	Erdington	6 (25.0%)	18 (75.0%)	24
Aston	Castle Vale	3 (27.3%)	8 (72.7%)	11
	Aston (proper)	6 (40.0%)	9 (60.0%)	15
Handsworth	Handsworth	23 (45.1%)	28 (54.9%)	51
	Lozells	9 (47.5%)	10 (52.5%)	19
	South Core	7 (38.9%)	11 (61.1%)	18
City	West Core	5 (50.0%)	5 (50.0%)	10
	East Core	3 (37.5%)	5 (62.5%)	8
	Rogue Core	5 (50.0%)	5 (50.0%)	10
Total		148 (56.1%)	116 (43.9%)	264
<u>(3) Ethnic Group</u>				
		White	Non-White	Total
Sutton	Sutton	97 (99.0%)	1 (1.0%)	98
	Erdington	19 (79.2%)	5 (20.8%)	24
Aston	Castle Vale	11 (100.0%)	0 (0.0%)	11
	Aston (proper)	1 (6.7%)	14 (93.3%)	15
Handsworth	Handsworth	9 (17.6%)	42 (82.4%)	51
	Lozells	3 (15.8%)	16 (84.2%)	19
	South Core	3 (16.7%)	15 (83.3%)	18
City	West Core	3 (30.0%)	7 (70.0%)	10
	East Core	1 (12.5%)	7 (87.5%)	8
	Rogue Core	6 (60.0%)	4 (40.0%)	10
Total		153 (58.0%)	111 (42.0%)	264

Note 1 - Rogue Core = Respondents not suitably placed in any locational divisions.

In summary, the locational divisions exhibit several differences in characteristics. The groups located in partnership area and on the edge of the City (i.e. Erdington and Castle Vale) had characteristics distinctive from the groups located in Birmingham's 'core' area, and from the Sutton sample. The Aston (proper) 'core' (with the exception of Rogue Core) and Handsworth respondents, all have generally similar characteristics.

4.8.2 Job take-up Rates - Table 4.11 shows the job take-up rates for each locational division of the sample. Although some of the numbers are small they do illustrate a few interesting points.

TABLE 4.11 - JOB TAKE-UP RATES AND THE 'LOCATIONAL GROUPS'

Locational Division	Obtained Employment	Continued Unemployment	Total
(SUTTON SAMPLE)	26 (26.5%)	72 (73.5%)	98 (100.0%)
Erdington	5 (20.8%)	19 (79.2%)	24 (100.0%)
Castle Vale	2 (18.2%)	9 (81.8%)	11 (100.0%)
Aston (proper)	6 (40.0%)	9 (60.0%)	15 (100.0%)
	13 (26.0%)	37 (74.0%)	50 (100.0%)
Handsworth	0 (0.0%)	51 (100.0%)	51 (100.0%)
Lozells	3 (15.8%)	16 (84.2%)	19 (100.0%)
(HANDSWORTH SAMPLE)	3 (4.3%)	67 (95.7%)	70 (100.0%)
South Core	7 (38.9%)	11 (61.1%)	18 (100.0%)
West Core	3 (30.0%)	7 (70.0%)	10 (100.0%)
East Core	0 (0.0%)	8 (100.0%)	8 (100.0%)
Rogue Core	5 (50.0%)	5 (50.0%)	10 (100.0%)
(CITY SAMPLE)	15 (32.6%)	31 (67.4%)	46 (100.0%)

The table shows that the City Centre Careers Office sample included respondents in division (Rogue Core) not necessarily living in the inner areas who had a higher job take-up rate than the rest of the sample. It is interesting that of the three who obtained work in the Handsworth Careers Office sample none actually lived in Handsworth (proper). (This factor will be considered in later analysis of job search data). It appears that the job take-up figure for the total Aston sample was substantially increased by the Aston (proper) division which has the characteristics (see table 4.12) of non-white, relatively high car ownership and higher SEG in comparison with the remainder of the total Aston sample. Erdington and Castle Vale respondents had below average job take-up rates and well below average levels of at least one car in the household.

Dividing each sample recruited from an inner area Careers Office, on a locational basis therefore seemed to reveal further important differences in sample characteristics and rates of job take-up. However, the actual numbers proved small and higher job take-up rates would not necessarily mean that job search had been more effective. This is a point which will be explored later in the context of the process of job search.

4.9 CONCLUSION

This chapter has shown that a representative sample of unemployed school leavers was recruited from four careers offices in Birmingham. The characteristics of the sample have been described and significant differences were noted particularly between the 'inner city' and suburban groups of respondents. A multi-variate technique (i.e. 'Cluster Analysis') was used to identify most similar groups of individuals. The 'Clusters' however generally reflected the patterns of home locations of the individuals. This emphasised further the need to divide the sample into locational divisions in order to examine some of the research hypotheses. An examination of job take-up later also revealed statistically significant differences between the groups recruited from the four careers offices, while significant differences in job take-up between clusters was not found. The respondents from the 'Handsworth' careers office had particularly low rates of job take-up and this group will be given special attention in later analysis of job search behaviour.

CHAPTER FIVE

JOB ASPIRATIONS OF
UNEMPLOYED SCHOOL-LEAVERS

5.1 Introduction

This chapter investigates the job 'Aspirations' held by unemployed school-leavers at the outset of job search. The role of 'aspirations' in the process of job search has been described in Chapter 2 within the context of the postulated 'Conceptual Model of Job Search'. Job 'Aspirations' for the purposes of this study have been divided into locational and non-locational. The non-locational job aspirations include the type of job sought, the minimum acceptable wage, and other characteristics of the job vacancy such as working conditions, unionisation, personality of the employer, etc.

The 'locational job aspirations' are obviously concerned with the geographical location of the firm offering the job vacancy. It is argued that a job seeker possesses preconceived ideas (note 1) about the locations in the city that he or she is prepared to travel to for work purposes. The 'model' in Chapter 2, showed that at each stage in the process of job search the job seeker makes a decision based on the extent to which the information available about the job vacancy accords with this set of locational and non-locational job aspirations.

Although examining non-locational aspects of job aspirations was not central to the research objectives, they are obviously an integral part of the search process. Therefore before analysing the 'locational' aspects of job aspirations it is informative to describe, briefly, the 'non-location' job aspirations held by unemployed school leavers at the outset of job search.

Note 1 - The individual may or may not be 'aware' of this preconceived preference for potential journey to work destinations.

5.2 TYPE OF JOB

Respondents were asked to indicate the type of job they were looking for at the outset of job search. Individuals were also asked if they would consider other (albeit less preferable) jobs and if so which types. The responses were wide ranging and for purposes of analysis it has been necessary to allocate each job type to a certain group based on a category of job types and skill level. (see Appendix E1). In the analysis presented below the job types are very broadly divided into the following.

- (1) unskilled (no training)
- (2) semi-skilled (basic training)
- (3) skilled (apprenticeships and formal training)

Examples for each group, respectively are labourer, tyre fitter, and carpenter.

Table 5.1 shows the breakdown of responses to the question "will you consider other job types?"

TABLE 5.1 RESPONDENTS WILLING TO CONSIDER OTHER JOBS

Response	(A) SAMPLE DIVISIONS TOTAL								TOTAL	
	CITY		HANDSWORTH		ASTON		SUTTON		No.	(%)
	No.	(%)	No.	(%)	No.	(%)	No.	(%)		
NO	8	(17.4)	9	(12.9)	7	(14.0)	15	(15.3)	39	(14.8)
YES	38	(82.6)	61	(87.1)	43	(86.0)	73	(74.7)	225	(85.2)
TOTAL	46	(100)	70	(100)	50	(100)	98	(100)	264	(100)

The chi-squared value is 0.43 with 3 degrees of freedom. Therefore the null hypothesis that the frequency of respondents willing to consider 'other' job types does not differ significantly between the four groups is accepted.

(B) END OF SURVEY DIVISION

RESPONSE	OBTAINED EMPLOYMENT		CONTINUED UNEMPLOYMENT		TOTAL	
	NO.	(%)	NO.	(%)	NO.	(%)
NO	8	(14.0)	31	(15.0)	39	(14.8)
YES	49	(86.0)	176	(85.0)	225	(86.2)
TOTAL	57	(100)	207	(100)	264	(100)

The chi-squared value is 0.64 with one degree of freedom. Therefore the null hypothesis that the frequency of respondents willing to consider 'other' job types does not differ significantly between those employed and those unemployed at the end of the survey period is accepted.

The above table demonstrates that only a minority (about 15%) of the total sample were unprepared to consider more than one type of job. It is also evident that no significant differences in this attitude existed between the four group of recruited school leavers (table 5.1A) and between those successful and unsuccessful in finding work by the end of the survey (table 5.1 B). The level of skill in the types of jobs considered are summarised in table 5.2.

TABLE 5.2. - SKILL LEVEL OF JOB TYPES PREFERRED AND OTHERS CONSIDERED -

JOB TYPE	PREFERRED		CONSIDERED		TOTAL	
	No.	%	No.	%	No.	%
UNSKILLED	89	(33.7)	158	(43.1)	247	(39.1)
SEMI-SKILLED	67	(25.4)	93	(25.3)	160	(25.4)
SKILLED	108	(40.9)	116	(31.6)	224	(35.5)
TOTAL	264	(100)	367	(100)	631	(100)

Chi-squared value is 7.15 with 2 degrees of freedom. Therefore the null hypothesis that the frequency of the skill levels does not significantly differ between 'preferred' and 'considered' jobs is rejected at the 95% confidence interval

Table 5.2 demonstrates that the majority of school leavers were prepared to 'consider' jobs requiring lower skill levels than the one which they most preferred. It is noticeable that approximately two thirds of the sample aspired to search for a job with at least some degree of training. Appendix E1 reveals that among the typical preferred jobs were those mechanic, tool maker and fitter. Table 5.3 shows a breakdown of job type between the inner city (Aston, City and Handsworth) groups and the suburban group (Sutton).

TABLE 5.3. - SKILL LEVEL OF JOBS PREFERRED

- INNER CITY VERSUS SUBURBAN GROUPS

SKILL LEVEL	INNER CITY No. (%)		SUBURBAN No. (%)		TOTAL No. (%)	
UNSKILLED	54	(32.5)	35	(35.7)	89	(33.7)
SEMI-SKILLED	47	(28.3)	20	(20.4)	67	(25.4)
SKILLED	65	(39.2)	43	(43.9)	108	(40.9)
TOTAL	166	(100)	98	(100)	264	(100)

The chi-squared value is 1.78 with 2 degrees of freedom. Therefore the null hypothesis that the frequency of skill levels does not differ significantly between 'inner city' and 'suburban' respondents is accepted.

TABLE 5.4 - SKILL LEVEL OF JOB PREFERRED
- EMPLOYED VERSUS STILL UNEMPLOYED

	EMPLOYED		CONTINUING UNEMPLOYED		TOTAL	
	NO.	(%)	No.	(%)	No.	(%)
UNSKILLED	22	(38.6)	67	(32.4)	89	(33.7)
SEMI-SKILLED	19	(33.3)	48	(23.2)	67	(25.4)
SKILLED	16	(28.1)	92	(44.4)	108	(40.9)
TOTAL	57	(100)	207	(100)	204	(100)

Chi-squared value is 5.23, with 2 degrees of freedom. Therefore the null hypothesis that the frequency of skilllevels of jobs preferred does not differ significantly between respondents 'employed' and those 'still unemployed' at the end of the survey is rejected at the 90.0% confidence interval.

From table 5.4 it is apparent that those respondents who obtained work preferred jobs with lower skill levels than those continuing unemployed at the end of the survey. Table 5.5 shows that of the 57 'employed' respondents 22 preferred an unskilled job at the outset of job search and 32 obtained an unskilled job by the end of the survey.

TABLE 5.5 - JOBS SOUGHT AND OBTAINED

	OBTAINED	PREFERRED
UNSKILLED	32	22
SEMI-SKILLED	12	19
SKILLED	13	16
TOTAL 'EMPLOYED' RESPONDENTS	57	57

To summarise, those school leavers who obtained work within the period of the survey were more prepared at the outset of search and indeed in the actual event of job search, to accept lower skilled jobs than those continuing unemployed. This is worth bearing in mind when considering later analysis of the locational aspects of job search.

5.3 OTHER JOB CHARACTERISTICS

A list of job characteristics was given to each school leaver. The respondent indicated, in order of importance, the three characteristics which he or she intended to consider when deciding whether or not to apply for a discovered job vacancy. The ranking based on aggregate scores for each reason by the total sample and the four sub-divisions are displayed in table 5.6.

TABLE 5.6 - RANKED IMPORTANCE OF JOB CHARACTERISTICS

(1 = most important)

(10 = least important)

	RANK				
	CITY	HANDS- WORTH	ASTON	SUTTON	TOTAL
Are the hours acceptable?	3	7	6	5	5
Are the arrangements/ amount of holiday accept?	8	8	8	8	8
Is it possible for me to travel to the firm?	5	5	4	3	4
Are the promotion prospects sufficient?	4	3	3	4	3
Is the pay enough?	2	2	2	2	2
Does the firm have a good reputation?	6	6	7	6	7
Do I know the area in which the firm is located?	7	4	5	7	6
Is this exactly the type of work I want?	1	1	1	1	1
Do any of my friends work at the firm?	9	9	9	9	9
Others	10	10	10	10	10

The above table has implications for the order of decision-making in the process of job search. These responses suggest that an individual is most likely to consider the type of job first of all and then the pay offered by the firm holding the job vacancy. The third ranking factor (for the total sample) is the promotion prospects and the fourth is the travel aspects. It is this fourth factor that is the main concern of this project. It is noticeable in the breakdown into sub-groups that travel aspects were relatively more important to the 'Sutton' and 'Aston' groups of respondents, compared to the 'city' and 'Handsworth' groups. The home locations of school leavers in the former groups were further from the city centre than the two latter groups.

Evidently travel is an important consideration to individuals in their process of job search. It should be remembered that these responses were made at the time when the respondents first left school. Subsequent expenditure on travel in job search may have influenced these attitudes. Furthermore, although table 5.6 reflects the importance of each job characteristic it does not necessarily follow that each discovered job vacancy was evaluated in this order. Indeed, this may have depended on how the individual discovered a job vacancy, and the order in which information about the job vacancy was received by the job seeker. It is concluded therefore that potential journey-to-work must, at some stage, be considered by individuals in the job search process. The 'Intended Travel to Work area' is examined fully in the second part of this chapter. However it is useful at this point to

investigate the minimum acceptable wage (i.e. the 'reservation wage') because of its obvious importance to the job seeker. (i.e. second rank of importance).

5.3.1 Reservation Wage - The minimum wage acceptable to respondents at the outset of search is shown in table 5.7.

TABLE 5.7 THE RESERVATION WAGE

£ per Week	CITY		HANDSWORTH		ASTON		SUTTON		TOTAL	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
0-10	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	2	(0.8)
11-20	8	(17.8)	9	(14.3)	12	(25.0)	21	(21.6)	50	(19.8)
21.-30	32	(71.1)	32	(50.8)	26	(54.2)	53	(54.6)	143	(56.5)
41+	1	(2.2)	5	(0.9)	1	(2.0)	4	(4.2)	11	(4.3)
TOTAL	45	(100)	63	(100)	48	(100)	97	(100)	253	(100)
NOT GIVEN	1		7		2		1		11	

The above table shows that the modal reservation wage category is £21-£30 per week. At least 50% of respondents from each of the four areas indicated that the minimum acceptable wage was within this category. A relationship could be expected between wage offered and the distance an individual is prepared to work.

Therefore, it seems likely that a wage offer would have to exceed £30.00 before an individual might consider extending the area of job search.

As with the type of job, it is informative to examine the reservation wage held at the outset of search by the respondents who obtained employment during the survey period. Table 5.8 shows a comparison between the 'employed' and 'unemployed' groups.

TABLE 5.8 THE RESERVATION WAGE -

EMPLOYED VERSUS CONTINUING UNEMPLOYED GROUPS

£ per week	EMPLOYED		CONTINUING UNEMPLOYED		TOTAL	
	No.	(%)	No.	(%)	No.	(%)
0-10	0	(-)	2	(0.1)	2	(0.8)
11-20	16	(28.1)	34	(17.3)	50	(19.8)
21-30	36	(63.2)	107	(54.6)	143	(56.5)
31-40	5	(8.7)	42	(20.4)	47	(18.6)
41+	0	(-)	11	(5.6)	11	(4.3)
TOTAL	57	(100)	196	(100)	253	(100)
NOT GIVEN	0		11		11	

Chi-squared value is 9.08 when the first two categories and last three are amalgamated. Therefore the null hypothesis that there is no statistically significant difference in the reservation wage between employed and unemployed respondents is rejected at the 95.0% confidence interval.

An amalgamation of the first two categories and the last three categories revealed that a significantly greater proportion of the continuing unemployed respondents held a reservation wage in excess of £21-30 per week. (N.B. These figures were for July 1980)

Table 5.9 shows the distribution of the wages accepted by those individuals who obtained employment during the survey.

TABLE 5.9 WAGE OF JOB OBTAINED

£ per week	'EMPLOYED' RESPONDENTS
0-10	0
11-20	1
21-30	37
31-40	9
41+	6
TOTAL	53
NOT GIVEN	4

Table 5.9 demonstrates that compared to the distribution of reservation wages at the outset of search, (table 5.8) a larger proportion of the 'employed' respondents obtained a weekly wage above £21.30.

5.4 PREPARED TO LEAVE HOME

Table 5.10 shows the proportion of respondents who stated at the outset of search that they would be prepared to leave home in order to take-up employment.

TABLE 5.10 PREPARED TO LEAVE HOME TO ACCEPT A JOB OFFER

RESPONSE	CITY		HANDSWORTH		ASTON		SUTTON		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%
YES	22	(48.8)	31	(44.3)	26	(52.0)	46	(47.0)	125	(47.3)
NO	24	(52.2)	39	(55.7)	24	(48.0)	52	(53.0)	139	(52.7)
TOTAL	46	(100.0)	70	(100.0)	50	(100.0)	98	(100.0)	264	(100.0)

The above table reveals that approximately half of the respondents were prepared to leave home in order to accept a job offer that was located beyond the individual's "Intended Travel to Work Area". This does not mean (note 1) that individuals were necessarily prepared to leave home in order to search for work. The implication of table 5.10 to subsequent job search is that about half the respondents were not prepared to leave home at all, therefore ANY jobs located beyond ITWA were probably not considered.

Note 1 In fact only 2 respondents left home during the survey and in both instances the move was because of 'personal' and not employment reasons.

5.5 TRAVELCARD OWNERSHIP

Finally, in view of increased speculation concerning a policy of free travel for the unemployed, it is useful to establish the proportion of respondents who owned a valid West Midlands Passenger Transport Executive Monthly 'Travelcard' (note 1) upon commencement of the survey.

TABLE 5.11 VALID TRAVELCARD POSSESSION
- EMPLOYED VERSUS CONTINUING UNEMPLOYED RESPONDENTS

	EMPLOYED	CONTINUING UNEMPLOYED	TOTAL
	No. (%)	No. (%)	No. (%)
NO	52 (91.2)	193 (93.2)	245 (92.8)
YES	5 (8.8)	14 (6.8)	19 (7.2)
TOTAL	57 (100)	207 (100)	264 (100)

Note 1 A 'travelcard' permits unlimited travel in the West Midlands County for a given period.

Table 5.11 shows that less than 10% owned a valid 'travelcard'. The table also shows that very little difference existed in the proportion of respondents owning valid travelcards between the two groups. Therefore it does not appear that those in possession of a 'travelcard' and therefore presumably more mobile, had any greater success in obtaining employment. However, many of the travelcards expired shortly after the survey began. Several individuals may have regularly bought a travelcard but decided not to buy one as the prospect of unemployment became imminent. It is possible that previous travelcard possession might affect levels of awareness of the city, at the outset of search and hence job search behaviour.

Table 5.12 shows the proportion of employed and continuing unemployed individuals who have ever owned a travelcard.

TABLE 5.12 PREVIOUS "TRAVELCARD" POSSESSION -
EMPLOYED VERSUS CONTINUING UNEMPLOYED RESPONDENTS

Response	EMPLOYED		UNEMPLOYED		TOTAL	
	No.	(%)	No.	(%)	No.	(%)
YES	16	(28.1)	24	(11.6)	40	(15.2)
NO	41	(71.9)	183	(88.4)	224	(84.8)
TOTAL	57	(100)	207	(100)	264	(100)

Chi-squared is 22.59 with 2 degrees of freedom. Therefore the null hypothesis that the frequency of travelcard ownership does not differ significantly between 'employed' and 'still unemployed' respondents is rejected at 99.9% confidence interval

The above table shows that a significantly greater proportion of 'employed' respondents have at one time owned a travelcard. This implies that in later analysis it will be interesting to compare levels of urban awareness and search behaviour between these two groups of respondents.

A number of conclusions can be drawn from this examination of the non-locational aspects of job aspirations at the beginning of a first ever spell of unemployment. It is evident that school leavers were prepared to consider job types which required lower levels of skill and training than the job they most preferred. This was particularly true of those who gained employment during the survey period. On average, the 'employed' group were also prepared to accept a lower minimum wage; although it is probable that the majority of the sample underestimated the average earnings of school leavers.

The wage offer was considered important by job seekers along with the type of work, promotion prospects and travel to work factors. The implication for the proposed "model of job search" is that the locational aspirations would have to be fulfilled before an individual would apply for a discovered vacancy. Hence, if the model is appropriate it should be possible to detect significant differences (if any exist) between the locational patterns of each stage (e.g. Vacancy Application Space) outlined in the conceptual model of the job search process.

5.7 INTRODUCTION

One method of examining the locational aspects of 'job aspirations' held by school-leavers was to establish the maximum distance and time which respondents reported (at the outset of search) that they were prepared to travel to work. A second method was to measure the 'Intended Travel to Work Area' (ITWA), defined as the districts of the city to which respondents indicated that they would be prepared to travel to work. The second approach facilitated a more sensitive comparison between job aspirations and job search behaviour. For instance, a job seeker might have stated that he/she was prepared to travel five miles to work but the individual may have subsequently decided not to follow-up (i.e. 'Vacancy Rejection Space') several vacancies located within a five mile radius of home. This could possibly have been because the location was not well known and/or because the distance to the location was perceived as greater than five miles. Hence it was hypothesised that ITWA was not significantly different from the 'awareness space' held by an individual job seeker. Awareness space was measured by a six point scale (i.e. a 'familiarity index') which facilitated a comparison of data on job search decision-making with an awareness score assigned to the district in which each discovered job vacancy was located.

5.8 INTENDED MAXIMUM DISTANCE AND TIME TO WORK

Table 5.13 shows the modal split and maximum distance and time respondents intended to travel to work. The majority of respondents (72%) stated that they intended to use the bus, and the average distance respondents in the inner city groups were prepared to travel to work by bus was 5.0 miles (note 1) for Erdington and Castle Vale the average was 6.0 miles and for the remaining suburban respondents the average was 9.5 miles. these average distances approximate the distance from the home location of each group to the city centre. The differences between the groups in terms of average maximum distance were more noticeable than differences in the maximum time respondents were prepared to spend travelling by bus. The average time for the inner city groups was 45 minutes (note 2), for the Erdington and Castle Vale groups the average was also 45 minutes, and for the five suburban groups the average was 50 minutes.

The Map Supplement shows, for each locational division of the samples, the average maximum time and distances for the intended travel to work by bus. The maximum distance has been drawn on the map of Birmingham as a radius from the home location point of each group. The maximum time has been drawn with the use of the West Midlands County Council's 'Accessibility Programme'. The patterns of maximum time and

Note 1 Average 'distance' figures have been calculated to the nearest half-mile.

Note 2 Average 'time' figures have been calculated to the 5 minute interval.

TABLE 5.1³

MAXIMUM DISTANCE AND TIME RESPONDENTS INTEND TO TRAVEL TO WORK BY INTENDED MODE

GROUP	MODE	NUMBER OF RESPONDENTS	AVERAGE DISTANCE (Miles)	AVERAGE TIME (MINUTE)
ASTON	Bus	12	4.5	50
	Car(Passenger)	2	4.0	60
	Walk	1	3.0	45
SOUTH CORE	Bus	12	5.0	40
	Bus (X)	4	10.0	50
	Bicycle	1	5.0	45
	Walk	1	4.0	30
WEST CORE	Bus	7	5.0	50
	Bus (X)	1	10.0	30
	Bicycle	1	7.0	120
	Walk	1	2.0	30
EAST CORE	Bus	7	5.0	50
	Train	1	5.0	60
LOZELLS	Bus	16	5.0	40
	Train	2	2.0	20
	Car (Passenger)	1	4.0	60
HANDSWORTH	Bus	50	5.0	45
	Car (Passenger)	2	10.0	40
ERDINGTON (PARTNERSHIP AREA)	Bus	21	5.5	50
	Bus (X)	1	5.0	60
	Train	1	15.0	60
	Bicycle	4	16.0	65
CASTLE VALE (PERIPHERAL COUNCIL ESTATE)	Bus	12	7.0	50
BOLDMERE	Bus	17	8.0	50
FALCON LODGE	Bus	11	9.0	45
	Motorcycle	3	13.0	45
FOUR OAKS	Bus	13	10.0	60
	Bus (X)	1	15.0	60
	Train	1	10.0	30
SUTTON CENTRAL	Bus	13	10.0	45
	Train	2	10.0	30
	Motorcycle	1	5.0	30
WALMLEY	Bus	14	10.0	50
	Motorcycle	1	20.0	45

NOTE: Bus (X) = Bus using a Travelcard

distance are generally similar in the direction towards the city centre, while in other directions there are noticeable differences. This implies that distances in certain directions are more accurately perceived and are presumably influenced by a number of factors including accessibility; which helps to explain the less noticeable differences between maximum time figures for each group.

As the map supplement shows, patterns of average maximum distance and time cover different parts of the city which obviously have their own particular employment opportunities. Hence it is informative, at this stage, to use the West Midlands County Council Accessibilities Program (which has the facility to provide employment and population figures for journeys times from any given origin) to compare accessibility to employment for the intended maximum time to work for each group (note 1). Table 5.14 shows that, although more jobs are generally located in the inner city, the intended travel to work time for inner city residents does not include a higher 'jobs per person' ratio than the intended travel time for suburban respondents. This, of course, is based on the assumption that individuals are in reality prepared to travel to all the destinations included within these patterns of accessibility. Therefore a more relevant measure of the

Note 1 The general patterns of accessibility to employment for each group are examined in Appendix F1 for a variety of journey time intervals. The appendix demonstrates that provided suburban residents are prepared to travel a journey time between 40 and 60 minutes, then the ratio of employment places per population is not noticeably different from the ratio for inner city residents.

TABLE 5.14 - EMPLOYMENT PLACES WITHIN MAXIMUM
TIME OF INTENDED TRAVEL TO WORK BY BUS

GROUP	MAXIMUM TIME OF INTENDED TRAVEL TO WORK BY BUS (Mins.)	EMPLOYMENT PLACES	TOTAL POPULATION	JOBS PER PERSON
TOTAL 'ASTON' SAMPLE	50	465622	808760	0.58
ASTON	50	499551	783698	0.64
ERDINGTON	50	471859	839421	0.56
CASTLE VALE	50	288503	396007	0.73
TOTAL 'CITY' SAMPLE	45	539340	947433	0.57
SOUTH CORE	40	423052	612200	0.69
WEST CORE	50	556607	822205	0.68
EAST CORE	50	473635	749531	0.63
TOTAL 'HANDSWORTH' SAMPLE	45	408249	482855	0.85
HANDSWORTH	45	466514	616638	0.76
LOZELLS	40	471905	596295	0.79
TOTAL 'SUTTON' SAMPLE	50	278930	413840	0.67
BOLDMERE	50	333930	444245	0.75
FALCON LODGE	45	51781	149780	0.35
FOUR OAKS	60	209236	343854	0.61
SUTTON CENTRAL	45	232881	346222	0.67
WALMLEY	50	251393	363020	0.69

Source: Category Analysis Data 1976, W.M.C.C. 'Accessibility' Programme.

locational aspects of job aspirations was the 'Intended Travel to Work Area' (ITWA) which covered all possible factors including perception of distance, accessibility and preferences and attitudes to certain destinations.

5.9 INTENDED TRAVEL TO WORK AREA

In order to define all the destinations in the city to which job seekers were prepared to travel, and to implicitly measure perception of distance in all directions from the home location, an Intended Travel to Work Area was defined. Respondents were given a list of all the districts of Birmingham and adjacent areas and asked to indicate whether or not they were prepared to travel to work in each district. They were asked to reply 'yes', 'no' or 'consider' to each district in the list. A list was used in preference to an annotated map because the use of a map showed relative locations of districts which the respondent might have otherwise not realised. A map would therefore have acted as a "prompt" and a source of further information to respondents. Furthermore, most job vacancy information was expected to be more frequently in a 'list' rather than cartographic form.

In order to show the geographical pattern of ITWA for each group of respondents it was necessary to define a criterion for the level of agreement between individuals. Various levels of agreement were tested to establish the most readable patterns. Sixty seven percent (i.e. two-thirds) agreement facilitated the most balanced three-fold division of responses. Hence, the following criteria were used to define the boundaries of the ITWA patterns for each group of respondents.

- (i) Over two-thirds of respondents saying 'yes' to intended travel to the district; = "Yes" district
- (ii) Over two-thirds of respondents saying 'consider' or 'yes' to intended travel to the district; = "Consider" district
- (iii) Less than two-thirds of respondents saying 'consider' or 'yes' to intended travel to the district; = "No" district

The maps illustrating the ITWA patterns are included in the 'Map Supplement'.

5.9.1 In terms of geographical extent the 'inner city' groups (note 1) exhibited a concentric ITWA pattern. The pattern was centred near to the average centre of the home location of the respondents and usually between the home location and the city centre. The distribution of 'yes' districts generally formed a compact and continuous area. The 'consider' districts were adjacent to 'yes' districts but further from the home location. However, unlike the 'yes' pattern the 'consider' pattern was not continuous and took the form of several 'tentacles'. For example, the 'consider' area for the 'West Core' respondents included Aston and Erdington but excluded Lozells, Birchfield, Witton and Perry Barr which are located nearer to the home location in terms of absolute distance.

The most noticeable feature of the ITWA patterns for all inner area groups was the absence of any 'yes' districts on the side of the city centre opposite to the home location. Therefore, although the pattern of ITWA was concentric, it was

Note 1 Inner Areas include East Core, South Core, West Core, Handsworth, Lozells and Aston.

definitely not concentric about the city centre. This indicated that a school leaver residing in an inner area did not intend to travel to work in all other areas.

5.9.2 Suburban Groups (note 1) exhibited a sectoral pattern of ITWA's. The Sutton sample was divided into five groups based on the proximity of home locations. The three groups located to the north of Sutton town centre (Sutton Central, Four Oaks and Falcon Lodge) exhibited very similar patterns. The distribution of 'yes' districts included all divisions of the sample from Sutton Coldfield, Erdington, Aston and the City Centre. One exception was the Falcon Lodge group of respondents of which less than two-thirds were definitely prepared to travel to the City Centre. (This may be explained by the fact that the Falcon Lodge is a "Council Estate" with lower levels of car ownership than the other "Middle Class" suburbs). The 'consider' districts were adjacent to 'yes' districts which created a wider sectoral pattern of ITWA. Obviously the shape of ITWA's for these groups was biased by the list of districts being restricted to Birmingham. Therefore the 'consider' pattern for these three groups was probably concentric about the home location. Further, the 'yes' pattern was a continuous area concentrated on the home location but 'off-set' by the presence of the city centre. Hence a 'corridor' into the city was noted in the pattern of 'yes' districts. The absence of 'consider' districts adjacent to the corridor was also most noticeable.

Note 1 Suburban Groups include Boldmere, Walmley, Falcon Lodge, Sutton Central, and Four Oaks.

The remaining groups, Boldmere and Walmley, are both located between Sutton Town Centre and Birmingham City Centre. The ITWA patterns for these groups were similar to those for the other three suburban areas, except the sector was nearer to the city centre and excluded some of the more peripheral districts such as Four Oaks and Mere Green. Also, the sector for these two groups included districts nearer to the city centre, for example Tyburn and Perry Barr.

It is apparent that the ITWA pattern for the suburban groups excluded all districts located on the 'opposite' side of Birmingham City Centre. This could be explained by the general absence of 'cross-city' bus routes in Birmingham. Also excluded from the ITWA were the majority of all 'inner city' districts excluding those located between the city centre and the 'home location'.

5.9.3 Castle Vale (Peripheral Council Estate)

The pattern of ITWA (see Map Supplement) for this group was slightly different from the suburban groups. Castle Vale respondents exhibited a linear pattern of 'yes' districts from the home location to the city centre. Another dimension of the ITWA was an arc of 'yes' districts originating from Castle Vale and extending to Sutton Centre in one direction and Chelmsley Wood in the other. The 'yes' pattern for the Castle Vale groups was unlike the pattern for other groups because it was linear and not clustered around the home location.

5.9.4 Erdington (Partnership Area)

This group of respondents lived nearer to the city centre than Castle Vale and suburban respondents but further than inner city groups. The general pattern was sectoral with

a linear pattern of 'yes' districts. The 'consider' districts were a sectoral pattern and included adjacent 'partnership' districts. Very few districts were included in the opposite direction from the city centre except Sutton Centre. Clearly respondents were generally prepared to travel to Sutton Centre but not to the intermediate districts of New Oscott, Boldmere, Wylde Green and Walmley.

5.9.5 Summary of ITWA Patterns

The pattern of ITWA's can be summarised as 'concentric' for inner city residents and 'sectoral' for suburban residents. Those respondents who lived in the 'partnership areas' exhibited a sectoral pattern, wider than the sectoral pattern for suburban residents but not so wide that it became concentric.

The City Centre has a large influence on all patterns of ITWAs. The centre of the concentric pattern is shared from the home locations towards the city centre and the city centre is a focal point for the sectoral patterns. However, its effect as a focal point is less for those respondents living beyond Sutton Town Centre, on the periphery.

The ITWAs for each group (see Map Supplement) shows that the city centre was generally the furthest from the home location within the 'yes' category. This is especially true for the suburban groups, while for the inner area groups the city centre was still the greatest distance from home location but so were other inner areas. An important point is that for suburban groups the only district included in 'yes' category was the city centre, while other districts, the same distance or less, were excluded from the 'yes' and 'consider' categories.

Also the districts allocated to the 'consider' category, by all groups, were not equi'distant from the home location.

An important feature of the patterns is that suburban residents were apparently prepared to travel to inner areas for job search (albeit in narrow corridors), yet an opposite potential flow along the 'corridor' to the suburban areas was not recorded. Given that "inner area" ITWAs were concentric it appears that inner area residents must compete for job vacancies located in their ITWA with, not only other inner area residents, but also with suburban residents.

The feature of the patterns common to both inner and outer residents, was that the ITWA did not extend the same distance in all directions from the home location. In other words, the maximum distance an individual was prepared to travel was not uniform throughout the city. It is useful therefore to compare the ITWA's with the maximum distances individual's were prepared to travel to work.

5.10 Comparison of ITWA and Intended Maximum Distance and Time to Work

The patterns of average intended maximum distance and time respondents claimed they were prepared to travel to work are superimposed on the ITWA patterns shown in the 'Map Supplement'. It is evident from these maps that some 'yes' and 'consider' districts were located at the furthest extent of the average maximum distance, while other districts included in the 'circle' were outside the ITWA.

The ITWA pattern for inner areas has already been described as concentric, centred on a point between the city

centre and the home location (note 1). Consequently, the ITWA covered more of the area within the average maximum distance circle towards the city centre. This indicates that destinations located on the opposite side to the city centre and towards the periphery of the city were perceived as a relatively greater distance than destinations on the same 'side' of the city centre. Journeys by public transport through the city centre generally took longer than most other journeys because they often involved a change of bus. (This was reflected in patterns of intended time of work.) However, this does not explain why certain districts on the same side of the city centre and relatively close to the 'home location' were not even 'considered'.

The 'average maximum distance' radius was greater than the distance from the city centre to the 'home locations' of all suburban groups, except Falcon Lodge. Evidently, suburban residents generally did not consider travel to work to destinations beyond the city centre, despite the recently upgraded (1980) Four Oaks to Longbridge railway line. Also, because the 'sectoral' pattern focused on the city centre, it was probable that the 'average maximum distance' was an overestimation of the real distance from home to the city centre. Distances to other destinations were therefore, likely to have been further 'over-estimated'.

Note 1 Except for Handsworth, Lozells and West Core - the 'yes' pattern in these instances is 'pulled' towards the immediately adjacent town of West Bromwich.

The patterns of intended 'time' to work concurred more closely to the ITWA pattern than the pattern of intended 'distance' but the remaining differences suggest other factors are involved in an individuals definition of his, or her ITWA.

The patterns of ITWA depicted in the 'Map Supplement' show the importance of the city centre to both suburban and 'inner city' respondents. The argument that the ITWA represents, in part, 'perceived distance' explains the general absence of 'yes' districts beyond the city centre in the pattern. However, several districts on the same side of the city centre, and at similar distances, from the 'home location' were not 'considered' by respondents. For example 'West Core' respondents 'considered' travel to Bartley Green but not to Weoley Castle.

Possibly certain 'names' of districts mean little or nothing to a respondent, or an individual might have known a district by a different name. Both explanations of course have implications for job search. For example, if the location of a job vacancy is advertised as say Gravelly Hill, then the job seeker might not follow-up the vacancy (note 1) even though the location of the firm may be known to the job seeker, except by another name (e.g. Erdington). Presumably, it is unusual for a firm to advertise its location as Erdington when it is in fact Gravelly Hill.

Note 1 This assumption is based on the fact that the individual has indicated at the outset of search that he or she is not prepared to travel to that district.

The conclusion is that ITWA is not purely the result of decisions based on economic rationale. The main hypothesis of this research is that the average ITWA is, on aggregate not significantly different from the 'awareness space' of a group of individuals. Although 'awareness space' is probably affected by the factors which influence the ITWA such as the road and bus network, travel times and perception of distance an individual may still be willing to travel to work in a district a long distance from home, with poor bus links; if the location is familiar to the individual because for example, a relative lives there or because a favourite football team plays there. 'Familiarity' it is argued therefore may not be entirely the result of 'economic' factors but would be the summation of 'economic' factors and other experiences and preferences of an individual.

If the 'ITWA' and 'Awareness Space' patterns are shown to be very similar (note 1) then it is preferable to analyse job search behaviour in conjunction with 'awareness' data rather than ITWA because the former is a clearly defined six-point scale. This scale is more meaningfully interpreted than responses such as 'yes', 'no' and 'consider', and therefore more useful in attempting to explain decisions by school leavers in job search.

5.11 AWARENESS SPACE

School leavers recruited for the survey were asked to indicate on a clearly defined six-point scale their 'familiarity' with each district of Birmingham and the immediately adjacent areas. The list of districts and the

Note 1 The two patterns are compared at the end of this chapter.

"familiarity index" used in the survey are shown in Appendix C2. Appendix C1 describes the nomenclature used in the list of districts and how it was developed by a series of pre-tests and pilot surveys. Also the Appendix describes the nomenclature used in the list of districts and how it was developed by a series of pre-tests and pilot surveys. Furthermore, Appendix C1 documents the development of the six-point scale of familiarity. It was essential that each point on the scale was interpreted by different people in the same way.

For example, awareness score '3' meant that the individual knew how to get to the district via one main road. It did not mean that the individual ranked this district as approximately half-way along their 'own' awareness scale. By using a scale of this nature it was possible to determine differences in 'level' of urban awareness between different individuals and groups of individuals. The geographical patterns of awareness were analysed using two methods -

- (1) Shaded maps based on aggregate awareness scores, and
- (2) The Standard Deviation Ellipse which is a summary of the dispersion of a given geographical pattern about its mean centre of gravity.

The ability of the SDE to summarize patterns was useful in comparing patterns for different groups and for identifying features common to these patterns. The weakness of the Standard Deviation Ellipse (SDE) technique is the limited range of its shape - which is by definition elliptical. (See Appendix B1 for further assessment of the technique). It was argued that "Awareness" of a city would not be uniform and equal in all directions. Although the SDE can indicate whether or not a geographical pattern was uniform in all directions

(i.e., the coefficient of circularity) it could disguise perceptual "sinks" or "holes" - (i.e. districts of low awareness surrounded by many districts of high awareness). Therefore, it was necessary to be able to identify any "perceptual holes" in an awareness pattern. Consequently, shaded maps for aggregate awareness scores were used in conjunction with the SDE's, to facilitate a clear understanding of the geographical patterns of "Awareness Space".

5.11.1 Method 1 - Aggregating Awareness Scores -

At the outset of analysis, it was intended to "weight" each awareness score by its own number. The total "weighted" score for each district could then be plotted on a map. Two problems associated with this method were:

- (1) The scale of awareness scores is an ordinal and not an interval scale. In other words, a district assigned a "score" of "4" is not necessarily "twice" as well-known as a district assigned a score of "2".
- (2) Once the scores are weighted and "averaged", the average score cannot then be strictly related to the definition of that score. As with any average score of nearly "3" would not necessarily mean that all the respondents actually knew how to get to the district via one main road, (i.e. definition of Score 3).

Hence, the frequency distribution of awareness scores assigned by respondents to each district provided the most meaningful method of describing the aggregate geographical pattern. Therefore, if at least two-thirds of the individuals in a group assigned a certain score (e.g. "5") to a district, then it was designated a "5" district for that group (1). This made it possible to relate the definition of awareness score

"5" directly to the aggregate geographical representation of "awareness space" (i.e., over 66.7% of respondents know the district extremely well - as defined for score "5"). Because the scale was ordinal, if less than 66.7% gave a district a score of "5", but over 66.7% gave a score of "4" or "5", then it could be stated that over 66.7% of the individuals in a group were familiar with the district to AT LEAST level "4", and so on. In each category it remained possible to relate the geographical pattern directly to the familiarity index (2).

Table 5.15 shows the criteria for defining each category to produce the geographical patterns of awareness space.

TABLE 5.15 DEFINITION OF AWARENESS SCORE CATEGORIES

Category	Definition Based on Awareness Scores
5	= Over 66.7% assign a score of "5".
4	= Less than 66.7% assign a score of "5"; but more than 66.7% assign a score of "4" or "5".
3	= Less than 66.7% assign a score of "4" or "5"; but more than 66.7% assign a score of "3", "4" or "5".
2	= Less than 66.7% assign a score of "3", "4" or "5"; but more than 66.7% assign a score of "2", "3", "4" or "5".
1	= Less than 66.7% assign a score of "2", "3", "4" or "5"; but over 66.7% assign a score of "1", "2", "3", "4" or "5".
0	= Less than 66.7% assign a score of "1", "2", "3", "4" or "5"; yet less than 66.7% assign a score of "0".

Note 1 'Two-thirds' concensus was used because it facilitated the most legible geographical patterns of awareness and because it was also consistent with the criterion used to define the ITWA patterns.

Note 2 This is most advantageous because it facilitates, in later analysis, a more meaningful comparison between locational aspects of job search and the aggregate awareness pattern.

TABLE 5.16 AVERAGE WEIGHTED SCORE FOR EACH AWARENESS CATEGORY

AWARENESS SPACE CATEGORY	EAST CORE	SOUTH CORE	WEST CORE	HANDSWORTH	LOZELLS	ASTON	ERDINGTON	CASTLE VALE	BOLDMERE	FOUR OAKS	SUTTON (CENTRAL)	FALCON LODGE	WALMLEY	AVERAGE SCORE CATEGORY
5	4.6	4.8	4.7	4.8	4.8	4.7	4.6	4.5	4.7	4.4	4.6	4.4	4.3	4.3-4.8
4	4.1	4.3	3.9	3.9	4.2	4.1	3.8	3.9	4.1	3.9	4.1	4.0	3.9	3.8-4.3
3	3.4	3.4	3.5	3.2	3.6	3.3	3.7	3.0	3.3	3.3	3.5	3.3	3.5	3.0-3.8
2	3.0	2.5	2.8	2.6	3.0	2.6	2.6	2.7	2.4	2.5	2.4	2.0	2.5	2.4-3.0
1	1.3	1.4	1.4	1.3	1.6	1.4	1.4	1.2	1.2	1.3	1.3	1.4	1.4	1.2-1.6
0	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.65	0.6	0.65	0.0-1.2
TOTAL AVERAGE SCORE	1.12	1.12	1.12	1.29	1.32	1.12	1.40	2.1	1.12	1.12	1.12	1.12	1.12	1.27

Although the average weighted score was not used to define each category, it was informative in calculating the average score. Table 5.16 shows that there was no overlapping of "average weighted" scores between each category for all groups of respondents. Therefore included in the definition of each category was a range of average weighted scores (see final column in Table 5.16).

5.11.2 Method 2 - The standard Deviational Ellipse -

The SDE provides a summary of a geographical distribution. However, caution must be exercised when using the technique to summarise "awareness space", because the scores were assigned to "fixed" locations, (i.e. the defined centre point of each district). Previous applications of the technique (e.g. Raine 1976) were on a distribution of dots - each dot representing one location (note 1). In other words, the dots could occur anywhere on the map. In this case a coefficient of circularity less than 1.00 indicated a directional bias in the data. As the set of fixed locations used in this study were not evenly distributed about the city, a directional bias was inherent in the analysis of 'awareness space'. Therefore a SDE was calculated for the distribution of the centre points of each district. This is referred to as the "optimal awareness". Figure 5.1 shows the "optimal awareness" SDE, and Table 5.17 outlines its statistical parameters.

Note 1 When analysing Job Search - travel to interviews - the data is of this nature, hence the SDE can be applied to job search travel without the caution noted here.

Optimal awareness ellipse

Figure 5.1

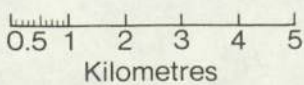
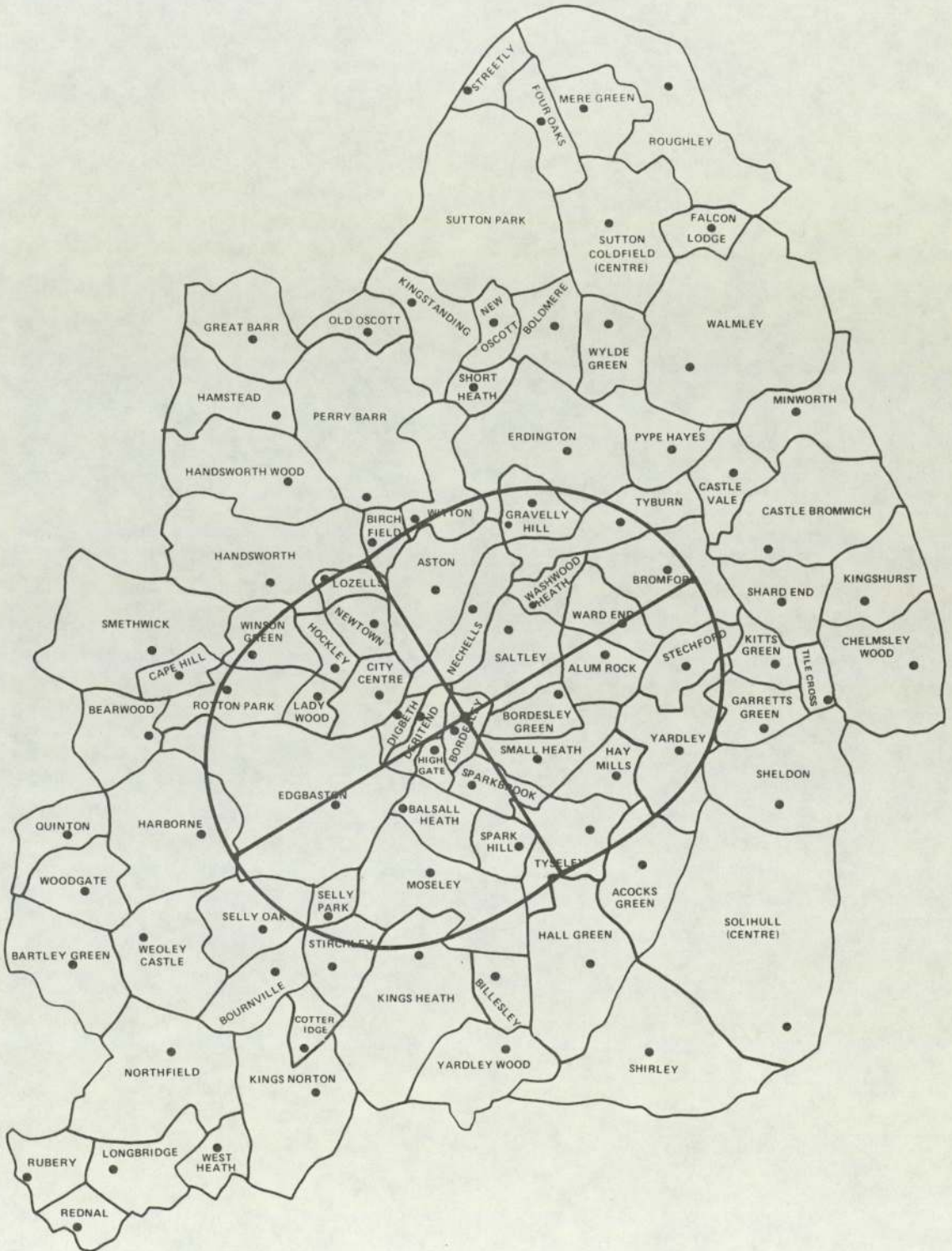


TABLE 5. 17 THE SDE PARAMETERS OF OPTIMAL AWARENESS
OF THE CITY

Table	The Optimal Awareness
*Mean X = 1.81	
*Mean Y = -0.55	
Major Axis = 5.68	Angle = 60°
Minor Axis = 3.88	Angle = 150°
Coefficient of Circularity = 0.68	
Area of Ellipse = 74.3	

Note * The mean X and Y co-ordinates are the distance from the City Centre (OS grid reference 068 870).

The Coefficient of Circularity is 0.68 and the major axis is tilted at 60° to due North. These two statistics of the SDE reflect the North-East to South-West elongation in the shape of the City. The mean centre of all the districts is located in the middle of the Bordesley district, immediately East of the City Centre. Because the mean centre is only slightly South of the City Centre, it is concluded that the distribution of districts is not biased in a North to South direction but a bias does exist from West to East.

The S D Ellipse identifies certain underlying geographical characteristics of the districts of Birmingham which must be considered when analysing awareness patterns using the SDE technique.

The problems associated with "weighting" each awareness score, discussed earlier, also apply to the calculation of standard deviation ellipses (i.e. "weighting" means that the ordinal scale of awareness is assumed to be an interval scale). However, the aim of using the SDE was to summarise patterns of awareness. If the scores (0 to 5) were not "weighted", then the awareness ellipse would have been very similar to the 'optimal awareness' SDE. It was necessary therefore to weight the scores in order that the SDEs clearly illustrated differences in locational biases between groups. An awareness score of "5" was given a value of 5, and a score of "4" was given a value of 5 and so on.

Awareness score "5" provided data that could be used to calculate an "unweighted" ellipse. In other words, "5" scores only were included in the calculation of a SDE, so that the ellipse represented a true summary of the distribution of districts "well known" (i.e. score 5) by each respondent in a given group.

Therefore, two SDE's were calculated for each pattern -

- (1) A 'weighted' total awareness SDE which included scores 1 to 5 and
- (2) A SDE for "5" scores, only.

5.11.3 The SDE Parameters Summarising Awareness Space - This section outlines some of the general characteristics of 'awareness space' identified by the summarising parameters of the standard deviation ellipse (SDE). This gives an indication of the general nature of 'awareness space' and provide the reader with a better understanding of the use of the SDE. (The reader should now refer to the 'Map Supplement').

The first observation is that in all cases the mean centre of Awareness (note 1) was closer to the City's Central Point (CCP) than the mean centre of Awareness 5 - which was always closer to the home location point (HLP). The second observation is that mean centres of both Awareness 1 and Awareness 5 SDE's were approximately located on a straight line running from the CCP to the HLP, for the suburban groups (Boldmere, Sutton Central, Four Oaks and Walmley) and the 'Erdington Group'. It is noticeable that all of these groups were situated in the general north-east to south-west axis of the shape of the City. For the other groups this straight line from the HLP is less certain. This is because the physical shape of the City forces the major axis of the SDE's (especially Awareness 1 SDE) towards the orientation of the "optimal awareness ellipse" (i.e. 60°). Table 5.18 shows that the orientation of "Awareness 1" SDE's generally conforms with the underlying structure of the City (i.e. 60°). However, when referring to the SDE's calculated only using "5" scores, the influence of the physical shape diminished because only a small proportion of the City's districts were assigned this score. Table 5.18 shows how the orientation of the "Awareness 5" SDE's was more varied than "Awareness 1" SDE. This is especially noticeable for the inner area groups (2).

Note 1 The "total weighted awareness SDE" is referred to as "Awareness 1" in this section.

Note 2 This variation may also be detected in suburban districts which, unlike those in this analysis, are not situated on the NE-SW axis of the City.

Indeed, "Awareness 5" SDE was more useful in analysis because the location of districts assigned "5" scores were not weighted, and because the location of districts assigned score "5" were generally less influenced by the shape of the City. Therefore the "coefficient of circularity" parameter in the case of "Awareness 5" SDE's can be assumed to be a meaningful indication of the degree of sectorality of the patterns.

TABLE 5.18 - ORIENTATION OF AWARENESS SDE'S

	Angle of Major Axis from North	
	Awareness 1	Awareness 5
Four Oaks	70°	70°
Falcon Lodge	60°	60°
Sutton Central	60°	60°
Walmley	60°	70°
Boldmere	60°	70°
Castle Vale	50°	20°
Erdington	60°	60°
Aston	60°	70°
Handsworth	60°	70°
Lozells	60°	60°
West Core	30°	140°
South Core	50°	40°
East Core	30°	40°

Table 5.19 lists the coefficient of circularity of each pattern for "Awareness 5" SDE's.

TABLE 5.19 - THE COEFFICIENT OF CIRCULARITY OF
"AWARENESS 5" SDE's

Group	Coefficient of Circularity
Four Oaks	.41
Falcon Lodge	.60
Sutton Central	.66
Walmley	.49
Boldmere	.46
Castle Vale	.45
Erdington	.86
Aston	.55
Handsworth	.78
Lozells	.72
West Core	.80
South Core	.85
East Core	.69

The figures indicate that the pattern of "5" scores was more concentric in the inner areas (except Aston) and tended to be more sectoral in the outer areas (each group will be examined individually later). The more concentric the distribution (i.e. nearer to 1.00), the less importance was attached to the direction of the major axis.

Table 5.20 outlines the area of the SDE's for each group.

TABLE 5.2 () - THE AREA OF AWARENESS SDE's

Group	Area (Sq. Kms.)	
	"Awareness 1"	"Awareness 5"
Four Oaks	71.4	41.5
Falcon Lodge	71.8	35.1
Sutton Central	70.3	29.1
Walmley	70.6	36.9
Boldmere	65.6	31.2
Castle Vale	54.8	35.9
Erdington	56.7	21.1
Aston	51.5	16.5
Handsworth	50.7	20.5
Lozells	49.5	38.1
West Core	50.4	28.0
South Core	46.7	27.2
East Core	44.4	28.3

The areas of both SDE's were generally larger for the suburban groups. This is explained by the fact that the suburban groups were familiar with the City Centre which is much further from the home locations than for inner area groups.

The above discussion is a brief summary of the general patterns based on the SDE parameters. The pattern for each group is now described using shaded maps in conjunction with the SDE's.

5.12 GEOGRAPHICAL PATTERNS OF AWARENESS SPACE

It is useful at this juncture, to recall the definitions of each point (0 to 5) in the familiarity index (see Appendix C2). A relevant distinction within the scale is between scores "0" and "1" (which represent no locational knowledge) and scores "2" and above (which represent at least some locational knowledge of a district).

5.12.1 Inner City Groups - A comparison of awareness space shaded maps for all the Inner Area groups (i.e. East Core, West Core, South Core, Handsworth, Lozells and Aston (see Mapp Supplement) reveals that districts in "category 2" and above formed a continuous area centred on the home location point (HLP) with a corridor of category 4 or 5 districts linking the home district with the City Centre. It was uncommon for a district on the opposite side of the City Centre to be in "category 2" and above.

Districts allocated to "category 1" and "category 0" generally formed a mixed pattern with a tendency to occur in districts on the periphery of the City. The patterns for each group did not conform to a consistent sectoral or concentric pattern. However, it is clear that districts in "category 2" and above covered a wide sector ranging from 180° (South Core) to 70° (East Core). As awareness level increased (i.e. category 3 to category 5) the sector became increasingly narrow and tended towards linearity for "category 5" (e.g. Handsworth). South Core group was possibly an exception in that the pattern became more concentric as awareness increased. This is endorsed by Table 5.19 which shows how the "Coefficient of Circularity" increased from 0.78 for "Awareness

'1' SDE" to 0.85 for "Awareness '5' SDE". No other "inner area" group possessed this characteristic. This might be explained by the close proximity of the HLP to the CCP and by virtue of the fact that the HLP is the nearest to the City Centre. This implies that individuals would have to live very close to the City Centre before the pattern of awareness was likely to be concentric about the city centre.

The awareness patterns for the inner areas can be summarized as a relatively wide sector (almost semi-circular) of minimal locational knowledge (i.e. "category 2" and above) which became more narrow as awareness score increased. This sector rarely extended to suburban districts except, perhaps, to adjacent suburbs on a main route from the City Centre. The sector focussed on the City Centre and excluded half the remaining inner areas and up to all of the suburban districts (e.g. East Core).

5.12.2 Suburban Groups - A comparison of awareness space shaded maps for all the suburban groups (i.e. Boldmere, Walmley, Sutton Central, Falcon Lodge and Four Oaks - see the Map Supplement) revealed that districts in "Category 2" and above formed a continuous area centred on the HLP, but elongated in a narrow sector to the City Centre. This pattern was considerably more sectoral as awareness score increased (i.e. category 3 and above). In fact, the sectors retreated within each other so that the focal point moved from the City Centre to Erdington. A "trough" of lower awareness was found for the inner area districts situated along the narrow corridor of relatively high awareness between the suburban home location and the City Centre. Consequently all other inner districts

were allocated to "category 1" and below, and suburban districts situated on the other side of the City Centre were also allocated to "category 1" and below.

The SDE parameter summarise these patterns. The mean centres have already been shown to move towards the HLP as "awareness" increased. The coefficients of circularity for each group were always less than 0.69 (the coefficient for the optimal awareness SDE) for both "Awareness 1" and "Awareness 5" SDE's. Also, Table 5.20 shows that the coefficient decreased markedly for Boldmere, Walmley and Four Oaks Groups. In the case of the groups located in Falcon Lodge, the coefficient only decreased from .60 to .59 and in Sutton Central it increased from 0.62 to 0.66. A possible explanation is the close proximity of the HLP's for both groups to Sutton Town Centre, which might have resulted in a concentric pattern of highest awareness centres on this town centre. Indeed the shaded map shows that Birmingham City Centre is allocated to 'category 3' for the Falcon Lodge Group.

5.12.3 Erdington (Partnership Area)- The awareness space shaded map for the Erdington Group (see Map Supplement) illustrates a sectoral pattern of awareness more narrow than that for the inner area groups, but without any suburban districts in category 2 and above. Sutton Town Centre was in category 3 but the intervening districts of Boldmere and Wylde Green were in "category 1".

Table 5.20 shows that the coefficient of circularity increased from .69 for Awareness 1 SDE, to .86 for Awareness 5 SDE. This is not surprising given that the mean centre moved closer to the HLP as awareness increased, yet awareness was not elongated into suburban districts.

5.12.4 Castle Vale (Peripheral Council Estate) - The awareness space shaded map indicates a definite sectoral pattern of awareness with a clearly defined linear pattern of higher awareness from the City Centre through Aston, Erdington and Pype Hayes to Castle Vale (see Map Supplement). The sector widened on the periphery into an "arc" of districts in "category 2" and above running from Chelmsley Wood through Castle Bromwich and Castle Vale to Sutton Town Centre.

As with the Erdington Group intervening suburban districts such as Walmley and Kingshurst were given lower awareness scores. The coefficient of circularity for the Awareness 5 SDE was .45. Only the pattern for the Four Oaks Group on the extreme northern perimeter of Birmingham revealed a lower coefficient.

5.12.5 Summary - Clear distinctions were found in the geographical patterns of awareness space between school-leavers resident in suburban areas and those resident in inner areas. The former group possessed a more sectoral pattern, but neither group possessed substantial awareness (i.e. above score '2') of districts located on the side of the city centre opposite to the home location. The distribution of districts assigned to each category by respondents in each of the locational groups is shown in table 5.21.

The geographical distribution of districts allocated to "category 1" and below showed no clear patterns. Therefore, it was sensible to compare the proportion of districts allocated to "category 2" and above between groups. Table 5.21 shows that the average percentage of the districts allocated to "category 2" was 13.4%. No significant difference was found between the thirteen groups in the proportion of districts allocated to "category 2" and above. However, the size of the districts themselves were not even and this may have influenced these results. Districts on the periphery of the City tend to be larger than inner areas. The "areas" of the SDE's for suburban patterns of "Awareness 1" were consistently larger than the SDE's for inner area groups. This implies that suburban school-leavers had at least some geographical knowledge (i.e. "category 2") of districts covering a wider area of the City than inner-city school-leavers, but a statistically significant difference did not exist in the number of districts included in this "Area" of geographical knowledge. Therefore it is concluded that inner and outer area residents had broadly similar

TABLE 5.21 DISTRIBUTION OF DISTRICTS ALLOCATED TO EACH
AWARENESS CATEGORY BY DIFFERENT GROUPS

(A) ALL CATEGORIES

	Category 0	Category 1	Category 2	Category 3	Category 4	Category 5
Lozells	53	40	7	1	1	2
Handsworth	43	45	7	5	3	1
Aston	35	51	4	6	4	4
South Core	50	37	8	5	4	-
West Core	42	52	2	4	3	1
East Core	43	51	6	2	2	-
Castle Vale	65	27	6	1	2	2
Erdington	35	52	10	2	1	3
Boldmere	54	36	8	2	3	1
Four Oaks	67	25	7	2	1	3
Falcon Lodge	58	35	7	1	1	2
Sutton Central	44	42	6	4	7	1
Walmley	39	50	8	1	4	2
Total	628	543	86	35	36	22

(B) GEOGRAPHICAL VERSUS NON-GEOGRAPHICAL CATEGORIES

	NoGeographical Awareness (i.e. 'Category 1' and below)	Some Geographical Awareness (i.e. 'Category 2' and above)
	No. %	No. %
Lozells	93 89.4	11 10.6
Handsworth	88 84.6	16 15.4
Aston	86 82.7	18 17.3
South Core	87 83.7	17 16.3
West Core	94 90.4	10 9.6
East Core	94 90.6	10 9.6
Castle Vale	93 89.4	11 10.6
Erdington	88 84.6	16 15.4
Boldmere	90 86.5	14 13.5
Four Oaks	92 88.5	12 11.5
Falcon Lodge	93 89.4	11 10.6
Sutton Central	86 82.7	18 17.3
Walmley	89 85.6	15 14.4
Total	1173 86.8	179 13.2

Chi-squared value is 8.77 with 12 degrees of freedom. Therefore the null hypothesis that the distribution of districts allocated to these two broad categories does not differ significantly between the thirteen groups, is accepted.

level of urban awareness (i.e. an average of fourteen districts (13.4%) in "category 2" and above) but a difference in geographical area and shape of awareness.

5.13 INTENDED TRAVEL TO WORK AREA AND AWARENESS SPACE

The Map Supplement shows the aggregated patterns of awareness space and the pattern of ITWA for each of the locational divisions of the sample. The two patterns are noticeably similar, especially between districts allocated to 'awareness score 2 and above' category and the 'yes' districts in the ITWA patterns. Here it is important to remember that awareness score '2' is the first point in the familiarity index which means that the individual has some knowledge of the relative location of the district in the city. This implies that school leavers were only prepared to travel to work to 'known' locations of the city.

However, both patterns were aggregated and produced using a method of categorising data based on the distribution of awareness scores (0-5) and travel intentions ('yes', 'no' and 'consider'), (i.e. over 66.7% in each category). Therefore, it was necessary to test statistically whether or not the two patterns were related. In order to do this it was necessary to arrange the data so that each awareness score given to a district by a respondent could be directly compared with the response of that individual towards intended travel to work. The research hypothesis was that respondents follow-up an increasingly large proportion of job vacancies as awareness score increases. Therefore the argument follows that those districts which respondents generally intended to travel to, would

correspond with the territory defined by the awareness spaces. Hence, assuming that subsequent job search decision-making behaviour could be accurately represented by these intended travel responses, then a comparison between ITWA and awareness data would indicate the validity or otherwise of the research hypothesis.

Table 5.22 shows the figures for 'intended decision-making' for the total sample, the table clearly illustrates that as awareness of a district increases, so does the likelihood of the respondent being prepared to travel to work in that district. However, in practice, the decisions made by job seekers are likely to be less extreme because a vacancy may still be rejected for a non-locational reason in an area of '5' awareness score. If only locational reasons for rejection were considered then it was to be expected that the pattern of rejection by awareness score would more closely reflect the figures in table 5.22.

Figure 5.2 graphically illustrates the figures in table 5.22. Figure 5.2 shows the distribution of the 'consider' responses for districts assigned each awareness score. The more extreme ends of the scale have proportionately fewer 'consider' responses. This is probably because those districts known very well (i.e. '5' and '4') and those districts not known at all (i.e. '0') were more readily assigned a definite response (i.e. yes or no). This means that towards the middle of the awareness scale the respondent was less certain about his or her travel attitudes. However, the distribution of 'consider' responses does not reflect a normal curve and is skewed towards the lower end of the familiarity index (awareness

TABLE 5.2² - INTENDED TRAVEL TO WORK BY

AWARENESS SCORE

(a) Total Figures

Awareness Score	'Yes' number	%	'Consider' number	%	'No' number	%	Total number
0	375	(4.2%)	1656	(18.8%)	6791	(77.0%)	8822
1	937	(10.3%)	2495	(27.5%)	5640	(62.2%)	9072
2	1055	(32.9%)	983	(30.7%)	1167	(36.4%)	3205
3	835	(55.8%)	353	(23.6%)	309	(20.6%)	1497
4	887	(70.8%)	200	(16.0%)	166	(13.2%)	1253
5	1269	(83.9%)	113	(7.5%)	131	(8.6%)	1513
TOTAL	5358	(21.1%)	5800	(22.9%)	14204	(56.0%)	25362

(b) CUMULATIVE PERCENTAGES OVER 66.7%

Awareness Score	Yes	Consider	No	Awareness Score
0			77.0%	0
1		27.5%	62.2%	1
3	55.8%	23.6%		3
4	70.8%	1		4
5	83.9%			5

Figure 5.2 AWARENESS SCORE AND INTENDED TRAVEL TO WORK – TOTAL SAMPLE

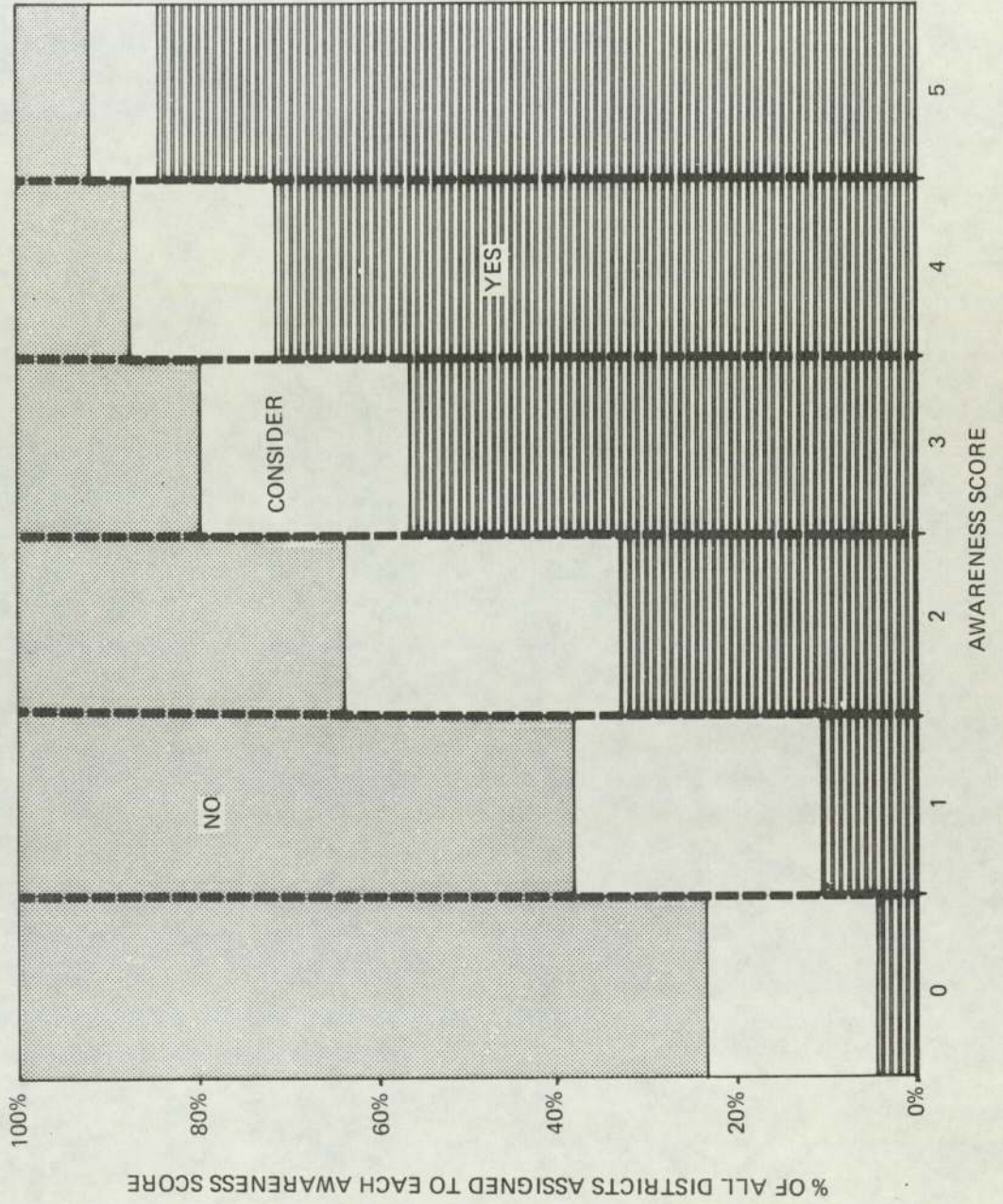
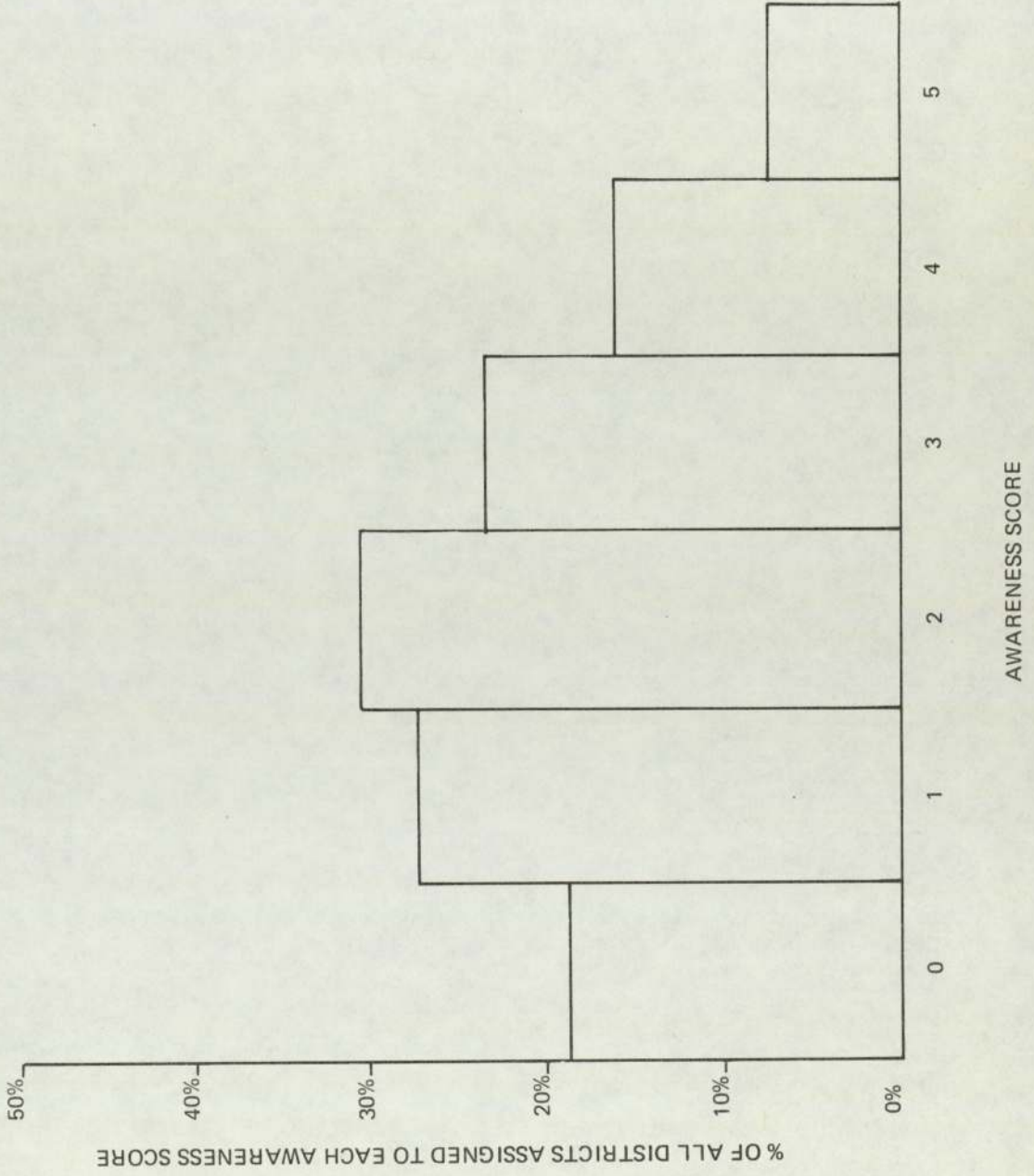


Figure 5.3 AWARENESS SCORE AND DISTRIBUTION OF DISTRICTS 'CONSIDER' TRAVEL TO WORK
— TOTAL SAMPLE



scale). This implies that a 'suitable' vacancy located in a district which was well-known (i.e. score '5') to the job seeker was most likely to be followed-up (83.9%), whereas if the area is not known at all (i.e. score '0') then there was a relatively greater chance of the vacancy being only considered (18.8%) but more usually (77.0%) rejected. These findings are reflected in the ITWA and awareness space maps for each group of respondents included in the Map Settlement. The highest proportion of 'consider' responses for scores '0', '1', or '2' implies that some 'travel' details will have to be acquired by the respondent. If the district in question was located near to the respondent's home then the 'consider' might have become a 'yes'. In other words, through a process of increasing awareness of a district, the chance of following-up a vacancy would be increased). The number of respondents who actually obtained locational and travel details would be examined in the next two chapters.

Table 5.22b shows the percentage of 'yes' and 'consider' responses over 66.7% for each awareness score. If we assume that 'consider' responses become the same as the majority (i.e. 'yes' or 'no') then over two-thirds of vacancies will probably be 'followed-up' in scores 3, 4 and 5 while over two-thirds will be 'rejected' in scores 2, 1 and 0.

The implication of the 'total' figures in table 5.22 is that if, a single job vacancy had been discovered in each district of the city then the school leaver, on average, would not 'follow-up at least 56% of the vacancies, simply because of a 'locational' factor. Of course, in reality the number of vacancies available would vary in different districts as would the number discovered in each district by different respondents. These aspects, however, will be investigated in the next chapter in more detail.

5.14 CONCLUSION

The Chapter has shown that travel to work factors are relatively important at the outset of school leavers' search for employment. This implies that the location of a firm offering a job vacancy, in conjunction with other factors (e.g. wage), must satisfy the job aspirations of an individual before he or she will apply for the vacancy. In other words, the locational aspects of job aspirations at the outset of search can be expected to influence the locational patterns of subsequent job search behaviour.

Part two of this chapter has demonstrated that the average maximum distance which individuals indicated that they were prepared to travel to work was not the same in all directions in the city. This is partly because of 'accessibility' factors. Accessibility contours based on the average maximum time school leavers said they were prepared to travel by bus to work has been shown to include greater distances in certain directions. (Over three-quarters of the sample said they intended to travel by bus to work). However, accessibility patterns do not entirely explain the patterns of Intended Travel to Work Area (ITWA).

In conclusion, it has been shown that the pattern of Intended Travel to Work Area is more adequately explained by the 'awareness space' held by respondents than by average maximum distance and time respondents state that they were prepared to travel to work. This validates the approach of this project and the next chapter of analysis towards an improved understanding of the job search process in a cognitive-behavioural context.

CHAPTER SIX

UNDERSTANDING THE PROCESS
OF JOB SEARCH

6.1 INTRODUCTION

This chapter reports the investigation of job search behaviour unemployed school leavers. The behavioural component of the decision-making model, postulated in Chapter 2, is used as the framework for analysis. Hence, the chapter is divided into sections based on each concept or stage in the model. The analysis relating to each section is described in a standard sequence.

First the frequency distribution of job vacancies contained in each stage (e.g. Vacancy Discovery) is presented and the distribution of these vacancies by awareness score is examined. Second, the geographical pattern of each concept is described (e.g. Vacancy Discovery Space) and compared with the patterns of other stages and with Awareness Space. Third, data on decision making, which reflects the differences in the frequency distributions and geographical patterns of each stage is analysed (e.g. Vacancy Application Rates). Possible cognitive-behavioural relationships in this decision making are central to the research hypothesis, and have therefore been investigated.

An examination of differences in the job search process between respondents employed and those continuing unemployed, at the end of the survey and a brief account of changes in job search with the duration of unemployment, are also included in this chapter. Finally, throughout the chapter, differences in the search process between the four sample groups (i.e. Aston, City, Handsworth and Sutton) and the relative importance of information sources used to discover job vacancies are investigated.

6.2 THE MODEL

Data was collected in order that the conceptual model of job search, could be tested as a framework for understanding the job search process. This section outlines, for the total sample, the figures which represent each stage in the decision-making process.

Figure 6.1 illustrates how these figures are placed in the 'Model of Job Search'. The numbers in square brackets represent a proportion of any 100 discovered vacancies. In other words, for every 100 vacancies discovered 58.7 were rejected while 41.3 were followed-up (i.e. Applications). Geographical reasons for Rejection accounted for 20.3 vacancies and non-geographical reasons for 38.4 vacancies. Of the 41.3 vacancy applications, only 1.5 became an accepted job offer. Vacancies 'drop-out' of the decision-making process at the following four possible stages in the model between application and job acceptance:

(i)	Interview not offered by employer	= 30.4
(ii)	Interview offered but refused by job seeker	= 0.4
(iii)	Job not offered after interview by employer	= 8.7
(v)	Job offered, after interview, but refused by job seeker	= 0.3
	job accepted	= <u>1.5</u>
	Total number of applications	= 41.3

Figure 6.2 demonstrates that over half of all discovered vacancies were Rejected (i.e. 58.7%). One-third of the vacancies were rejected for geographical reasons (i.e. 34.6% of

FIGURE 6.1 DATA ON DECISION MAKING IN THE PROCESS OF JOB SEARCH – TOTAL SAMPLE

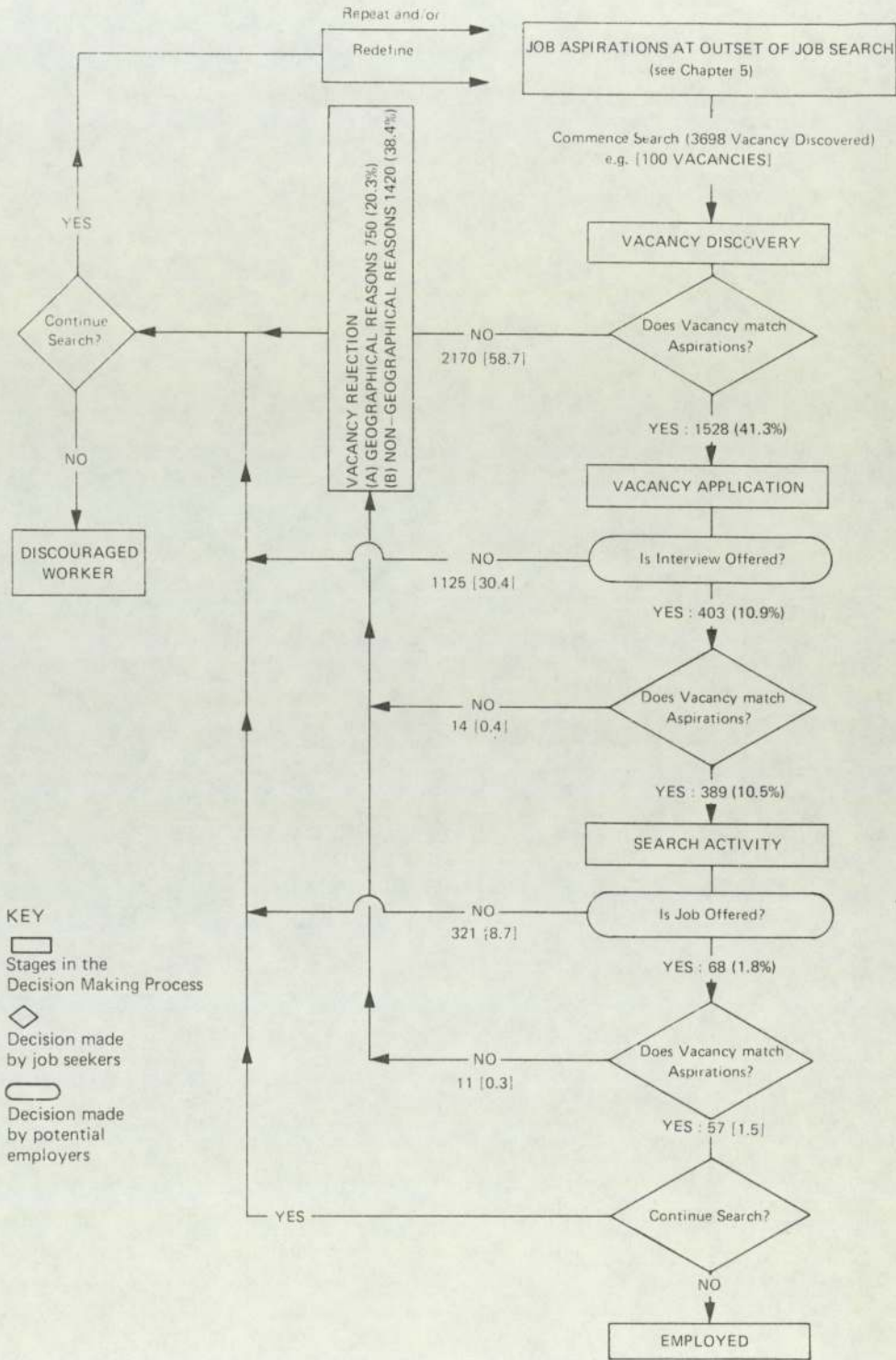


FIGURE 6.2 DECISION IN THE JOB SEARCH PROCESS – TOTAL SAMPLE

CODE							
◇ = Decision by Jobseekers				○ = Decision by Potential Employers			
◇ VACANCY DISCOVERY							
Vacancy Rejection		2170 [58.7%]		+ Vacancy Application		1528 [41.3%] = Vacancy Discovery 3698 [100%]	
◇ VACANCY REJECTION							
(A) GEOGRAPHICAL REASONS			(B) NON-GEOGRAPHICAL REASONS			(C) TOTAL	(D) VACANCY DISCOVERY
No.	(% of C)	(% of D)	No.	(% of C)	(% of D)	No.	No.
750	(34.6)	[20.3]	1420	(65.4)	[38.4]	2170	3698
○ VACANCY APPLICATION							
(A) NO INTERVIEW OFFER			(B) INTERVIEW OFFER			(C) TOTAL	(D) VACANCY DISCOVERY
No.	(% of C)	(% of D)	No.	(% of C)	(% of D)	No.	No.
1125	(73.6)	[30.4]	403	(26.4)	[10.9]	1528	3698
◇ INTERVIEW ACCEPTANCE							
(A) INTERVIEW REJECTED			(B) INTERVIEW ACCEPTED			(C) TOTAL	(D) VACANCY DISCOVERY
No.	(% of C)	(% of D)	No.	(% of C)	(% of D)		
14	(3.5)	[0.4]	389	(96.5)	[10.5]	403	3698
○ SEARCH ACTIVITY							
(A) NO JOB OFFER			(B) JOB OFFER			(C) TOTAL	(D) VACANCY DISCOVERY
No.	(% of C)	(% of D)	No.	(% of C)	(% of D)		
321	(82.5)	[8.7]	68	(17.5)	[1.8]	389	3698
◇ JOB ACCEPTANCE							
(A) JOB REJECTED			(B) JOB ACCEPTED			(C) TOTAL	(D) VACANCY DISCOVERY
No.	(% of C)	(% of D)	No.	(% of C)	(% of D)		
11	(16.2)	[0.3]	57	(83.8)	[1.5]	68	3698

all Rejections), while the remaining vacancies were rejected for "other", non-geographical reasons, two examples are 'pay too low' and 'poor reputation of the firm'.

A large majority (73.6%) of vacancy applications did not result in an 'interview offer' by a potential employer. Hence only 26.4% (approximately 1 in 4) applications resulted in an interview offer. Very few (3.5%) offers to interviews were refused by respondents. (The decision to refuse an interview is likely to be the result of further information about the vacancy which had been obtained when the job seeker first contacted the firm). Potential employers offered proportionately more interviews per application than jobs per interview. The 389 interviews resulted in only 68 job offers (i.e. 8.7% of all vacancies discovered). However, an unexpectedly large proportion of these job offers were refused (i.e. 16.2%). At the end of the survey 57 respondents had accepted a job offer. In other words 21.6% of the sample left the job search model at the 'Employed' stage.

PART ONE

VACANCY DISCOVERY

6.3 VACANCY DISCOVERY

By way of introducing this part of the analysis, the relative position of the 'vacancy discovery' stage in the job search process has been indicated in the reproduction of the model, shown opposite.

6.3.1 Frequency of Vacancies discovered -

Sources of information on job vacancies available to the job seeker range from 'formal' sources (eg. Jobcentre) to the more informal. (eg. Family) Table 6.1A shows that local newspapers were used to discover the largest number of job vacancies. Family contacts and Jobcentres or Careers Offices were also used to gain information on a relatively large proportion of vacancies. It does not necessarily follow, however, that these sources are the most effective in terms of job or interview offers. Hence, throughout this analysis of the search process reference will be made to this topic at the appropriate stage in the chapter.

TABLE 6.1A INFORMATION SOURCES OF DISCOVERED VACANCIES

<u>SOURCE</u>	<u>NUMBER OF VACANCIES</u>	
Local Newspaper	2321	(62.8%)
Careers Office/Jobcentre	505	(13.9%)
Friend/Relative	477	(12.9%)
Speculative visit	89	(2.4%)
Speculative Ringing/writing	132	(3.5%)
Local Radio	49	(1.3%)
Other	125	(3.4%)
TOTAL	3698	(100.0%)

TABLE 6.1B FREQUENCY DISTRIBUTION OF VACANCIES DISCOVERED

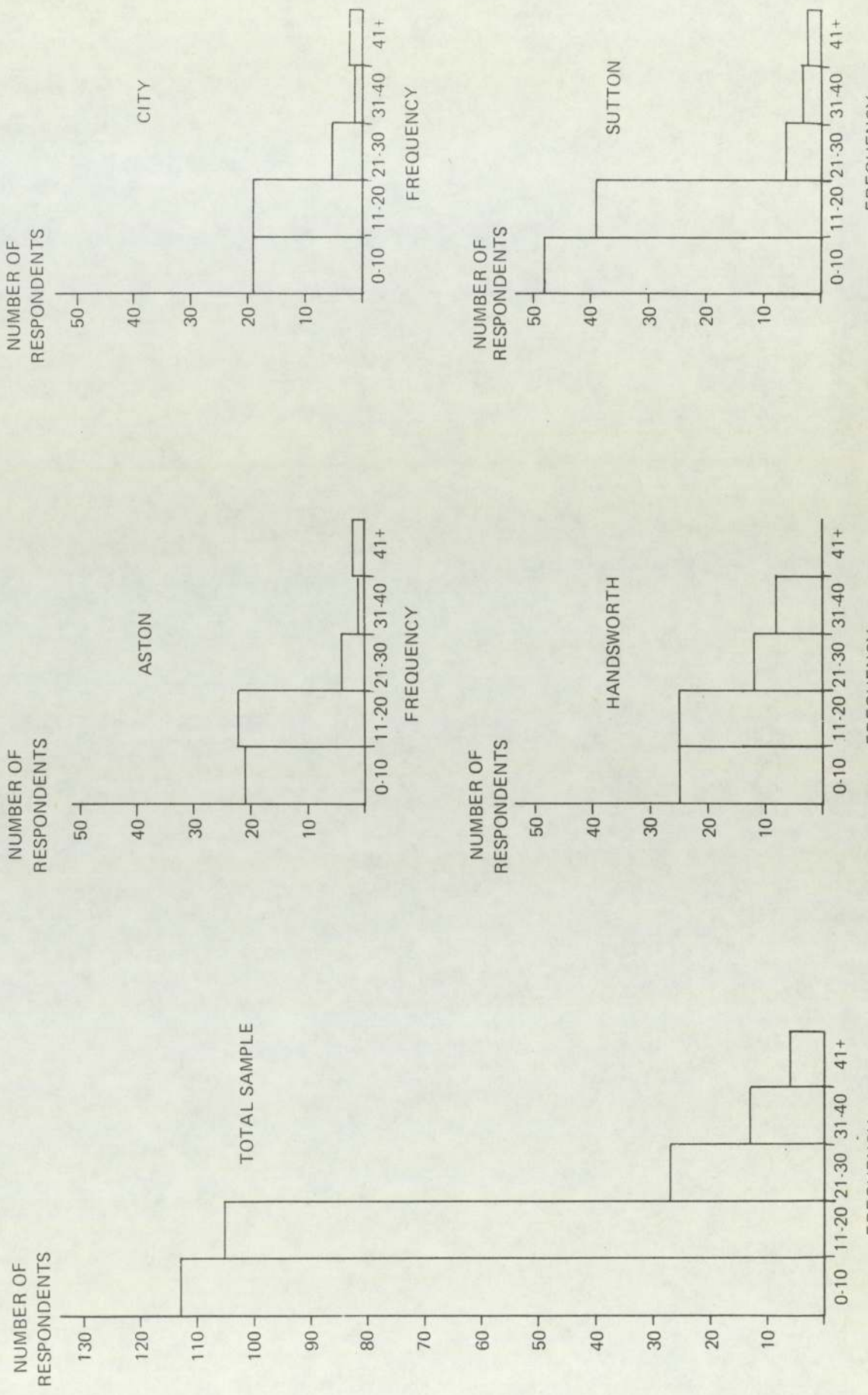
		FREQUENCY OF VACANCIES DISCOVERED BY EACH RESPONDENT						TOTAL NUMBER OF RESPONDENTS	TOTAL NUMBER OF VACANCIES	AVERAGE PER PERSON	STANDARD DEVIATION
0.10	11-20	21-30	31.40	41+							
No.	%	No.	%	No.	%	No.	%				
ASTON	21 (42.0)	22 (44.0)	4 (8.0)	1 (2.0)	2 (4.0)	2 (4.0)	50 (100.0)	752	15.0	14.1	
CITY	19 (41.3)	19 (41.3)	5 (10.9)	1 (2.2)	2 (4.3)	2 (4.3)	46 (100.0)	627	13.6	10.0	
HANDSWORTH	25 (35.7)	25 (35.7)	12 (17.1)	8 (11.5)	0 (0.0)	0 (0.0)	70 (100.0)	1117	16.0	10.4	
SUTTON	48 (49.0)	39 (40.0)	6 (6.0)	3 (3.0)	2 (2.0)	2 (2.0)	98 (100.0)	1202	12.3	9.0	
TOTAL	113 (42.8)	105 (39.8)	27 (10.2)	13 (4.9)	6 (2.2)	6 (2.2)	264 (100.0)	3698	14.0	11.9	

'Z' test of statistically significant difference between frequency distributions

	Sutton	Aston	Handsworth
Aston	1.26 (accept)		
Handsworth	2.42 (reject)	0.42 (accept)	
City	0.78 (accept)	0.54 (accept)	1.17 (accept)

The null hypothesis that there is no statistically significant difference between the frequency of vacancies discovered by respondents in each of the four groups is accepted in all cases except between Sutton and Handsworth, which is rejected at the 98% confidence interval.

FIGURE 6.3 FREQUENCY DISTRIBUTION OF VACANCY DISCOVERIES



During the survey period the sample of 264 school leavers discovered (i.e. entered in part-one of the "Job Seekers Diary") 3698 vacancies located in Birmingham and adjacent areas. The average number of vacancies reported by each respondent was 14, which was approximately two vacancies for each week of the survey. Table 6.1B shows the frequency distribution of vacancies discovered by the total sample and the four main sample groups. (These figures are illustrated graphically in Figure 6.3). The table shows that the average number of vacancies discovered by respondents in each of the four sample groups was not significantly different with the exception that the Handsworth group discovered significantly more vacancies on average than the Sutton group.

6.3.2 Vacancies discovered and Awareness Score -

Table 6.2 shows the breakdown of awareness scores assigned by the total sample to the locations of vacancies discovered through each information source. In all awareness scores the local newspapers were used to discover the largest number of vacancies. The column for score '5' shows that at this initial stage in the search process a greater proportion of vacancies were "discovered" (i.e. reported in the diary) in the locations most familiar to the job seeker. Vacancies discovered through the local newspaper were therefore the least biased in terms of awareness score, although some bias still existed.

Table 6.3A and Figure 6.4 illustrate the distribution of vacancies discovered by each awareness score for the total sample and the four sample groups. Over 50% of vacancies discovered by the total sample were located in districts of

TABLE 6.2 VACANCIES DISCOVERED THROUGH EACH INFORMATION SOURCE BY AWARENESS SCORE

INFORMATION SOURCE	AWARENESS SCORE						TOTAL
	0	1	2	3	4	5	
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Local Newspaper	226 (9.7)	499 (21.5)	325 (14.0)	175 (7.5)	329 (14.2)	767 (35.1)	2321 (100)
Careers Office/ Jobcentre	18 (3.5)	57 (11.3)	62 (12.3)	54 (10.7)	109 (21.5)	205 (40.6)	505 (100)
Friend/Relative	30 (6.4)	58 (12.1)	63 (13.1)	27 (5.8)	79 (16.5)	220 (46.1)	477 (100)
Speculative Visit	- (-)	- (-)	- (-)	- (-)	10 (10.8)	79 (89.2)	89 (100)
Speculative writing and telephoning	18 (13.5)	8 (6.0)	4 (3.0)	12 (9.0)	8 (6.0)	82 (62.4)	132 (100)
Local Radio	2 (4.2)	4 (8.3)	4 (8.3)	4 (8.3)	16 (33.3)	19 (37.5)	49 (100)
Other	10 (8.2)	12 (9.6)	17 (13.3)	19 (14.8)	15 (11.9)	52 (42.2)	125 (100)
TOTAL VACANCIES DISCOVERED	304 (8.2)	638 (17.3)	475 (12.8)	291 (7.9)	566 (15.3)	1424 (38.5)	3698 (100)

TABLE 6.3A - DISTRIBUTION OF VACANCIES DISCOVERED BY AWARENESS SCORE

	AWARENESS SCORE					TOTAL			
	0	1	2	3	4		5		
No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
SUTTON	73 (6.1)	186 (15.5)	158 (13.1)	80 (6.7)	207 (17.2)	498 (41.4)	1202 (100.0)		
ASTON	82 (10.9)	153 (20.3)	129 (17.2)	55 (7.3)	76 (10.1)	257 (34.2)	752 (100.0)		
HANDSWORTH	103 (9.2)	198 (17.7)	134 (12.0)	123 (11.0)	173 (15.5)	386 (34.6)	1117 (100.0)		
CITY	46 (7.3)	101 (16.1)	54 (8.6)	33 (5.3)	110 (17.5)	283 (45.2)	627 (100.0)		
TOTAL SAMPLE	304 (8.2)	638 (17.3)	475 (12.8)	291 (7.9)	566 (15.3)	1424 (38.5)	3698 (100.0)		

Chi-squared value is 98.2 with 15 degrees of freedom. Therefore, the null hypothesis that there is no statistically significant difference in the distribution of vacancies discovered by awareness score between the four groups is rejected at the 99.9% confidence interval.

TABLE 6.3B - DISTRIBUTION OF DISTRICTS ASSIGNED TO EACH AWARENESS SCORE

	AWARENESS SCORE					TOTAL			
	0	1	2	3	4		5		
No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
SUTTON	3774 (37.0)	3618 (35.5)	1238 (12.2)	517 (5.1)	473 (4.6)	572 (5.6)	10192 (100.0)		
ASTON	1768 (40.0)	1630 (34.1)	605 (12.6)	256 (5.4)	221 (4.6)	304 (6.3)	4784 (100.0)		
HANDSWORTH	2548 (35.0)	2612 (35.9)	859 (11.8)	459 (6.3)	349 (4.8)	453 (6.2)	7820 (100.0)		
CITY	1730 (33.4)	1915 (36.8)	671 (12.9)	278 (5.3)	282 (5.4)	324 (6.2)	5200 (100.0)		
TOTAL	9820 (35.8)	9775 (35.6)	3373 (12.3)	1510 (5.5)	1325 (4.8)	1653 (6.0)	27456 (100.0)		

Chi-squared value is 48.2 with 15 degrees of freedom. Therefore, the null hypothesis that there is no statistically significant difference in the distribution of districts assigned to each awareness score between the four groups is rejected at the 99.9% confidence interval.

FIGURE 6.4 DISTRIBUTION OF VACANCIES DISCOVERED BY AWARENESS SCORE
- TOTAL SAMPLE

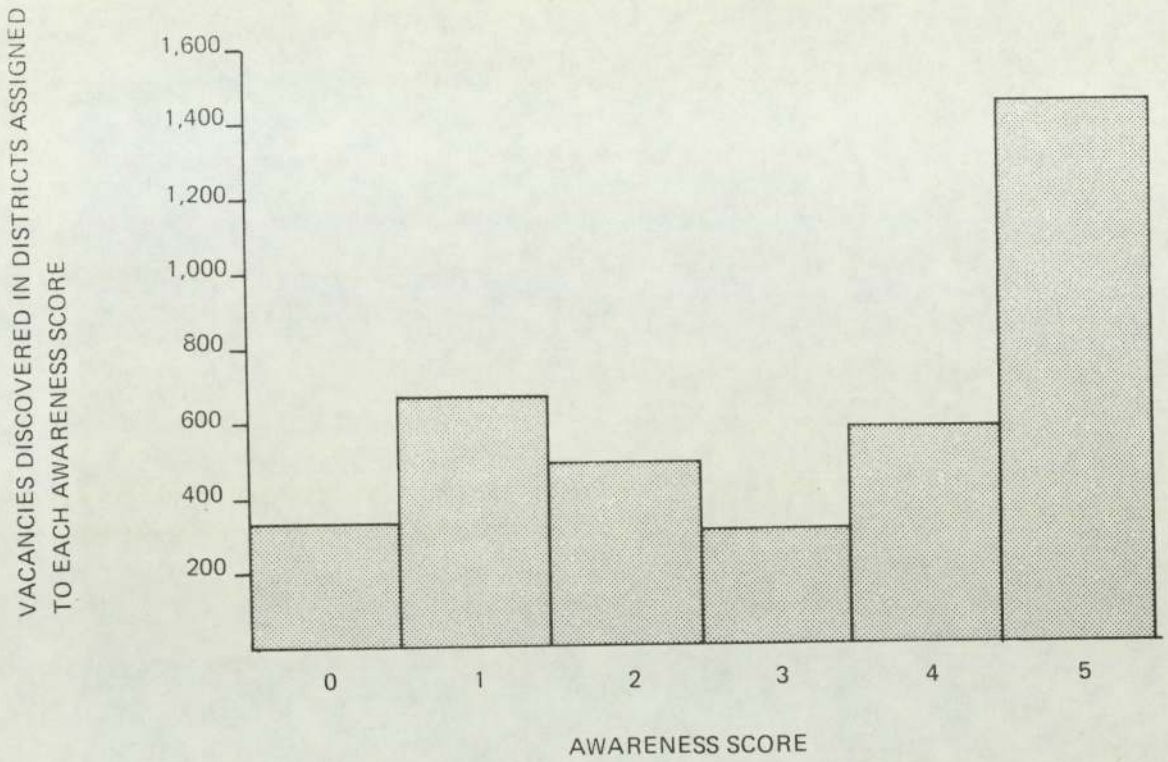
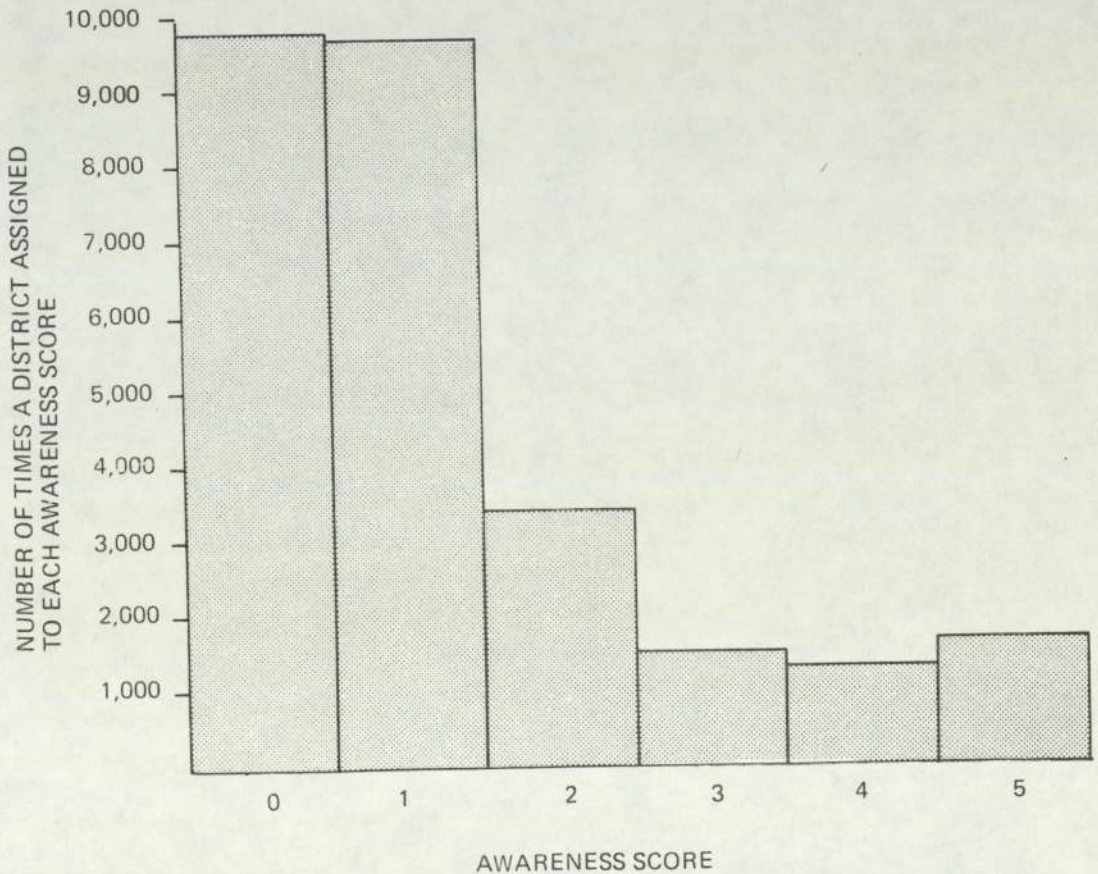


FIGURE 6.5 DISTRIBUTION OF AWARENESS SCORES ASSIGNED TO DISTRICTS - TOTAL SAMPLE



awareness score '4' and '5'. Table 6.3B and Figure 6.5 show that over 50% of the districts were assigned to awareness scores '0' and '1'. This demonstrates therefore that an 'awareness' and/or 'geographical' filtering of information was exercised by respondents before they entered vacancies into part-one of the 'Diary'. The implications for later analysis is that any significant differences in the relationship between decision-making data and awareness score (e.g. applications per vacancy discovery) is likely to be even more significant than the data would initially suggest.

Figure 6.6 illustrates that generally the difference between the distribution of districts assigned to each awareness score and the distribution of vacancies discovered by each awareness score was consistent for all four groups of the sample.

The distribution of districts assigned to each awareness score obviously influenced the distribution of discoveries. It can be suggested that respondents living on the periphery of the city were aware of fewer districts than their 'inner city' counterparts because peripheral districts generally cover a larger area than 'inner' districts. Table 6.4 shows that in aggregate the 'Sutton' respondents assigned a greater proportion of districts to awareness score '0', than did the 'City' and 'Handsworth' groups of respondents. The 'Aston' group included respondents from Cattle Vale located on the periphery of the city.

Table 6.4 shows the proportion of districts assigned to awareness score '0' for the respondents from Sutton, Castle Vale and the rest of the sample.

FIGURE 6.6 DISTRIBUTION OF VACANCY DISCOVERIES AND AWARENESS SCORES - THE FOUR GROUPS

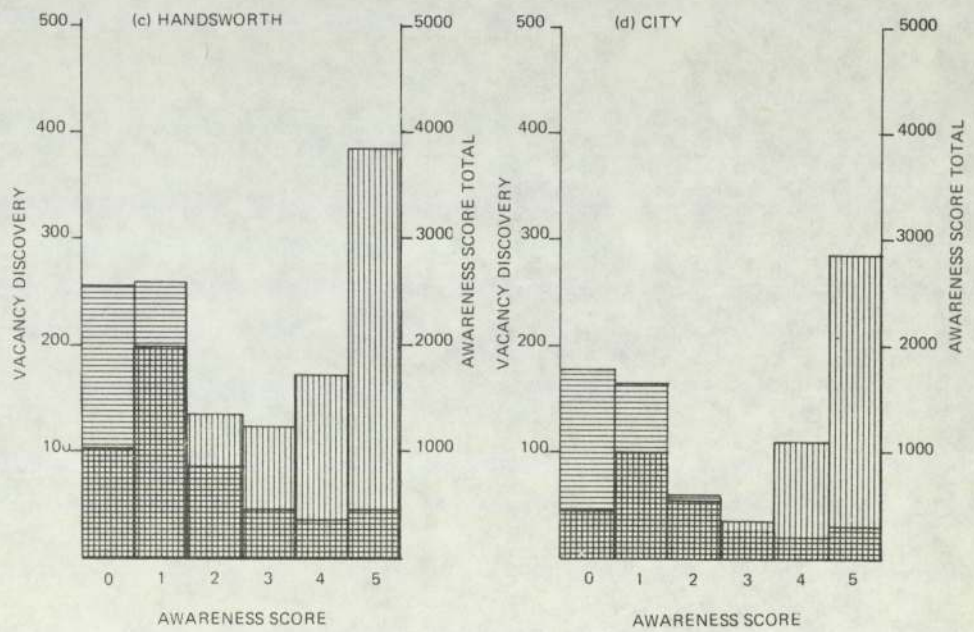
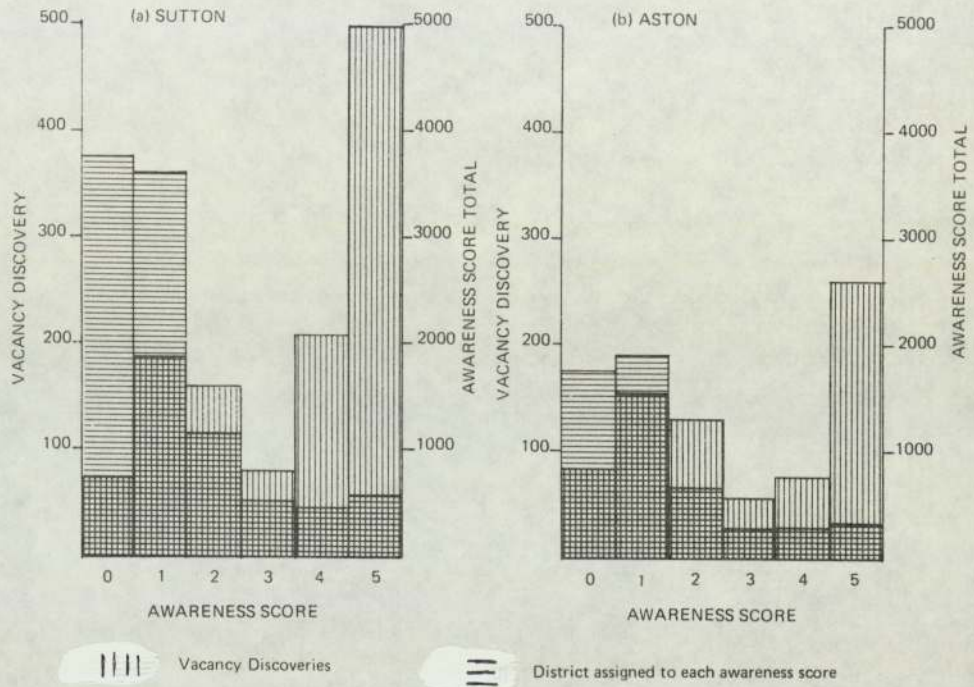


TABLE 6.4 - AGGREGATE NUMBER OF DISTRICTS
WITHIN 'AWARENESS SPACE' -
INNER CITY VERSUS PERIPHERAL CITY RESIDENTS

	AWARENESS SCORE					
	No.	'0' (%)	No.	'1' to '5' (%)	No.	TOTAL (%)
SUTTON	3774	(37.0)	6148	(63.0)	10192	(100.0)
CASTLE VALE	566	(49.5)	578	(50.5)	1144	(100.0)
REST OF ASTON	1202	(33.0)	2438	(67.0)	3640	(100.0)
HANDSWORTH	2548	(35.0)	4732	(65.0)	7280	(100.0)
CITY	1730	(33.3)	3470	(66.7)	5200	(100.0)
TOTAL						
'PERIPHERAL'	4340	(38.3)	6996	(61.7)	11336	(100.0)
TOTAL 'INNER'	5480	(34.0)	10640	(66.0)	16120	(100.0)
TOTAL	9820	(35.8)	17036	(64.2)	27456	(100.0)

A comparison of the above table with table 6.4 shows that the relatively high value of awareness score '0' for the total Aston sample (40%) was in fact strongly influenced by the inclusion of the respondents who lived in the Castle Vale peripheral council estate. It is also interesting to note that respondents in the Handsworth sample also lived closer to the perimeter of the city than the remaining 'inner' respondents. Table 6.4 shows that the proportion for '0' score was 35.0% for the Handsworth sample compared with 33.0% and 33.3% for 'Rest of Aston' and 'city' respectively.

6.4 VACANCY DISCOVERY SPACE

6.4.1 The Geographical Pattern - The shaded maps (in the Map Supplement - Behavioural component) show the geographical distribution of vacancy discoveries for the four main sample groups and the locational groups. In all cases, the distributions were dominated by vacancies discovered at the city centre, and it was rare that respondents discovered vacancies located on the 'opposite' side of the city centre. For instance, the 'behavioural' shaded map for Sutton includes virtually no vacancy discoveries south of the city centre. The 'standard deviational ellipse' (SDEs) summarize these patterns. The mean centre of the vacancy discovery SDE, for each group of respondents, is located between the home location and the city centre. The 'coefficient of circularity' for vacancy discovery space was generally higher for inner area groups (e.g. East Core, 0.83) than suburban groups (e.g. Sutton, 0.61). This indicates a greater degree of directional bias in the distribution of vacancies discovered by suburban groups.

6.4.2 Cognitive - behavioural Relationship - A visual comparison of the SDE's for 'Awareness Space' and the SDE's for Vacancy Discovery Space reveal a general similarities. For example in the case of the Sutton sample the mean centre of the SDE for both the 'Vacancy Discovery Space' and for 'Awareness 1' is centred in the Nechells district. The relationship between vacancy discovery and awareness is repeated for the other group samples. It is concluded therefore that the geographical pattern of 'vacancy discovery space' is related to the pattern awareness (i.e. 'Awareness 1').

APPLICATIONS/REJECTIONS

The conceptual model (Figure 6.1) indicates that once a vacancy was discovered the job seeker would decide whether or not to apply for the vacancy. The decision would be based upon a comparison with the particular job 'Aspirations' held by the individual. If all characteristics of the vacancy matched the 'locational' and 'non-locational' aspects of the school leaver's job aspirations, then the vacancy would be followed-up (i.e. the firm was contacted, which was the initial stage of a job application). If the vacancy characteristics and job aspirations did not match for one (or a number) of reasons, then the vacancy would ^{NOT} be followed-up (i.e. 'Rejected').

6.5.1

Rates of Vacancy Rejection/Application - Table 6.5A shows the rates at which discovered vacancies were rejected/applied for by respondents in each of the four sample groups. The table shows that under half of the discovered vacancies were applied for by the total sample. The rates of applications were very similar for the Sutton and City respondents and for the Handsworth and Aston respondents. The two former groups applied for a significantly greater proportion of discovered vacancies than the latter two. However, on average respondents in the Sutton and City groups discovered fewer vacancies on average (table 6.1). It is possible that the Aston and Handsworth respondents entered proportionately more vacancies in their 'Diaries' which in reality they were not interested in or for which they were unsuited. This might explain the higher rejection rates by job seekers in these two groups.

TABLE 6.5A - VACANCY REJECTION AND APPLICATION RATES

	VACANCY REJECTION		VACANCY APPLICATION		VACANCY DISCOVERY	
	No.	(%)	No.	(%)	No.	(%)
ASTON	514	(68.4)	238	(31.6)	752	(100.0)
CITY	303	(48.3)	324	(51.7)	627	(100.0)
HANDSWORTH	7878	(69.7)	339	(30.3)	1117	(100.0)
SUTTON	575	(47.8)	626	(52.2)	1202	(100.0)
TOTAL	2170	(58.7)	1528	(41.3)	3698	(100.0)

Chi-squared value is 173.2 with 3 degrees of freedom. Therefore, the null hypothesis that there is no statistically significant difference between the rate of applications per vacancies discovered by each of the four groups of respondents is rejected at the 99.9% confidence interval.

TABLE 6.5B - VACANCY REJECTION AND APPLICATION RATES
BY INFORMATION SOURCE

INFORMATION SOURCE OF VACANCY DISCOVERY	VACANCY REJECTION		VACANCY APPLICATION		VACANCY DISCOVERY	
	No.	(%)	No.	(%)	No.	(%)
Local Newspaper	1661	(71.6%)	660	(28.4%)	2321	(100.0%)
Careers Office/Jobcentre	170	(33.7%)	335	(66.3%)	505	(100.0%)
Friend/Relative	234	(49.1%)	243	(50.9%)	477	(100.0%)
Speculative visit	0	(-)	89	(100.0%)	89	(100.0%)
Speculative ringing/writing	21	(15.9%)	111	(84.1%)	132	(100.0%)
Local Radio	32	(65.3%)	17	(34.7%)	49	(100.0%)
Other	52	(41.6%)	73	(58.4%)	125	(100.0%)
TOTAL	2170	(58.7%)	1528	(41.3%)	3698	(100.0%)

It will be recalled that the largest proportion of vacancies were discovered through the local newspaper and that this source of information was the least biased in terms of awareness score. (Section 6.3.2). Table 6.5B demonstrates that although the largest proportion of vacancy rejections was for those discovered through the local newspaper, this source still produced the largest number of applications. Clearly there is a potential for increasing rates of application for vacancies discovered through the local newspaper. The table also shows the relatively high application rate for vacancies discovered through the Jobcentres/Careers Office. This suggests that this 'formal' source facilitates information on the more 'suitable' jobs. The number of interviews obtained as a result of these applications will be investigated later.

6.5.2 Cognitive-Behavioural Relationship - This section examines the relationship between vacancy application/rejection rates and awareness score. This is in fact a test of the CENTRAL HYPOTHESIS which is that rates of application for vacancies located in districts of high awareness are significantly greater than the rates for vacancies located in districts of low awareness (i.e. Application rate increases as awareness score increases).

Table 6.6 shows the frequency of vacancies discovered in locations assigned each awareness score and the proportion which were applied for (i.e. followed-up) by the total sample (see figure 6.7).

FIGURE 6.7 AWARENESS SCORE AND THE PROCESS OF JOB SEARCH — TOTAL SAMPLE

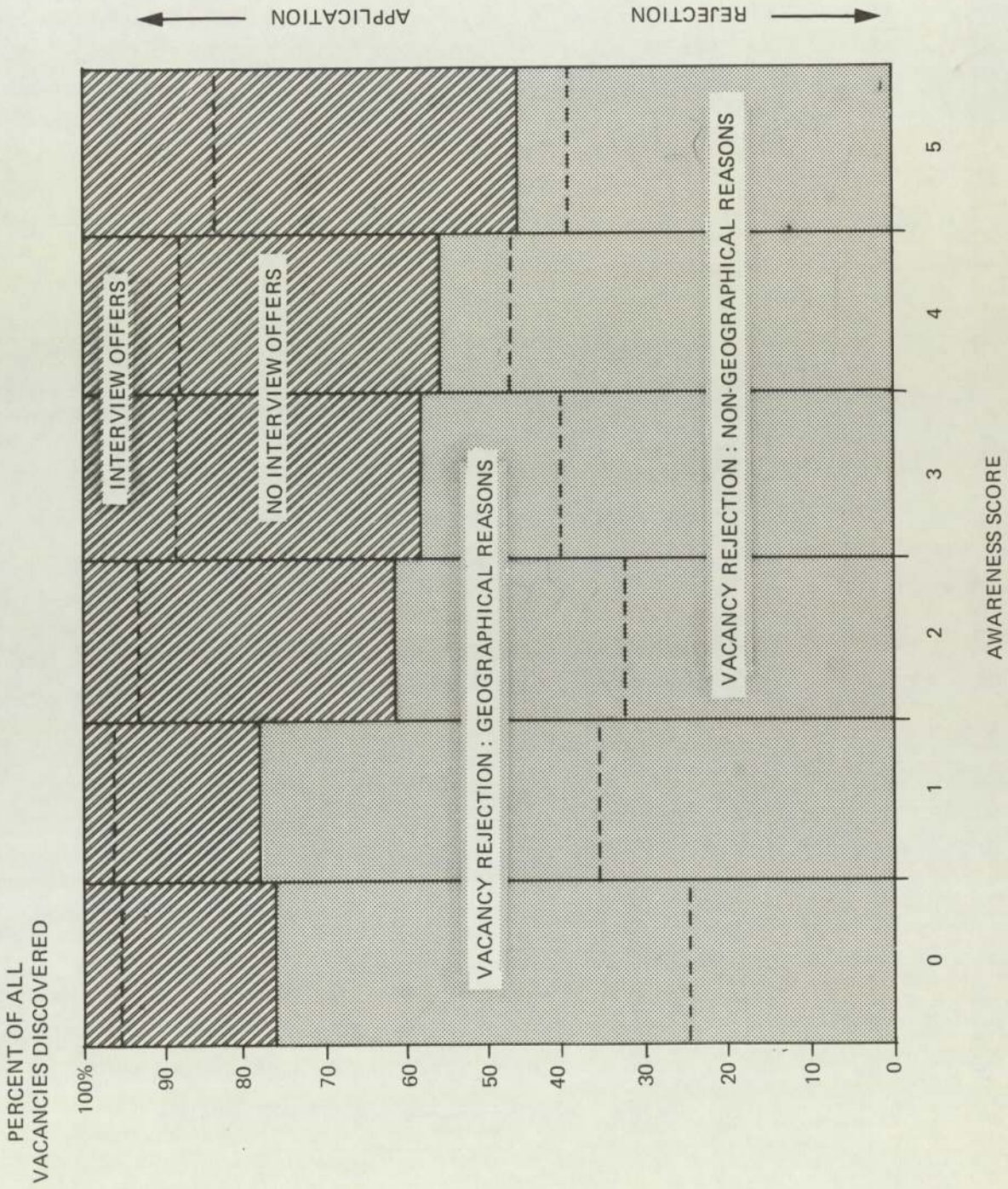


TABLE 6.6 - VACANCY REJECTION AND APPLICATION RATES
BY AWARENESS SCORE - TOTAL SAMPLE

AWARENESS SCORE	VACANCY APPLICATION		VACANCY REJECTION		VACANCY DISCOVERY	
	No.	%	No.	%	No.	%
0	72	(23.7)	232	(76.3)	304	(100.0)
1	137	(21.5)	501	(78.5)	638	(100.0)
2	180	(37.9)	295	(62.1)	475	(100.0)
3	122	(41.0)	169	(58.1)	291	(100.0)
4	248	(43.8)	318	(56.2)	566	(100.0)
5	769	(54.0)	655	(46.0)	1424	(100.0)
TOTAL	1528	(41.3)	2170	(58.7)	3698	(100.0)

The chi-squared value is 240.8 with 5 degrees of freedom. Therefore the null hypothesis that there is no statistically significant difference between the rate of application per vacancies discovered in locations assigned to each awareness score is rejected at the 99.9% confidence interval. (This validates the CENTRAL HYPOTHESIS).

The scale of awareness scores is not of course an interval scale but an ordinal scale, hence although an individual might have been more familiar with a district assigned a score of '4' than a district given a score of '2', it did not necessarily mean that he or she was twice as familiar with the latter district. The fact that the awareness scale is ordinal and not interval is probably reflected in the differences between the differences in application rates for each awareness score. Differences in proportions are shown in table 6.7

TABLE 6.7 - DIFFERENCE IN APPLICATION RATES BY INCREASE
IN AWARENESS SCORE

<u>Awareness Score</u>	<u>Relative increase in application rates</u>
1 to 2	21.5% - 37.9% = + 16.4
2 to 3	37.9% - 41.9% = + 4.0
3 to 4	41.9% - 43.8% = + 1.9
4 to 5	43.8% - 54.0% = + 10.2

The main increase in proportion of vacancies followed-up was between scores 1 and 2, and 4 and 5, while only small increases occurred between 2 and 3, and 3 and 4. Chi-squared values for proportions followed-up in scores 2, 3 and 4 only total 3.80 which is not large enough to indicate a statistically significant difference. Therefore, although there was a general trend for increased vacancy application rates with increased awareness score, the most significant differences were between 0, 1 and 5 scores.

The '0' awareness score was not included in table 6.7 because it denotes something rather different from the scores 1 to 5. Whereas scores 1 to 5 indicate at least some 'awareness' or knowledge of a particular district even if it is just 'heard the name', '0' means totally no awareness. Hence a comparison might be made for vacancy follow-up rate between on the one hand at least some level of awareness and on the other, no awareness. (See Table 6.8)

TABLE 6.8 - DIFFERENCES IN APPLICATION RATES BETWEEN
SOME AND NO AWARENESS OF A DISTRICT

AWARENESS SCORE	VACANCY APPLICATION		VACANCY REJECTION		VACANCY DISCOVERY	
	No.	(%)	No.	(%)	No.	(%)
No awareness (0)	72	(23.7)	232	(76.3)	304	(100.0)
Some Level of awareness (1-5)	1456	(42.9)	1932	(55.1)	3394	(100.0)
TOTAL (0-5)	1528	(41.3)	2170	(58.7)	3698	(100.0)

The chi-squared value is 76.5 with 1 degree of freedom. Therefore the null hypothesis that there is no statistically significant difference between the rate of application per vacancies discovered in locations assigned to no awareness and locations assigned at least some level of awareness is rejected at the 99.9% confidence interval.

Score '1', unlike scores 2 to 5, has no geographical component in its definition. Hence a further distinction should be made between no geographical knowledge and some level of geographical knowledge of a location in the city. (See Table 6.9)

TABLE 6.9 - DIFFERENCES IN APPLICATION RATE BETWEEN
SOME AND NO GEOGRAPHICAL KNOWLEDGE OF A DISTRICT

AWARENESS SCORE	VACANCY APPLICATION		VACANCY REJECTION		VACANCY DISCOVERY	
	NO.	(%)	NO.	(%)	NO.	(%)
No geographical knowledge (0+1)	209	(22.2)	733	(77.8)	942	(100.0)
Some geographical knowledge (2-5)	1319	(47.9)	1437	(52.1)	2756	(100.0)
TOTAL (AWARENESS SCORE 0 to 5)	1528	(41.3)	2170	(58.7)	3698	(100.0)

The chi-squared value is 10.3 with 1 degree of freedom. Therefore the null hypothesis that there is no statistically significant difference between the rate of applications per vacancies discovered in locations assigned to geographical knowledge and locations assigned at least some geographical knowledge is rejected at the 99.9% confidence interval.

The vacancy application rate in districts of '0' awareness score was 23.7%, which is slightly higher than the corresponding figure of 21.5% for areas of '1' awareness score. This slight fluctuation in the trend of decreasing proportions of vacancies followed-up from scores '5' to '1' is explained by the fact that '0' score is not part of an awareness scale (i.e. a district allocated a score of '0' is not in the 'awareness space'). Hence the '0' score should not be considered when discussing the 'trends' within the awareness scores (1 to 5).

However this does not alter the fact that a job seeker is more likely to make an enquiry about a vacancy located in a district of the City which he or she has never heard of, (score '0') rather than a vacancy located in a district he or she has heard of, but no idea of the relative location of the area (score '1'). The implication is that the job seeker rejected the vacancy because it was not in that part of the city about which he/she had some geographical knowledge. This further implies that if the vacancy was located outside a person's geographical knowledge then it was less likely that he/she would follow-up that discovered vacancy, than if it was located within the individual's defined geographical knowledge of the city. Both scores '0' and '1' are outside this geographical knowledge (table 6.9 shows the differences in application rates between 0 to 1 and 2 to 5 scores).

Another implication is that locational/transport issues were more likely to be the main reason for rejecting a vacancy located in a district assigned a low awareness score than had a vacancy located in an area of high awareness been rejected. (This is examined fully in section 6.6.)

Table 6.10 shows, for each of the four main groups of the sample, the rate of applications for vacancies discovered in districts assigned to each awareness score. This is graphically illustrated in Figure 6.8. The graphs demonstrate that, in all four groups, application rates generally increased as awareness score (given to the location of the firm offering the vacancy) increased.

The general pattern of increased rates of application with increases in awareness score is least distinct for the 'City' group of respondents.

TABLE 6.10 - VACANCY REJECTION AND APPLICATION RATES
BY AWARENESS SCORE - THE FOUR SAMPLE GROUPS

	AWARENESS SCORE	VACANCY REJECTION		VACANCY APPLICATION		VACANCY DISCOVERY	
		NO.	(%)	NO.	(%)	NO.	(%)
ASTON	0	76	(92.7)	6	(7.3)	82	(100.0)
	1	131	(85.6)	22	(14.4)	153	(100.0)
	2	101	(78.3)	28	(21.7)	129	(100.0)
	3	33	(60.0)	22	(40.0)	55	(100.0)
	4	48	(63.2)	28	(36.8)	76	(100.0)
	5	125	(48.6)	132	(51.4)	257	(100.0)
TOTAL		514	(68.4)	238	(31.6)	752	(100.0)

The chi-squared value is 98.5 with 5 degrees of freedom. Therefore the null hypothesis that there is no statistically significant difference between the rate of application per vacancies discovered in locations assigned to each awareness score is rejected at the 99.9% confidence interval.

CITY	0	26	(56.5)	20	(43.5)	46	(100.0)
	1	74	(73.3)	27	(26.7)	101	(100.0)
	2	27	(50.0)	27	(50.0)	54	(100.0)
	3	17	(51.5)	16	(48.5)	33	(100.0)
	4	57	(51.8)	53	(48.2)	110	(100.0)
	5	102	(36.0)	181	(64.0)	283	(100.0)
TOTAL		303	(48.3)	324	(51.7)	627	(100.0)

The chi-squared value is 44.5 with 5 degrees of freedom. Therefore the null hypothesis that there is no statistically significant difference in the rate of applications per vacancies discovered in locations assigned to each awareness score is rejected at the 99.9% confidence interval.

HANDSWORTH	0	91	(88.3)	12	(11.7)	103	(100.0)
	1	154	(77.8)	44	(22.2)	198	(100.0)
	2	83	(61.9)	51	(38.1)	134	(100.0)
	3	90	(73.2)	33	(26.8)	123	(100.0)
	4	117	(67.6)	56	(32.4)	173	(100.0)
	5	243	(63.0)	143	(37.0)	386	(100.0)
TOTAL		778	(69.7)	339	(30.3)	1117	(100.0)

The chi-squared value is 36.3 with 5 degrees of freedom. Therefore the null hypothesis that there is no statistically significant difference in the rate of applications per vacancies discovered in locations assigned to each awareness score is rejected at the 99.9% confidence interval.

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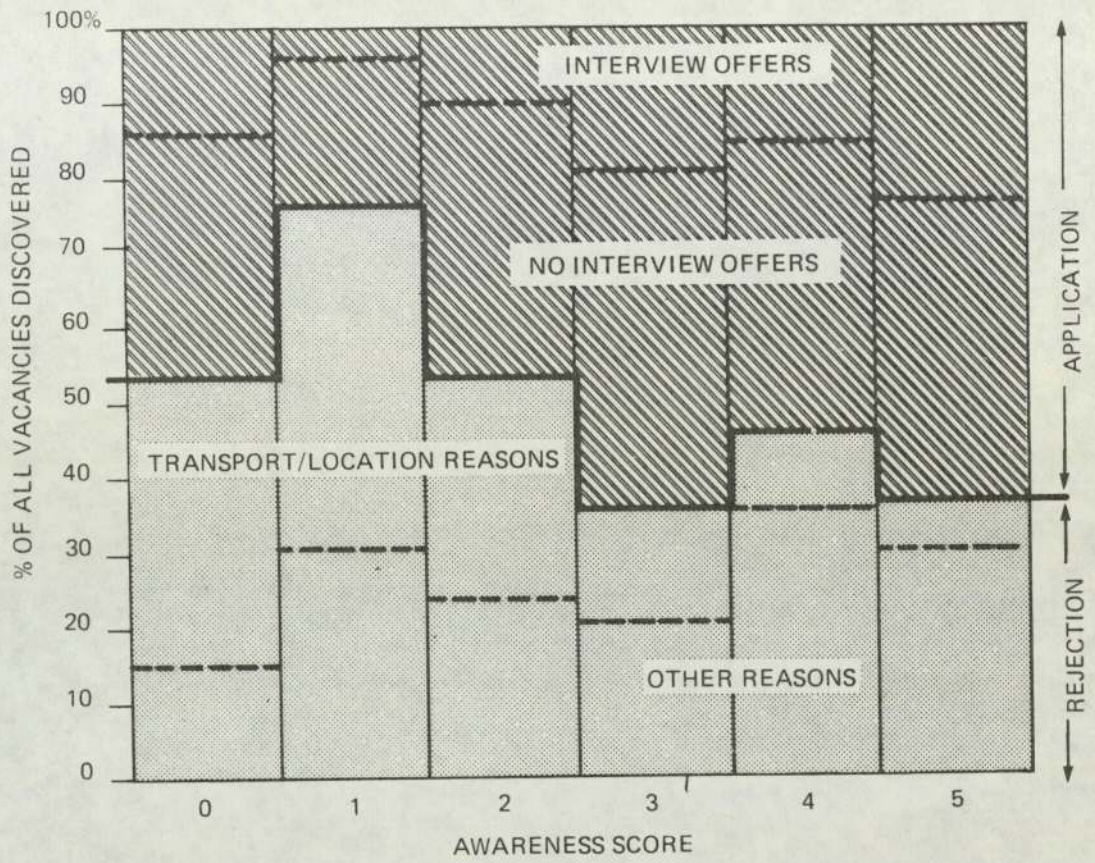
	AWARENESS SCORE	VACANCY NO.	REJECTION (%)	VACANCY NO.	APPLICATION (%)	VACANCY NO.	DISCOVERY (%)
SUTTON	0	39	(53.4)	34	(46.5)	73	(100.0)
	1	142	(76.4)	44	(23.6)	186	(100.0)
	2	84	(53.2)	74	(46.8)	158	(100.0)
	3	29	(36.3)	51	(63.7)	80	(100.0)
	4	96	(46.4)	111	(53.6)	207	(100.0)
	5	185	(37.1)	313	(62.9)	498	(100.0)
<hr/>							
	TOTAL	575	(47.8)	627	(52.2)	1202	(100.0)

The chi-squared value is 88.4 with 5 degrees of freedom. Therefore the null hypothesis that there is no statistically significant difference in the rate of applications per vacancies discovered in locations assigned to each awareness score is rejected at the 99.9% confidence interval.

Figure 6.8 discloses no differentiation in application rates for awareness scores '2', '3' and '4', for the 'city' sample. However, the application rate was considerably higher in awareness score '5' than in either awareness score '1' or '0'. The relatively high application rates in scores '2' and '3' and '4' for the 'city' group imply that the respondents were more willing (or more able) to consider vacancies located in these districts of relatively low awareness. This is quite possible because the respondents in the 'city' groups lived closer to the city centre than respondents in any other group; hence these individuals should have had less difficulty in travelling to destinations in all directions from the city centre. Indeed, Figure 6.8 shows that transport/location reasons for rejection were extremely low for vacancies located in awareness score '3' and '4'. Vacancy rejection is discussed next.

FIGURE 6.8 AWARENESS SCORE AND THE PROCESS OF JOB SEARCH – THE FOUR GROUPS

(a) SUTTON



(b) ASTON

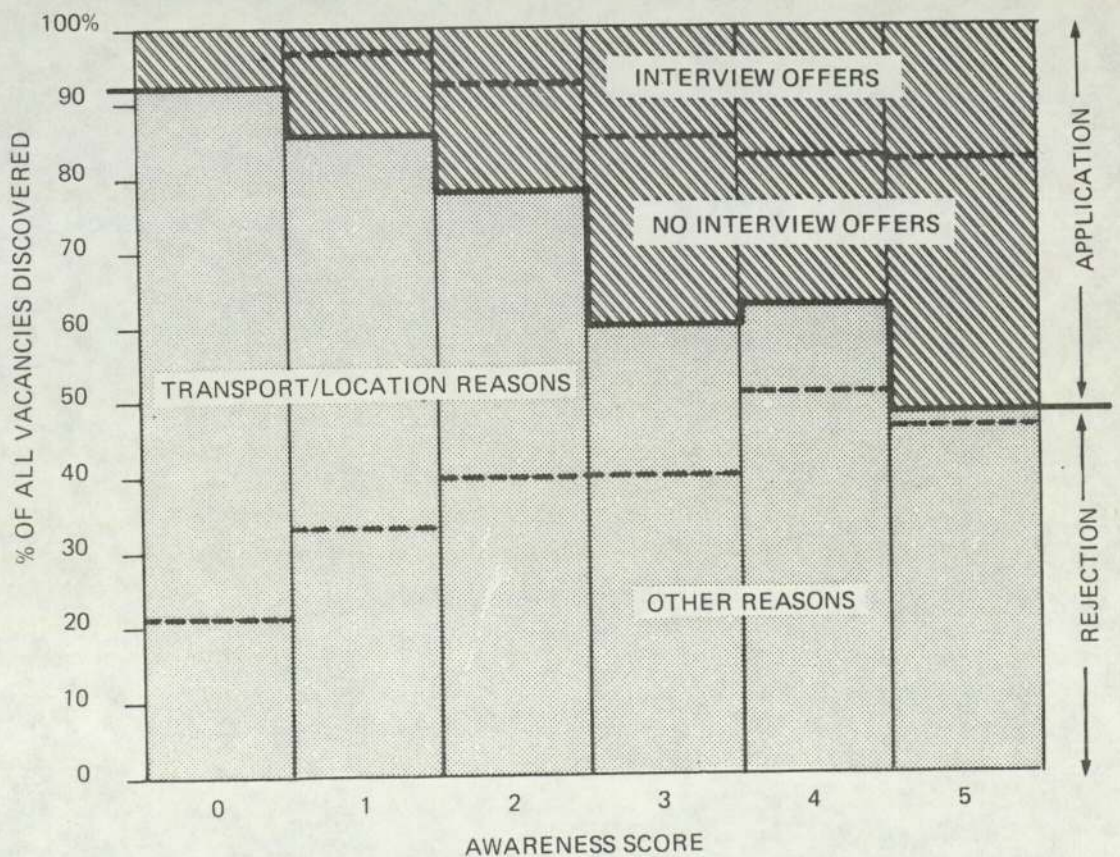
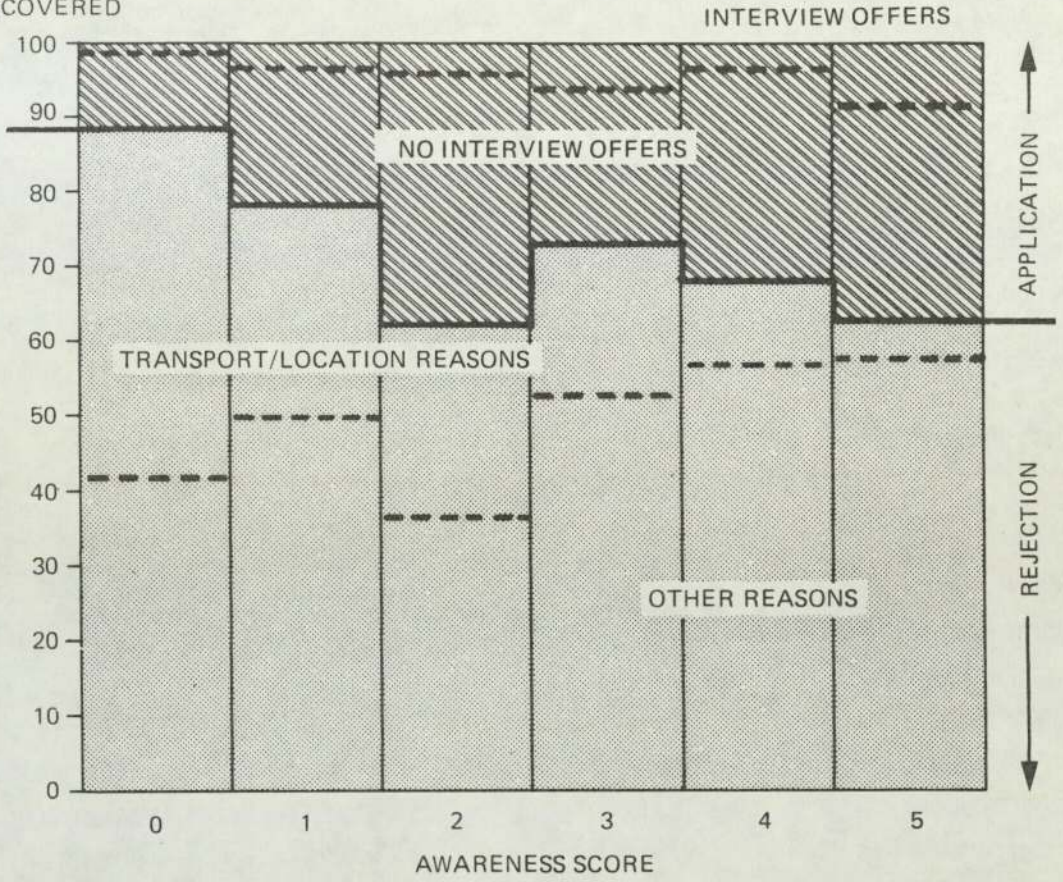


FIGURE 6.8 (Continued)

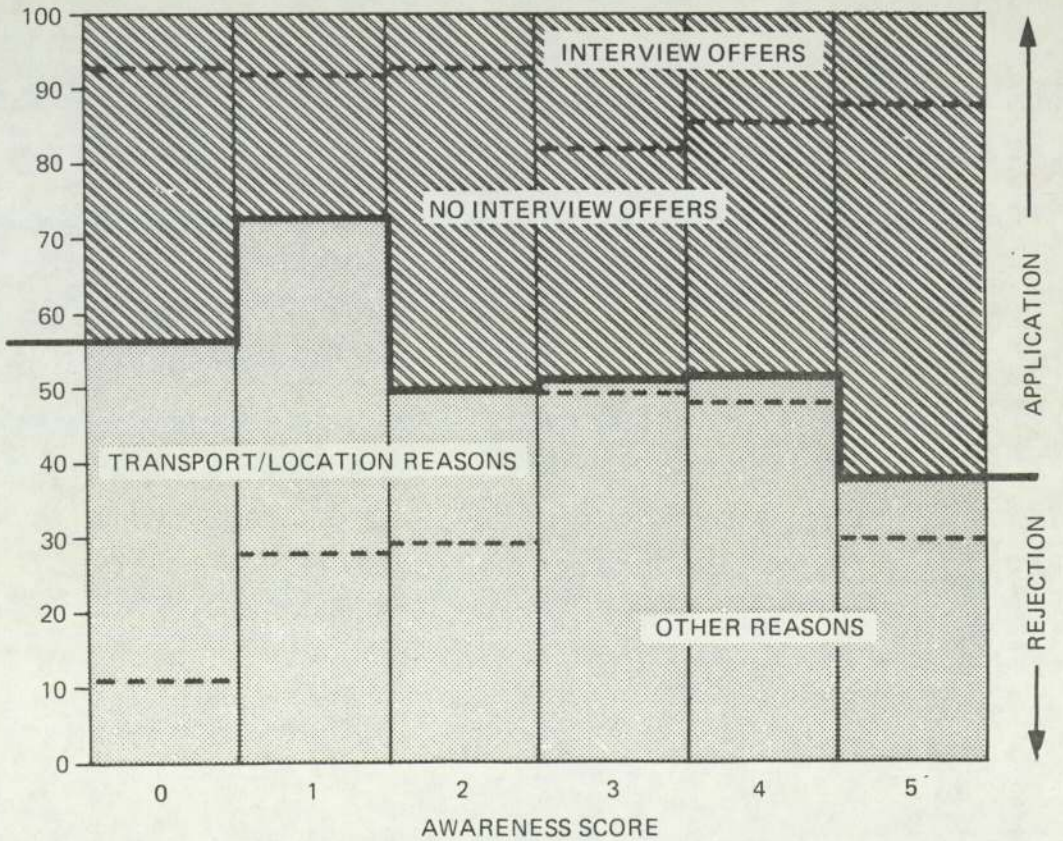
% OF ALL VACANCIES DISCOVERED

(c) HANDSWORTH



% OF ALL VACANCIES DISCOVERED

(d) CITY



6.6 VACANCY REJECTION

A total of 2170 (58.7%) of all vacancies entered in part-one of the 'Job Seekers Diary' were rejected. Respondents were given a list of possible reasons and asked to indicate the reason(s), in order of importance for rejecting a vacancy. In compiling the pre-coded 'list of reasons' rejecting a vacancy the aim was to provide respondents with as many appropriate responses as possible. It is useful to examine firstly, the most important reasons for rejecting a vacancy. Inevitably some overlapping has occurred between each reason. Therefore it is also relevant to study all reasons given by respondents.

6.6.1 Reason for Vacancy Rejection - Table 6.11 shows a breakdown of the most important reasons for rejecting a vacancy. The table demonstrates that the reason most frequently cited by respondents for rejecting a vacancy was that they were "Not sufficiently qualified/experienced to do the work" (reason 0). In Chapter 4, it was shown that only 16.7% of the Sample had taken exams above C.S.E. The majority of respondents has taken C.S.E. exams (78.1%). Given that the type of sample recruited was towards the bottom of the labour market in terms of academic qualifications, this would evidently be a major obstacle in the job search process of these unemployed school leavers.

The second most frequently cited reason for rejecting a vacancy was reason "Not interested in this particular type of work" (N). In Chapter 5 it was revealed that the type of jobs that the majority preferred at the outset of search involved some degree of training of apprenticeships. Respondents entered vacancies in part-one of the Diary that were of the type of job they were seeking or would consider. Hence, vacancies rejected because of reason 'N' were probably

TABLE 6.11 - THE MOST IMPORTANT REASON FOR VACANCY REJECTION
- TOTAL SAMPLE

	REASON	No.	%	RANK
GEOGRAPHICAL REASONS	LOCATIONAL REASONS (TOTAL A-D)	567	26.2	
	A. Never heard of area in which the firm is located	157	7.3	6
	B. Don't know how to get to the firm	256	11.8	3
	C. Don't like the area in which the firm is	59	2.7	9
	D. Don't like travelling so far.	95	4.4	7
	TRANSPORT REASONS (TOTAL E-H)	183	8.4	
	E. Takes too much time to travel to the firm	71	3.2	8
	F. Costs too much money to travel to the firm	43	2.0	12
NON - GEOGRAPHICAL REASONS	G. Impossible (for me) to get to the firm	15	0.7	16
	H. Difficult (for me) to get to the firm	54	2.5	10
	WORK CONDITION REASONS (TOTAL I-L)	109	5.0	
	I. Pay too low	37	1.7	13
	J. Don't like hours of work (e.g. shifts)	53	2.4	11
	K. Don't like amount/arrangements for holidays	4	0.2	18
	L. Unpleasant/dirty working conditions	15	0.7	16
	PERSONAL REASONS (TOTAL M-P)	937	43.1	
	M. Poor reputation of the firm	17	0.8	15
	N. Not interested in this particular type of work.	324	14.9	2
	O. Not sufficiently qualified/experienced to do the work.	576	26.5	1
	P. No friends working at the firm	20	0.9	14
OTHER REASON(S) (TOTAL Q-X)	374	17.3		
Q. Other Reasons	167	7.7	5	
X. Reason Not Given	207	9.6	4	
TOTAL REASONS		2170	100	

considered by respondents to be 'dead-end' positions below their job aspirations.

The third most cited reason was that they "didn't know how to get to firm"(reason B). This is most important with respect to the objectives of this research. A total of 256 vacancies were rejected for this reason, which is 11.8% of all 'rejected' vacancies. The statement representing reason 'B' suggests that the individual had probably heard of the district in which the firm was located but he/she did not know of a major road or bus route to the district. Quite obviously respondents decided not to find out further travel details (note 1)

Reason 'B' indicated that the individual had at least heard of the area in which the firm was located. If the area was totally unknown to the job seeker then reason 'A' was given (7.3% of all rejections were because the job seeker had never heard of the area in which the firm is located). Reason C (2.7%) was given when the respondent had some preconceived idea that the area of the firm is undesirable. Reason D (4.4%) implied that the job seeker had a definite perception of distance to the firm which was considered to be too great.

The second group of reasons E to H were associated with how the job seeker might travel to each location. In this case the respondent knew (or at least thought he knew) how to travel to the firm, but the respondent made the decision that he or

Note 1 However, other factors may have influenced the decision to 'reject' the vacancy. Table 6.11 is only for the most important reason. All reasons given for vacancy rejection are analysed next.

she was not prepared to travel to the firm. The third group of reasons was connected with the conditions of work. The most frequently cited reason in this category was 'J' ("Don't like hours of work") (2.4%). The total proportion of all rejections in this category of reasons (I to L) was comparatively small (5.0%).

Table 6.12 shows a broad division of all reasons given for rejecting a vacancy. A total of 2170 vacancies were rejected by respondents, therefore the differences between the actual number of vacancies rejected and the number of all reasons reflects the influence of the second to sixth reasons for rejecting a vacancy.

TABLE 6.12 - ALL REASONS FOR REJECTING A VACANCY
- TOTAL SAMPLE

	GEOGRAPHICAL REASONS (A-H)		NON-GEOGRAPHICAL REASONS (I-X)		TOTAL REASONS	
	No.	(%)	No.	(%)	No.	(%)
Primary reason	750	(34.6)	1420	(65.4)	2170	(100)
Secondary reasons	771	(59.7)	521	(40.3)	1292	(100)
All reasons	1521	(43.9)	1941	(56.1)	3462	(100)

Chi-squared value is 209.8 with 1 degree of freedom. Therefore the null hypothesis that there is no significant difference in the proportion of geographical reasons for rejecting a vacancy between the first and all subsequent reasons given by respondents is rejected at the 99.9% confidence interval.

The table shows that for all secondary reasons given by respondents the 'geographical' group of reasons (i.e. transport/ locational groups) were cited proportionately more often than for the most important reasons. This suggests (although it is not proven) that if a vacancy was rejected primarily for a geographical reason (A-H) then it was likely that secondary reasons would also be of a geographical nature.

A summary of the two broad types of reasons for rejecting a vacancy is shown in table 6.13 for each of the four main sample groups (note 1). The Handsworth groups assigned the greatest proportion of rejected vacancies to non-geographical reasons (73.9%), while the Aston group assigned only (56.4%) to non-geographical reasons. This demonstrates that job seekers in the 'Handsworth' group were more concerned about work conditions, personal and other reasons than the rest of the sample, and that respondents in the Aston sample were the most concerned about locational and/or transport factors.

Note 1 The four main divisions of the total sample are based at the Careers Office from which school leavers were recruited (i.e. City, Aston, Handsworth, and Sutton).

TABLE 6.13 - REASONS FOR VACANCY
REJECTION - THE FOUR SAMPLE GROUPS.

	GEOGRAPHICAL REASONS		NON-GEOGRAPHICAL REASONS		(A)VACANCY REJECTION		(B)VACANCY DISCOVERY NO.
	No.	(%A) [%B]	No.	(%A) [B]	No.	(%)	
ASTON	224	(43.6) [30.0]	290	(56.4) [38.4]	514	(100.0)	752
CITY	100	(33.0) [15.9]	203	(67.0) [32.4]	303	(100.0)	627
HANDSWORTH	203	(26.1) [18.2]	225	(73.9) [51.5]	778	(100.0)	1117
SUTTON	223	(38.8) [18.6]	352	(61.2) [29.3]	575	(100.0)	1202
TOTAL	750	(34.6) [20.3]	1420	(65.4) [38.4]	2170	(100.0)	3698

Chi-squared value is 190.7 with 3 degrees of freedom. Therefore the null hypothesis that there is no statistically significant difference in the proportion of vacancies rejected for geographical reasons between each of the four groups of respondents is rejected at the 99.9% confidence interval.

The main conclusion is that at least one-third of all decisions to reject a vacancy were based upon a reason with a locational or transport component (i.e. Reasons A to H). Furthermore it appears that 'locational' and transport reasons were also probably of subsidiary importance for rejecting a proportion of the remaining vacancies. The section demonstrates that at the end of this cognitive process, nearly one-third of all vacancy rejection were because the transport and/or locational aspects of the vacancy were considered by the job seeker to be inappropriate, based upon each individual's knowledge and perception of a set of locations in the city and how to travel to each. This implies that a distinctive locational pattern existed in the geographical distribution of rejected vacancies, although rejection based entirely on non-geographical reasons will tend to disguise some aspects of the pattern. Before examining the geographical pattern of Vacancy Rejection Space it is relevant to compare reasons for rejection with the corresponding awareness score.

6.6.2

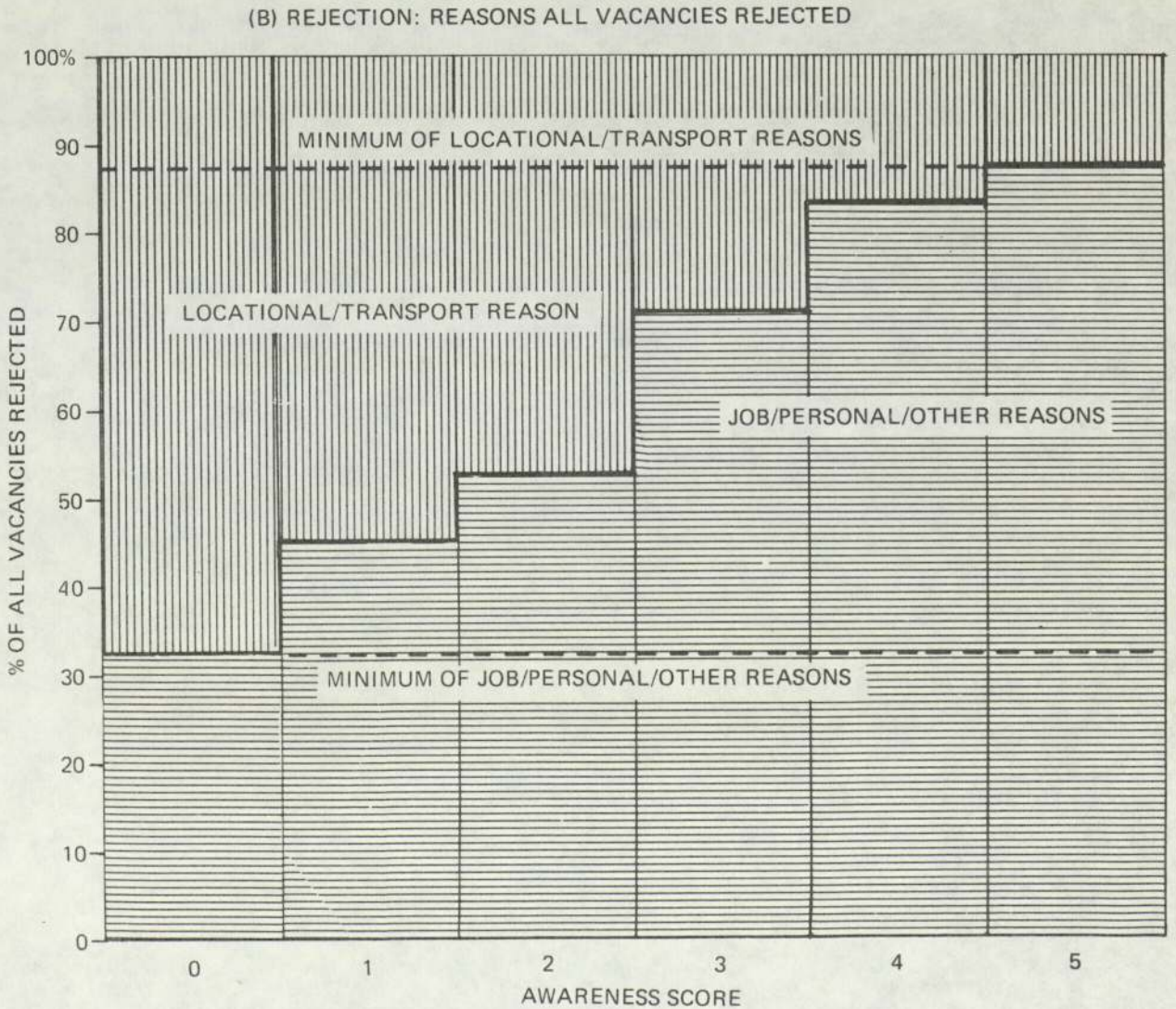
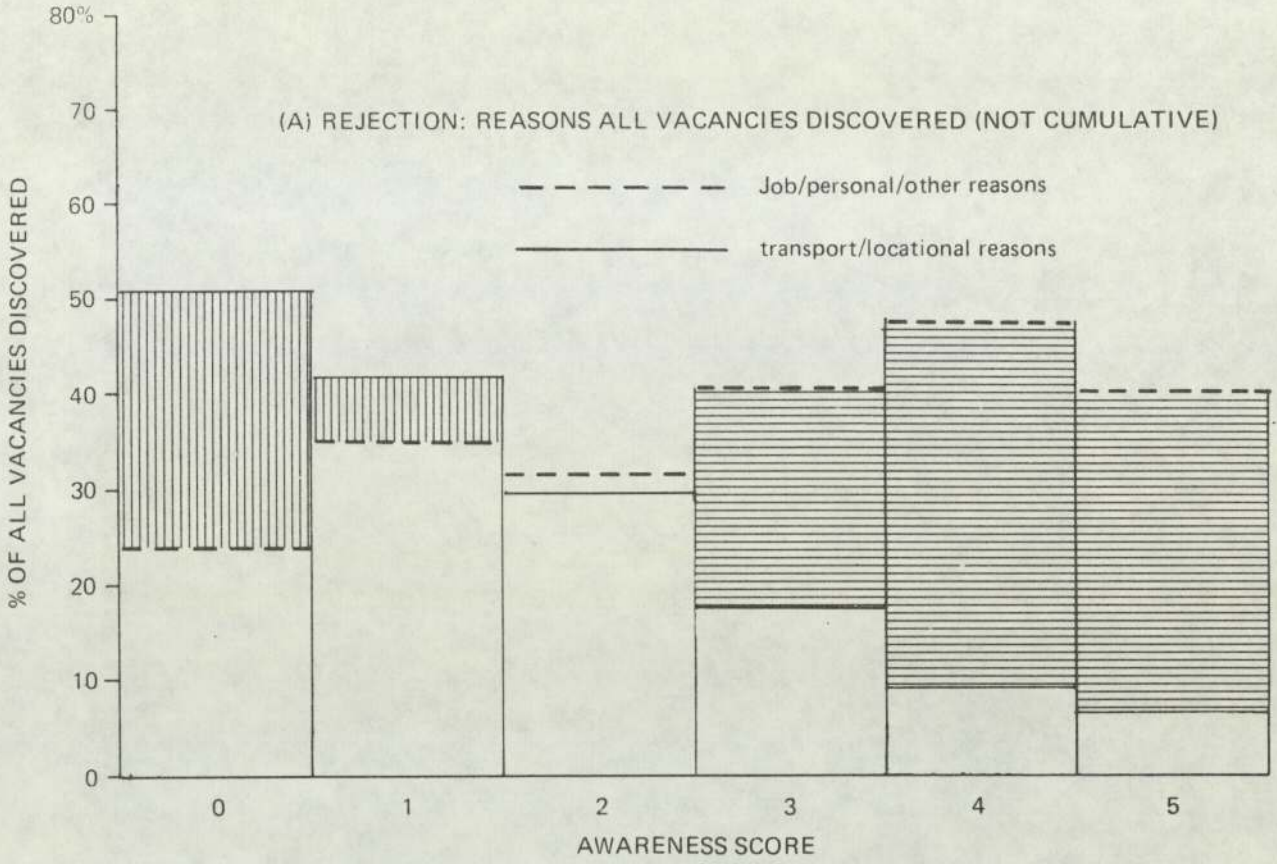
Reasons for Vacancy Rejection and Awareness Score - The broad category of reasons for rejecting a vacancy exhibited a definite pattern based on the awareness score allotted to the district in which each vacancy was located. Table 6.14 shows the proportion of vacancies rejected for location/transport reasons by awareness score. The figures are based on the primary reason cited by the respondent

TABLE 6.14 - REASONS FOR REJECTION AND AWARENESS SCORE - TOTAL SAMPLE

AWARENESS SCORE	TRANSPORT/LOCATION REASON		JOB/PERSONAL/OTHER REASONS		VACANCY REJECTION		VACANCY DISCOVERY		
	NO.	% OF TOTAL REJECTED	% OF TOTAL DISCOVERED	NO.	% OF TOTAL REJECTED	% OF TOTAL DISCOVERED		No.	(%)
0	156	(67.2)	[51.3]	76	(32.8)	[25.0]	232	(100.0)	304
1	270	(53.9)	[42.3]	231	(46.1)	[36.2]	501	(100.0)	638
2	140	(47.5)	[29.5]	155	(52.5)	[32.6]	295	(100.0)	475
3	49	(29.0)	[16.8]	120	(71.0)	[41.2]	169	(100.0)	291
4	52	(16.4)	[9.2]	266	(83.6)	[47.0]	318	(100.0)	566
5	83	(12.7)	[5.8]	572	(87.3)	[40.2]	655	(100.0)	1424
TOTAL	750	(34.6)	[20.3]	1420	(65.4)	[38.4]	2170	(100.0)	3698

The chi-squared value is 20.6 with 5 degrees of freedom. therefore the null hypothesis that there is no statistically significant difference in the proportion of all rejections for locational reasons between vacancies located in districts assigned to each awareness score is rejected at the 99.9% confidence interval.

FIGURE 6.9 AWARENESS SCORE AND VACANCY REJECTION – TOTAL SAMPLE



The above table demonstrates that transport and locational reasons were cited with increasing importance as awareness score decreased. (This was demonstrated earlier in Figure 6.7 and it was also noticeable that job/personal/other reasons became more important as awareness score increased). One might have expected the proportion of discovered vacancies which were rejected for job/personal/other reasons to have been broadly similar between each awareness score. However, as table 6.14 indicates, this proved not to be the case. In figure 6.9, in fact, differences are readily apparent. The two histograms intersect at awareness score '2'. Job/personal/other reasons were considered by respondents to be more important than transport/locational reasons for discovered vacancies located in districts of awareness '3', '4' and '5'. The definition of score 2 includes only a basic geographical awareness (eg. 'somewhere to the south of city'). Score '3' is the first score in the awareness scale which indicates the respondent knew how to travel to the area. This implies that once a vacancy was discovered in a district of the city to which an individual knew how to travel, then the job characteristics, personal and other characteristics attained most importance. Of course, a vacancy located in a district of awareness score '3' and above could still have been rejected for transport/location reasons (table 6.14). However, the main point is that at least 25% of all vacancies were rejected for non-geographical reasons regardless of awareness score. At low levels of awareness ('2' and below), transport/locational considerations exerted such a constraint that a total of between 60 and 80% of all vacancies discovered were rejected. (Figures 6.7 and 6.8 illustrate the twofold breakdown of rejection reasons by awareness score, each

as a proportion of the vacancies discovered). The combination of geographical and non-geographical reasons had the result that over 50% of vacancies discovered in all districts, except awareness '5', were rejected. It is noticeable that even in extremely 'familiar' areas, transport/location factors were occasionally the cause of a vacancy rejection (Figure 6.9B). It might be that as unemployment continues, and reserves of finance and enthusiasm for job search are reduced, transport factors caused an increasing proportion of vacancies to be rejected even in areas of high awareness. (This issue is explored further in the final part of this chapter).

A breakdown of rejection reasons by awareness score for the four main sample groups is shown in table 6.15 and depicted in Figure 6.10. A comparison of the diagrams reveals that over 50% of transport/location reasons were assigned to rejections in awareness scores '0' and '1' for all groups except Handsworth. However, the pattern in this latter group is the same as in the other groups (i.e. transport/location reasons increase as awareness score decreases); the only difference is that 'other' reasons were generally of greater importance. The rate of change in the proportion of rejections for transport and locational reasons between awareness scores was greater for the city and Aston groups, than for the remaining two groups. The total proportion of locational/transport reasons for rejection was also greater for these two 'inner city' groups, which implies that applications to districts of low awareness score (0 to 2) were considered to present particular travel difficulties to these respondents.

Therefore, the summary of the pattern of reasons for rejection by awareness score described for the total sample is generally repeated for these four divisions of the sample.

6.7 VACANCY REJECTION SPACE

6.7.1 The Geographical Pattern - The geographical pattern of vacancy rejections is depicted in the shaded maps of job search behaviour in the Map Supplement. The maps show those districts where a significant number of vacancies were discovered and the bar graphs indicate the proportion of vacancies rejected for both geographical and non-geographical reasons.

Erdington provides a typical example. The average proportion of rejected vacancies was 66.3% (244), and the average proportion of all vacancies rejected for a locational reason was 18.5% (68). The map supplement shows those districts with more than the average proportion of vacancies rejected by respondents in the 'Erdington' group. Only vacancies discovered in Aston, Erdington, City Centre, Hockley and Witton had below average vacancy rejections. Of the remaining districts in which vacancies were discovered, only Edgbaston and Erdington had below average locational reasons. Therefore, all vacancies discovered in districts which were not linked by a major route to Erdington were rejected for a relatively large proportion of transport/locational reasons (e.g. Vacancies discovered in Smethwick; 91% rejected, 46% rejected for transport/locational reason). The general patterns of 'Rejection' for inner area residents was that a greater proportion of discovered vacancies were rejected for

transport/locational reason if the vacancy was located on the periphery of the city. This is demonstrated by the smaller area of 'Vacancy Application Space' ellipses compared to ellipses for 'Vacancy Discovery Space'. The implication is that 'inner area' residents are unlikely to consider, and may experience actual or perceived difficulties, in "reverse commuting".

The pattern of vacancy rejection for suburban groups shows that most vacancies discovered outside the 'sector' from the home location to the city centre were rejected for locational reasons.

6.7.2

Cognitive - Behavioural relationships - The previous section has highlighted the relationship between vacancy rejection and awareness scores. The map supplement further highlights this relationship by comparing awareness space and the pattern of vacancy rejection. A cautionary note should be made for non-geographical reasons. This tends to disguise the underlying geographical pattern of vacancy rejection. However, the difference between 'Vacancy Discovery Space' and 'Vacancy Application Space' (described in section 6.9) reflects the influence of vacancy rejection patterns.

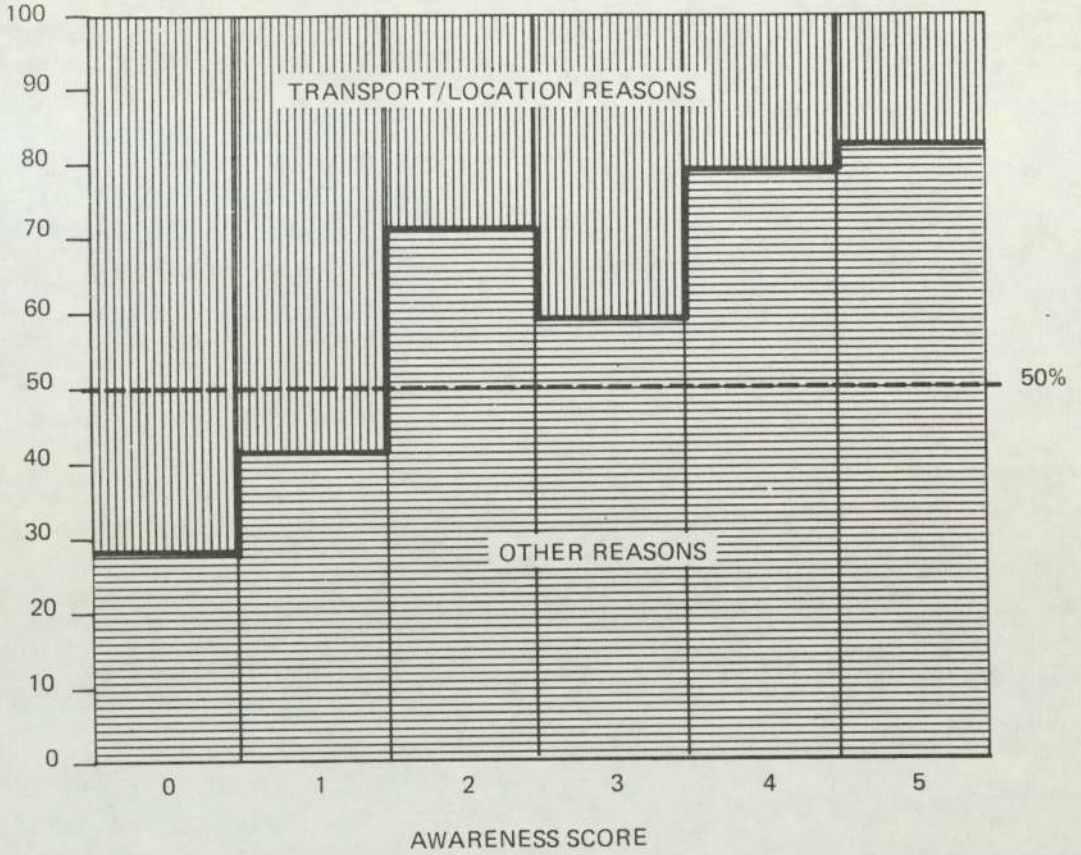
TABLE 6.15 - VACANCY REJECTION REASON AND AWARENESS SCORE
THE FOUR SAMPLE GROUPS

AWARE- NESS SCORE	LOCATIONAL TRANSPORT REASONS		OTHER REASONS			(A)VACANCY REJECTION	(B) VACANCY DISCOVERY
	No.	(%A) [%B]	No.	(%A) [B]	No.	(%)	
<u>SUTTON</u>							
0	28 (71.8)	[38.4]	11 (28.2)	[15.0]	39 (100.0)		73
1	84 (59.2)	[45.2]	58 (40.8)	[31.2]	142 (100.0)		186
2	46 (29.1)	[29.1]	38 (70.9)	[24.1]	84 (100.0)		158
3	12 (41.4)	[15.0]	17 (58.6)	[21.3]	29 (100.0)		80
4	20 (20.7)	[9.7]	76 (79.3)	[36.7]	96 (100.0)		207
5	33 (17.8)	[6.6]	152 (82.2)	[30.5]	185 (100.0)		498
<u>TOTAL</u>	<u>223 (38.8)</u>	<u>[18.6]</u>	<u>352 (61.2)</u>	<u>[29.3]</u>	<u>575 (100.0)</u>		<u>1202</u>
<u>ASTON</u>							
0	59 (77.6)	[72.0]	17 (22.4)	[20.7]	76 (100.0)		82
1	81 (61.8)	[53.0]	50 (38.2)	[32.6]	131 (100.0)		153
2	49 (48.5)	[38.0]	52 (51.5)	[40.3]	101 (100.0)		129
3	11 (33.3)	[20.0]	22 (66.7)	[40.0]	33 (100.0)		55
4	9 (18.8)	[11.8]	39 (81.2)	[51.4]	48 (100.0)		76
5	15 (12.0)	[6.0]	120 (88.0)	[46.6]	125 (100.0)		257
<u>TOTAL</u>	<u>224 (43.6)</u>	<u>[30.0]</u>	<u>290 (56.4)</u>	<u>[38.4]</u>	<u>514 (100.0)</u>		<u>752</u>
<u>HANDSWORTH</u>							
0	48 (52.7)	[46.6]	43 (47.3)	[41.7]	91 (100.0)		103
1	59 (38.3)	[29.8]	95 (61.7)	[50.0]	154 (100.0)		198
2	34 (41.0)	[25.4]	49 (59.0)	[36.5]	83 (100.0)		134
3	25 (27.8)	[20.3]	65 (72.2)	[52.9]	90 (100.0)		123
4	19 (16.2)	[11.0]	98 (83.8)	[56.6]	117 (100.0)		173
5	18 (7.4)	[5.7]	225 (92.6)	[58.3]	243 (100.0)		386
<u>TOTAL</u>	<u>203 (26.1)</u>	<u>[18.2]</u>	<u>575 (73.9)</u>	<u>[51.5]</u>	<u>778 (100.0)</u>		<u>1117</u>
<u>CITY</u>							
0	21 (80.8)	[45.7]	5 (19.2)	[10.8]	26 (100.0)		46
1	46 (62.2)	[45.6]	28 (37.8)	[27.7]	74 (100.0)		101
2	11 (40.7)	[20.4]	16 (59.3)	[29.6]	27 (100.0)		54
3	1 (6.3)	[3.0]	16 (93.7)	[48.5]	17 (100.0)		33
4	4 (7.0)	[3.6]	53 (93.0)	[48.2]	57 (100.0)		110
5	17 (16.7)	[6.0]	85 (83.3)	[30.0]	102 (100.0)		283
<u>TOTAL</u>	<u>100 (33.0)</u>	<u>[15.9]</u>	<u>203 (67.0)</u>	<u>[32.4]</u>	<u>303 (100.0)</u>		<u>627</u>

FIGURE 6.10 AWARENESS SCORE AND VACANCY REJECTION – THE FOUR GROUPS

% OF ALL VACANCIES REJECTED

(a) SUTTON



% OF ALL VACANCIES REJECTED

(b) ASTON

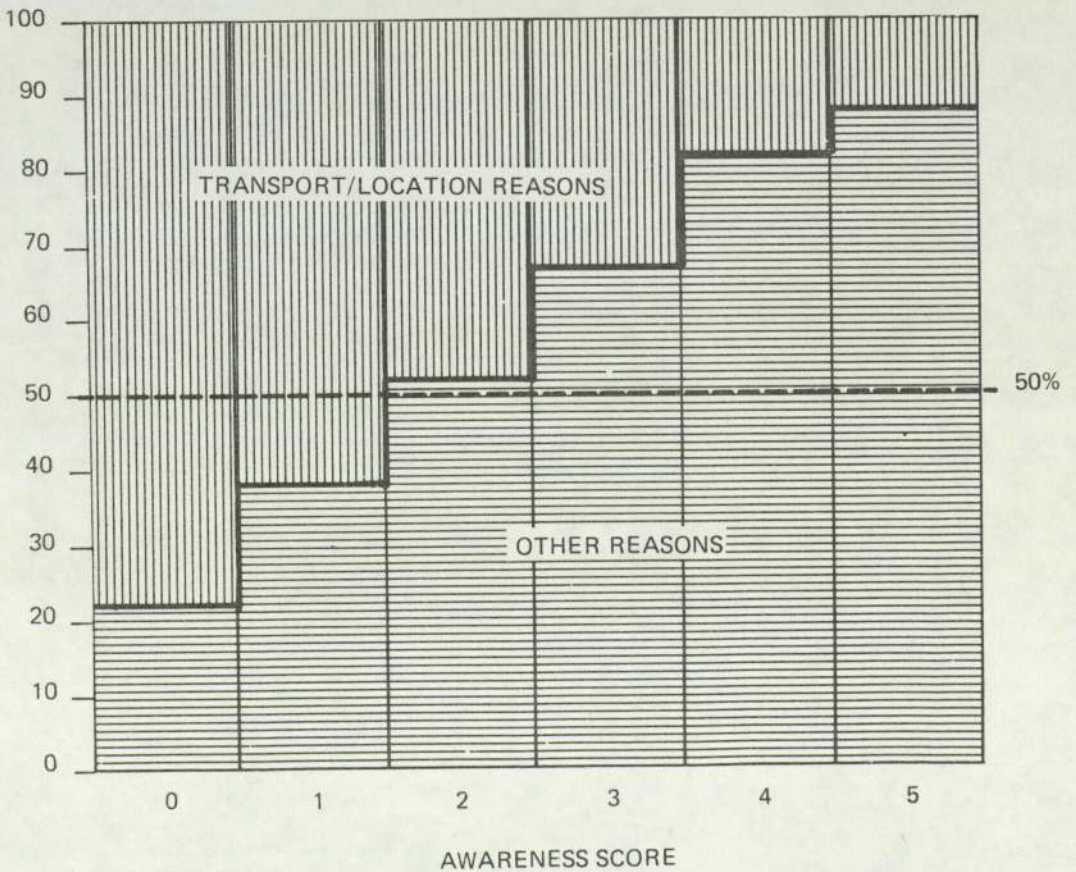
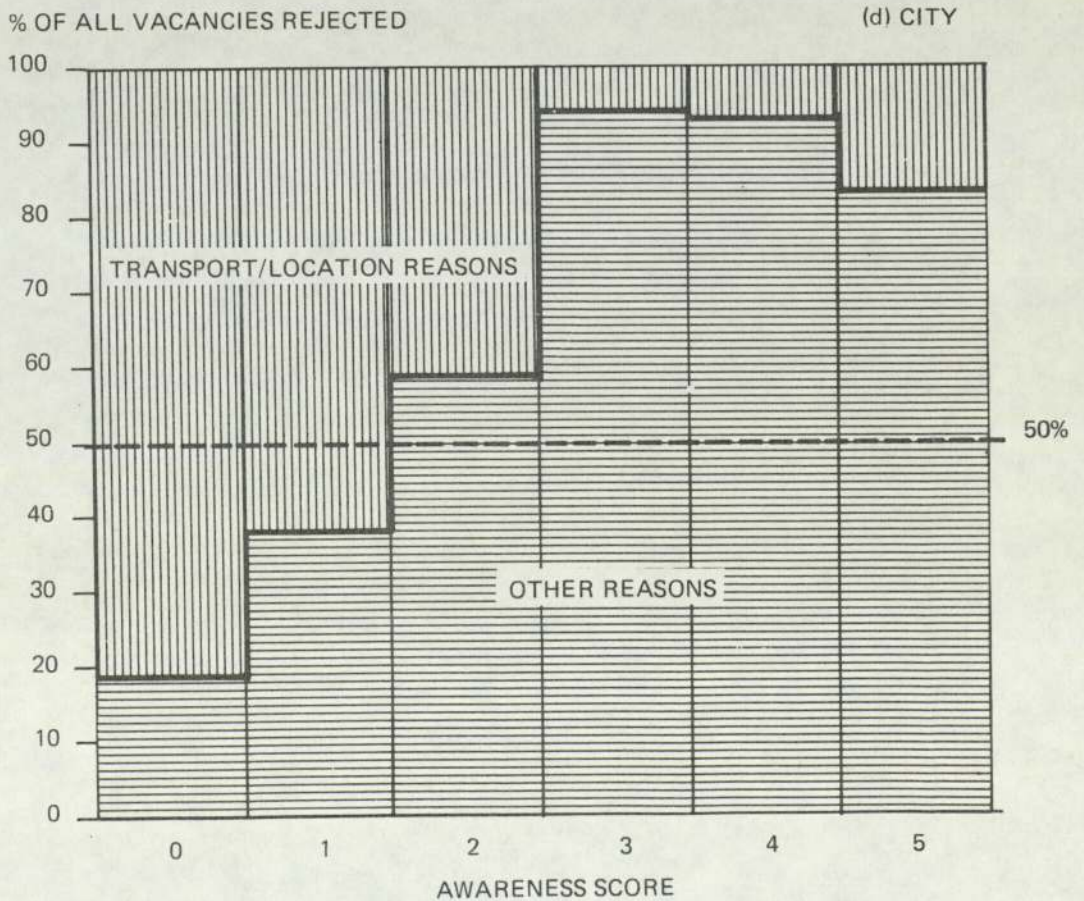
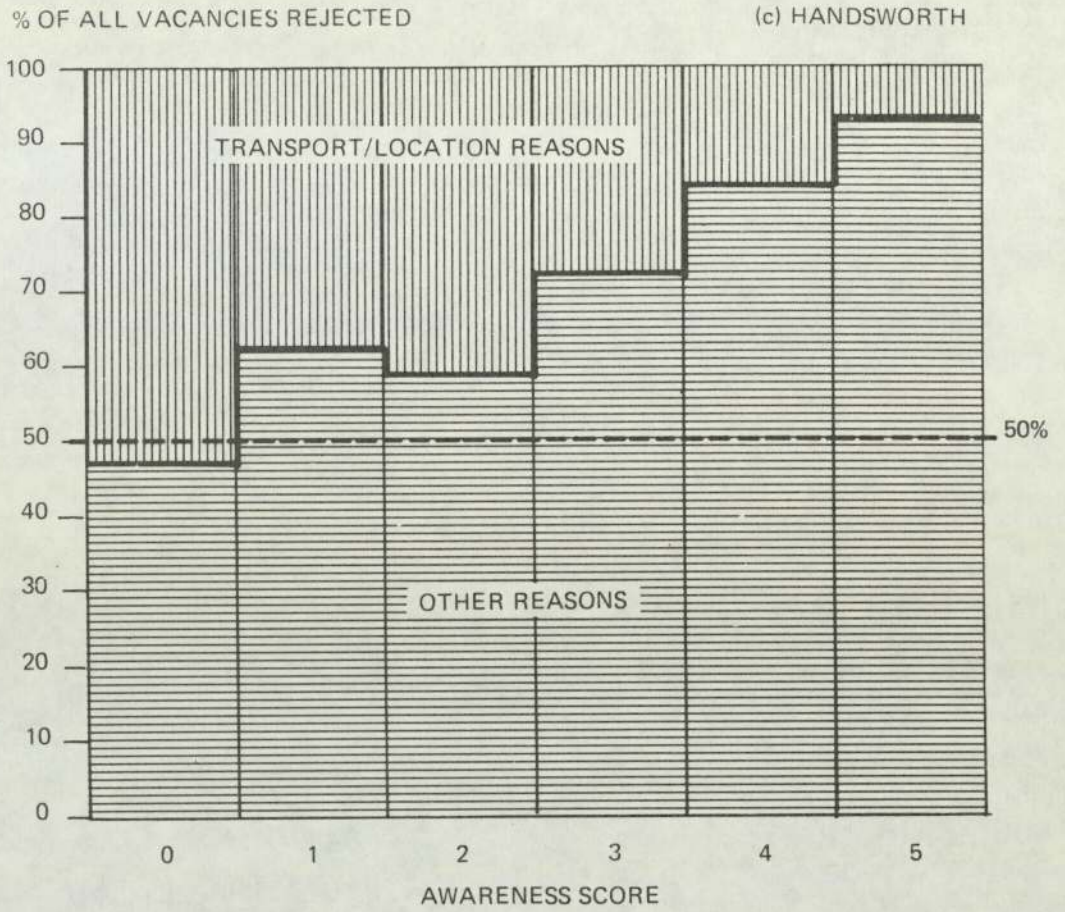


FIGURE 6.10 (Continued)



PART TWO

VACANCY APPLICATION

6.8 VACANCY APPLICATION

By way of introducing 'part two' of the analysis, the relative position of the 'Vacancy Application' stage in the job search process has been highlighted in the reproduction of the Model opposite. This section of the analysis deals with 'Vacancy Application' in the same manner as 'Vacancy Discovery' was analysed in Part-One of this chapter.

6.8.1 Frequency of Vacancy Applications - During the survey period, the sample of 204 school leavers made 1528 applications for job vacancies. The average number of vacancy applications was 5.8 per respondent which was approximately one application for each week of the survey. Table 6.16 shows the frequency distribution of vacancy applications. These figures are illustrated graphically, for the total sample, and each of the four main sample groups in Figure 6.11.

The above table shows that the average number of vacancy applications by respondents in each of the four groups was not significantly different. Table 6.1 revealed statistically significant differences in the average number of vacancies.

TABLE 6.16 - FREQUENCY DISTRIBUTION OF VACANCY APPLICATIONS

	FREQUENCY OF VACANCY APPLICATIONS							TOTAL NUMBER OF RESPONDENTS	TOTAL NUMBER OF VACANCIES	AVERAGE	STANDARD DEVIATION
	0	1 - 5	6 - 10	11 - 15	16 - 20	21 - 25	26+				
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)				
ASTON	3 (6.0)	32 (64.0)	11 (22.0)	2 (4.0)	1 (2.0)	1 (2.0)	0 (-)	50 (100)	238	4.8	4.5
CITY	7 (15.2)	17 (37.0)	10 (21.7)	8 (17.4)	2 (4.4)	0 (-)	2 (4.3)	46 (100)	324	7.0	8.6
HANDSWORTH	12 (17.2)	36 (51.4)	15 (21.4)	3 (4.3)	3 (4.3)	1 (1.4)	0 (-)	70 (100)	339	4.8	4.9
SUTTON	7 (7.1)	51 (52.0)	21 (21.4)	12 (12.2)	4 (4.1)	1 (1.0)	2 (2.1)	98 (100)	627	6.4	6.2
TOTAL	29 (11.0)	136 (51.5)	57 (21.6)	25 (9.5)	10 (3.8)	3 (1.1)	4 (1.5)	264 (100)	1528	5.8	5.1

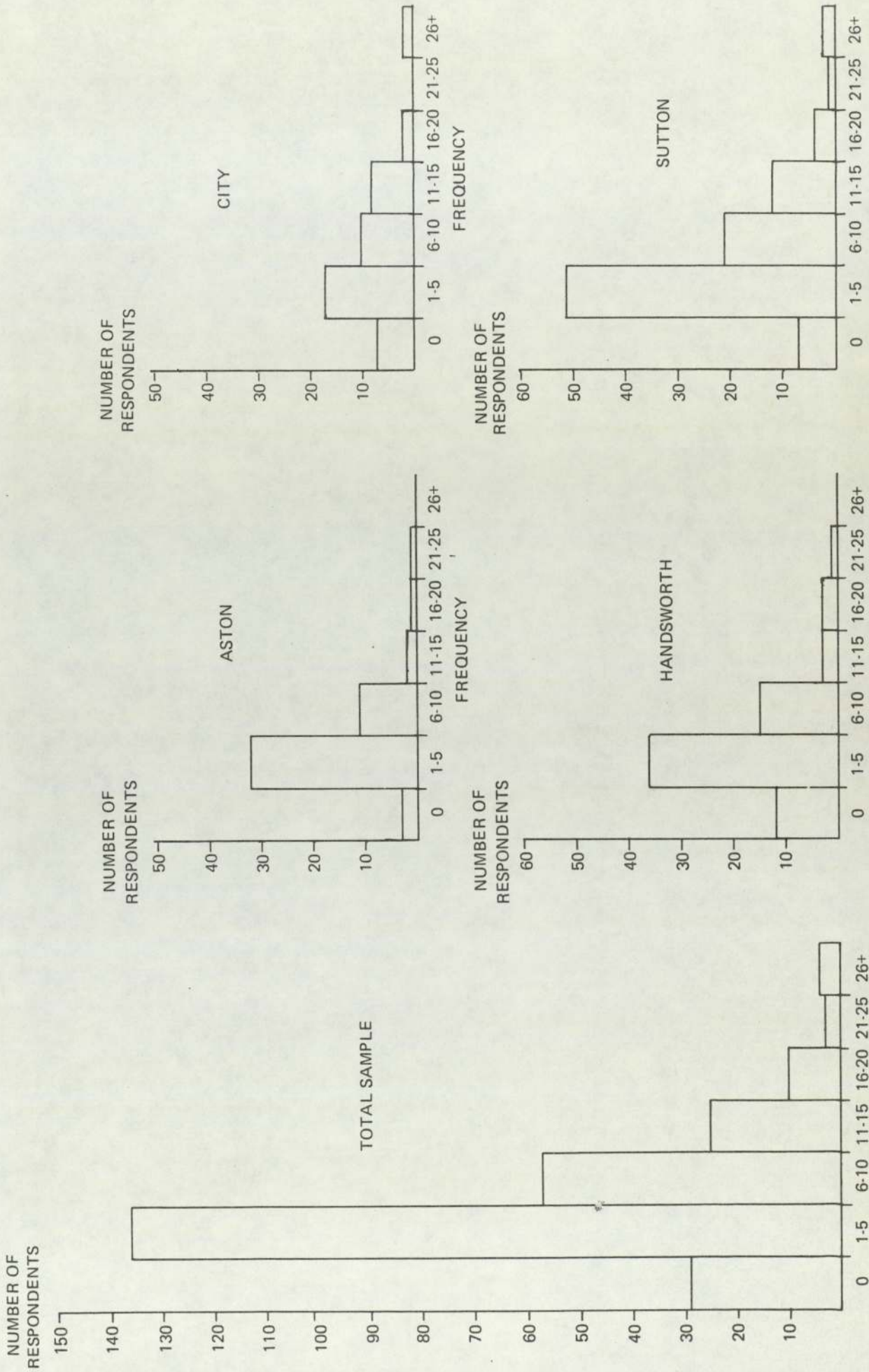
'Z' Test of Statistically Significant Difference between

Frequency Distribution

	SUTTON	ASTON	HANDSWORTH
ASTON	1.83 (Accept)		
HANDSWORTH	1.77 (Accept)	0.14 (Accept)	
CITY	0.48 (Accept)	1.63 (Accept)	1.58 (Accept)

The null hypothesis that there is no statistically significant difference between the frequency distributions of vacancy applications for each of the groups is accepted.

FIGURE 6.11 FREQUENCY DISTRIBUTION OF VACANCY APPLICATIONS



discovered between the Sutton and Handsworth groups. However, rates of application were higher for the Sutton group (see table 6.5). Hence, despite differences in levels of vacancy discovery, the average number of applicants from each sample group did not significantly differ. This, one might expect, would imply no difference in the proportion of interview offers. This aspect is explained later, in section 6.10.

6.8.2 Vacancy Application and Awareness Score - It was shown earlier (section 6.3.2) that 53.8% of vacancies discovered by the total sample were located in districts assigned awareness score '4' and '5'. It has also been shown that highest proportions of applications were for vacancies located in districts allocated these two awareness scores. Table 6.17 shows the distribution of vacancy applications by awareness score. Figure 6.12 graphically illustrates the figures for the total sample and the four sample groups.

TABLE 6.17 - NUMBER OF VACANCY APPLICATIONS BY AWARENESS SCORE - THE FOUR SAMPLE GROUPS

	AWARENESS SCORE						TOTAL
	'0'	'1'	'2'	'3'	'4'	'5'	
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	
SUTTON	34 (5.4)	44 (7.0)	74 (11.8)	51 (8.1)	111(17.7)	313(50.0)	627(100)
ASTON	6 (2.5)	22 (9.2)	28 (11.8)	22 (9.2)	28(11.8)	132(55.5)	238(100)
HANDSWORTH	12 (3.6)	44(13.0)	51 (15.0)	33 (9.7)	56(16.5)	143(42.2)	339(100)
<u>CITY</u>	<u>20 (6.2)</u>	<u>27 (8.3)</u>	<u>27 (8.3)</u>	<u>16 (5.0)</u>	<u>53(16.4)</u>	<u>181(55.8)</u>	<u>324(100)</u>
TOTAL	72 (4.7)	137 (9.0)	180 (11.8)	122 (8.0)	248(16.2)	769(50.3)	1528(100)

Chi'squared value is 29.7 with 15 degrees of freedom. Therefore, the null hypothesis that there is no statistically significant difference in the distribution of vacancy applications by awareness score between each group is rejected at the 99.9% confidence interval.

FIGURE 6.12 VACANCY APPLICATIONS BY AWARENESS SCORE – THE TOTAL SAMPLE

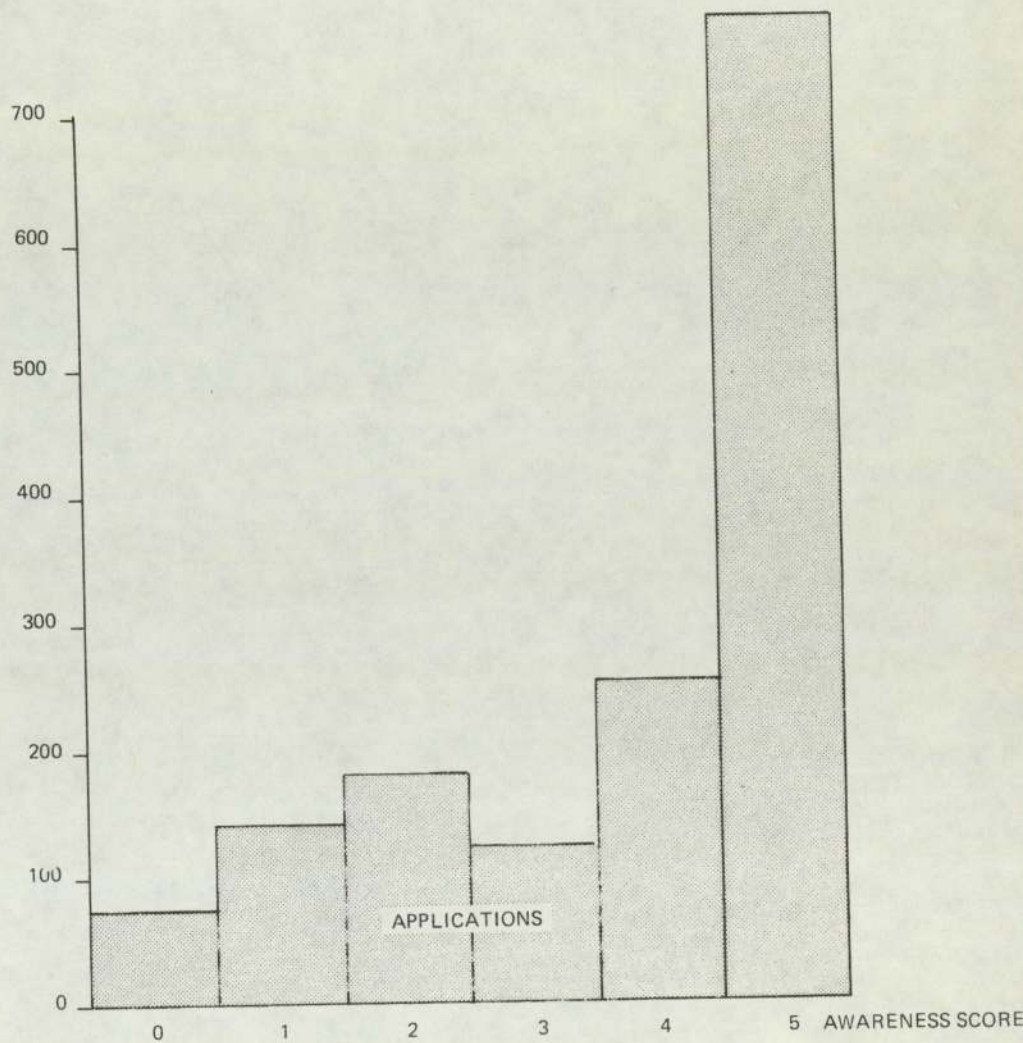
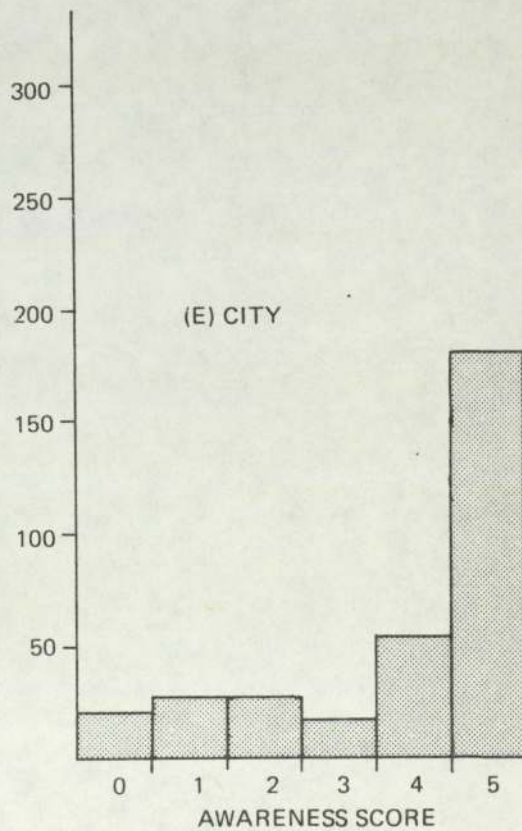
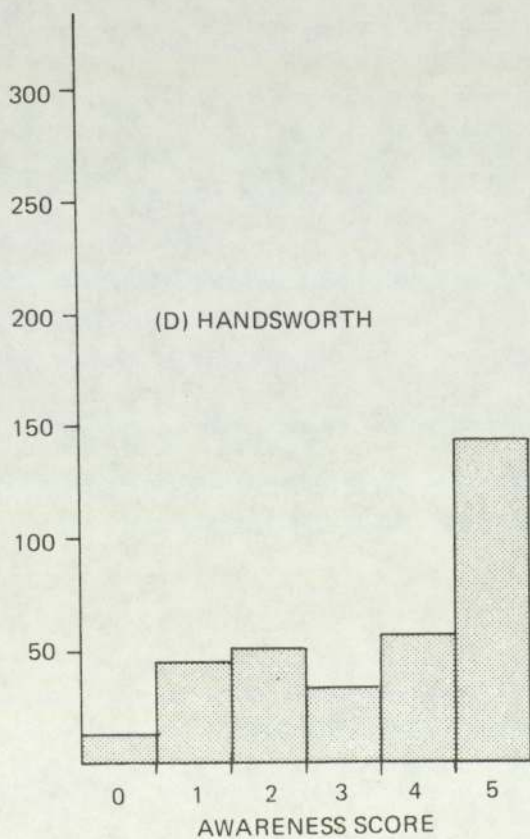
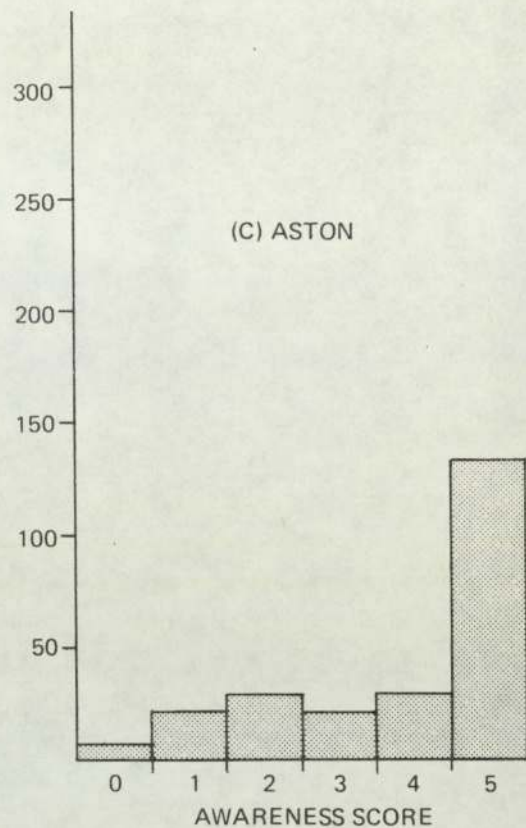
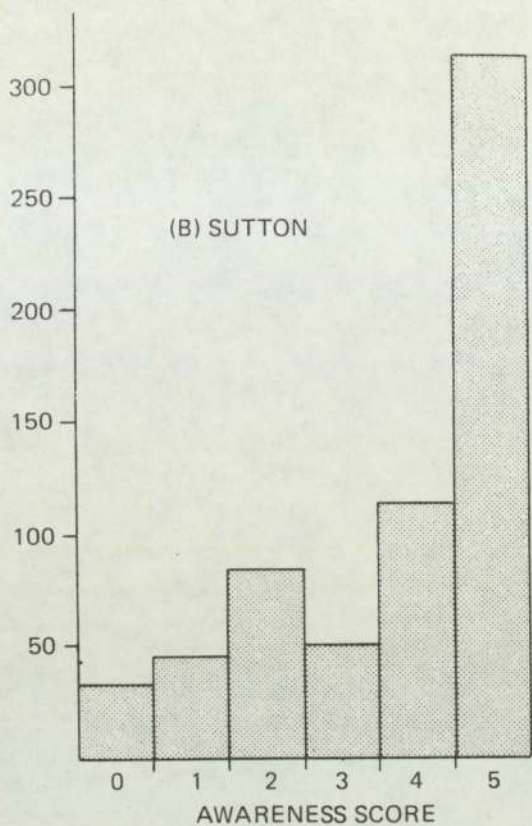


FIGURE 6.12 (Continued) VACANCY APPLICATIONS BY AWARENESS SCORE
 -THE FOUR GROUPS



Although the differences in the distribution of applications by awareness score is statistically significant, it is apparent from the statistical test conclusions that the differences were not as great as the differences in vacancy discovery. It is apparent that the same process of decision-making in relation to awareness space was carried out by different groups despite relative differences in awareness level and in proximity to available vacancies.

6.9 VACANCY APPLICATION SPACE

6.9.1 The geographical pattern - The shaded maps on the job search behaviour (Map Supplement) shows the geographical distribution of vacancy applications for each group. The patterns are similar and indeed more pronounced than those identified for vacancy discovery space; that is, very few applications were made to firms on the 'opposite' side of the city centre. Patterns similar to vacancy discovery space can also be noted in the SDE's (ie. Standard Deviational Ellipse) for 'Vacancy Application Space'. The coefficient of circularity is markedly smaller for suburban groups (e.g. Sutton 0.35) than for inner area groups (e.g. South Core 0.76) and the area of vacancy application space SDE's was larger for inner area groups compared to the Sutton group.

The SDE maps for vacancy discovery space and vacancy application space shown in Map Supplement illustrate a relationship between the two 'spaces' which is common to all groups (both inner area and suburban). The Vacancy Application SDE's decreased in area and became more sectoral or linear (i.e. more directional bias as indicated by the coefficient of circularity and the mean centre

was closer to the home location compared to the discovery SDEs. The only exception was East Core where the mean centre of vacancy application space was closer to the city centre than the mean centre of vacancy discovery space.

6.9.2

Cognitive Behavioural Relationships - It was shown (section 6.5.2) that a greater proportion of vacancies were applied for in locations of increasingly higher awareness score. This is reflected in a comparison between awareness space and vacancy application space (see summaries by both shaded maps and SDEs in Map Supplement). A general similarity is noted between the patterns of vacancy applications and the districts assigned an awareness score of at least '2'. Also the changes in the pattern from discovery to application reflects the differences in awareness patterns for increased 'awareness' score (i.e. awareness '1' to '5' SDE).

6.10

VACANCY APPLICATION AND THE PROPORTION OF INTERVIEW OFFERS.

The model indicates that the next decision for a job seeker after an application for a job vacancy concerns whether or not to accept an offer of an interview with the firm. However, the rate of interview offers was of course controlled by the potential employers recruitment practices. Therefore, an examination and comparison of the frequency and location of firms offering interviews with the frequency and location of vacancy applications should highlight the influence of Employers Recruitment Practices on the job search process.

6.10.1

Rates of Interview Offers - The rates at which job vacancy applications resulted in an interview offer is shown for each group in table 6.18. The table also includes the rate of interview offers as a percentage of the total number of vacancies discovered.

Table 6.18- INTERVIEW OFFERS PER APPLICATION - THE FOUR SAMPLE GROUPS

	INTERVIEW OFFER		NO INTERVIEW OFFER		(A)VACANCY APPLICATION		VACANCY DISCOVERY
	No.	(%A)	(%B)	No.	(%A)	(B) No.	
ASTON	80	(33.6)	(10.6)	158	(66.4)	(21.0) 238	(100.0) 752
CITY	73	(22.5)	(11.7)	251	(77.5)	(40.0) 324	(100.0) 627
HANDSWORTH	56	(16.5)	(5.0)	283	(83.5)	(25.3) 339	(100.0) 1117
SUTTON	194	(30.9)	(16.2)	433	(69.1)	(36.0) 627	(100.0) 1202
TOTAL	403	(26.5)	(10.9)	1125	(73.5)	(30.4)1528	(100.0) 3698

Chi-squared value is 32.1 with 3 degrees of freedom. Therefore, the null hypothesis that there is no statistically significant difference between this proportion of application which resulted in interview offers for each group is rejected at the 99.9% confidence interval.

The table demonstrates that on average one in four applications resulted in an interview offer which is 10% of all vacancies discovered. The proportion of interview offers per application was significantly less for the respondents recruited from the Handsworth Careers Office. This implies that either potential employers discriminated against offering an interview to a "Handsworth" applicant or that a greater proportion of the 'Handsworth' sample did not make a single application during the survey period. (i.e. If a significantly larger number of 'Handsworth' respondents failed to make at least one application then this would obviously decrease the figure for the average number of interview offered per person).

Table 6.19 demonstrates that the difference between the proportion of respondents in each group who made at least one application is not statistically significant.

TABLE 6.19 - RESPONDENTS WHO DID NOT MAKE A SINGLE APPLICATION DURING THE SURVEY - THE FOUR SAMPLE GROUPS

GROUP	RESPONDENTS MAKING AT LEAST ONE APPLICATION		RESPONDENTS MAKING NO APPLICATION		TOTAL NUMBER OF RESPONDENTS	
	No.	(%)	No.	(%)	No.	(%)
SUTTON	91	(92.9)	7	(7.1)	98	(100)
ASTON	47	(94.0)	3	(6.0)	50	(100)
HANDSWORTH	58	(82.9)	12	(17.1)	70	(100)
CITY	39	(84.8)	7	(15.2)	46	(100)
TOTAL	235	(89.0)	29	(11.0)	264	(100)

Chi-squared value is 2.59 with 3 degrees of freedom. Therefore the null hypothesis that there is no statistically significant difference between the proportion of respondents in each group who made at least one application is accepted.

It is noted, however, that the highest proportion of respondents who did not make at least one application during the survey was the 'Handsworth' group. Therefore, it is relevant to investigate the proportion of respondents who made at least one application who received an interview offer. A chi-squared test as shown in table 6.20 shows that the lower figure for the Handsworth group is statistically significant.

TABLE 6.20 - RESPONDENTS WHO MADE AT LEAST ONE APPLICATION
DURING THE SURVEY WHO WERE OFFERED
AT LEAST ONE INTERVIEW - THE FOUR SAMPLE GROUPS

GROUP	RESPONDENTS OFFERED AT LEAST ONE INTERVIEW		RESPONDENTS OFFERED NO INTERVIEW		RESPONDENTS WHO MADE AT LEAST ONE APPLICATION	
	No.	(%)	No.	(%)	No.	(%)
SUTTON	73	(80.2)	18	(19.8)	91	(100)
ASTON	36	(76.6)	11	(23.4)	47	(100)
HANDSWORTH	28	(48.3)	30	(51.7)	58	(100)
CITY	34	(85.0)	6	(15.0)	40	(100)
TOTAL	171	(73.7)	65	(26.3)	236	(100)

Chi-squared value is 24.8 with 3 degrees of freedom. Therefore the null hypothesis that there is no statistically significant difference in the proportion of respondents who made at least one application who received at least one interview offer between the four groups is rejected at the 99.9% confidence interval

It is concluded that respondents in the Handsworth group who made at least one application were less likely than respondents in the other groups to receive an interview offer. The figures for the response rate and the proportion of respondents who did not make a single application indicate the possibility that certain respondents recruited from the Handsworth careers office were not as 'active' in job search as the rest of the sample. This does not however explain the alarmingly low rate at which interviews were offered by potential employers to 'Handsworth' respondents who were equally as 'active' as individuals from any other group in the sample.

6.10.1 (a) Handsworth and the Inner City Groups.

It is helpful to establish whether any differences existed in the interview/application ratio within the Handsworth sample itself. Table 6.2.1 shows the figures for the 12 white and 58 non-whites in the Handsworth sample.

TABLE 6.21 - THE INTERVIEW/APPLICATION RATIO
FOR HANDSWORTH SAMPLE BY ETHNIC MIX

ETHNIC GROUP	INTERVIEW OFFER		NO INTERVIEW OFFER		APPLICATIONS	
	No.	(%)	No.	(%)	No.	(%)
White	16	(29.1)	39	(70.9)	55	(100)
Non-White	40	(14.1)	244	(85.9)	284	(100)
TOTAL	56	(16.5)	283	(83.5)	339	(100)

Chi-squared value is 7.49 with 1 degree of freedom. Therefore the null hypothesis that there is no statistically significant difference in the proportion of applications which resulted in interview offers between white and non-white Handsworth respondents is rejected at the 99.0% confidence interval.

The table shows quite clearly that a significant difference in interview offers per application existed between white and non-white respondents. The non-whites obtained proportionately fewer interviews per application. It is worth noting also that the non-whites made more applications per respondents, on average (4.9) compared with white respondents (4.6) applications/person). It is inferred from this that the non-whites in the

Handsworth group were, on average, making at least as much effort as their white counterparts to obtain employment.

Table 6.22 shows how the white respondents from Handsworth compare with white respondents from other inner area groups (note 1).

TABLE 6.22 - INTERVIEW/APPLICATION RATIO FOR WHITE
RESPONDENTS FROM 'INNER CITY' GROUPS

GROUP	INTERVIEW OFFER		NO INTERVIEW OFFER		APPLICATIONS	
	No.	(%)	No.	(%)	No.	(%)
City	13	(26.7)	65	(83.3)	78	(100)
Handsworth	16	(29.1)	39	(70.9)	55	(100)
TOTAL	29	(21.8)	104	(78.2)	133	(100)

Chi-squared value is 2.9 with 1 degree of freedom. Therefore the null hypothesis that there is no statistically significant difference in the proportion of applications which resulted in interview offers between Handsworth and other inner city 'white' respondents is rejected at the 90% confidence interval.

The table shows that a statistically significant difference (but only 90% confidence interval), in the interview/application ratio between whites in Handsworth and City groups. However, this difference shows that whites in the Handsworth group achieved proportionately more interviews for each application than whites from the 'City' group.

Note 1

Only whites from the 'City' sample can be used because the 'Aston' sample included Erdington and Castle Vale respondents and only one respondent from Aston (proper) was white.

Therefore the problem appears to lie with the non-white respondents in the Handsworth group. Table 6.23 shows that the non-whites in Handsworth obtained a significantly smaller proportion of interviews for each application.

TABLE 6.23 - INTERVIEW/APPLICATION RATIO FOR NON-WHITE RESPONDENTS FROM THE 'INNER CITY' GROUPS.

	Interview Offer		No interview Offer		Application	
	No.	(%)	No.	(%)	No.	(%)
City and Aston (proper)	84	(28.1)	214	(71.8)	298	(100)
Handsworth	40	(14.1)	244	(85.9)	284	(100)
TOTAL	124	(21.3)	458	(78.7)	582	(100)

Chi-squared value is 17.3 with 1 degree of freedom. Therefore the null hypothesis that there is no statistically significant difference in the proportion of applications which resulted in interview offers between Handsworth and the other inner city 'non-white' respondents is rejected at the 99.9% confidence interval.

It is concluded that white Handsworth respondents obtained significantly more interviews per application than non-white Handsworth respondents. In fact, white respondents recruited from Handsworth Careers Office displayed a higher ratio than whites in other inner areas.

The non-whites in Handsworth showed a significantly lower ratio of interviews per applications than non-whites in the rest of the sample. Therefore it is apparent that a non-white school leaver from Handsworth searching for work had a significantly less chance of obtaining an interview for every application. Chapter four demonstrated no difference in exams taken between

the four samples (although it does not distinguish between exams taken between the four samples). Table 6.24 shows exams by ethnic group in the Handsworth sample.

TABLE 6.24 - EXAMS BY ETHNIC GROUP IN 'HANDSWORTH' SAMPLE

	White		Non-White		Total	
'O' and 'A' Level	4	(33.3%)	8	(13.7%)	12	(17.1%)
C.S.E. and None	8	(66.7%)	50	(86.2%)	58	(82.9%)
TOTAL	12	(100.0%)	58	(100.0%)	70	(100.0%)

The table shows that a slightly greater percentage of white respondents in the Handsworth sample sat 'O' and 'A' levels than non-white respondents - but the difference cannot be tested for statistically significant differences because the numbers in the samples are too low.

The implication of the above results is that non-whites from Handsworth were discriminated against by potential employers. How the employer distinguished between a non-white and white respondent (in the Handsworth recruited sample) probably depended on the method used to contact the firm. On the telephone the employer may have been able to distinguish a non-white person's accent. In the case of written applications employers might have had perceptions and attitude towards certain addresses of applicants.

Only 3 out of the 12 white respondents gave 'Handsworth' as their home address, while over 75% of the non-white respondents gave a 'Handsworth' address. Evidently a 'Handsworth' address

had an 'unfavourable image' with potential employers. It is also noted that the white respondents generally gave their address as "Handsworth Wood". This district is comprised of more recent housing stock than is found in Handsworth, with a majority of semi-detached and detached houses. "Handsworth Wood" has a more favourable image (note 1).

6.10.1 (b) Method of Contacting Firms

The methods used by respondents to contact a firm are shown for each of the four sample groups in table 6.25.

TABLE 6.25 - METHODS OF CONTACTING THE FIRM - THE FOUR SAMPLE GROUPS

	SUTTON		ASTON		HANDSWORTH		CITY		TOTAL	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Telephone	316	(50.4)	130	(54.6)	218	(64.3)	206	(63.5)	870	(56.9)
Write	215	(34.3)	65	(27.3)	97	(28.6)	94	(29.0)	471	(30.8)
Through Careers Office	47	(7.5)	32	(13.4)	8	(2.4)	7	(2.2)	94	(6.2)
Through Friend/ Relative	6	(1.0)	3	(1.3)	0	(-)	1	(0.3)	10	(0.7)
Speculative Visit to Firm	43	(6.8)	8	(3.4)	16	(4.7)	16	(5.0)	83	(5.4)
Total	627	(100)	238	(100)	339	(100)	324	(100)	1528	(100)

Note 1 Noelle Gordon ex-star of 'Crossroads' has been reported to live in Handsworth Wood.

The proportion of applications made by the respondent writing to the firm was very similar for all the 'inner city' groups (Aston, City and Handsworth) (note 1) approximately 28%. The job seekers in the Sutton group made proportionately more written applications (34.3%). Table 6.18 showed that the Aston group and in particular the Sutton group of job seekers received more interview offers as a proportion of the number of applications than the other two groups. A closer inspection of table 6.25 shows that in general the same division existed between groups in terms of the methods used to contact a firm. Handsworth and City respondents used the telephone proportionately less often in comparison with the Sutton and Aston groups. Table 6.26 shows that the telephone was the least effective and the Careers Office was the most effective in terms of interview offers per application.

The total number of interview offers was 403 over the period of the survey, but corresponding figure in table 6.26 is only 292. The reason for this discrepancy is because table 6.26 represents the immediate response of the firm upon application, while table 6.18 represents the response of the firms at the end of the survey. This difference is because respondents had to wait for a reply for 213 of the 1528 applications. The majority (165) of all the "waiting reply" applications were made by writing to the firm. Applications not offering an interview at the time when the survey finished were treated as 'no interview' even if the job seeker was still waiting for a reply.

Note 1 However, Castle Vale and Erdington residents are included in the Aston sample.

TABLE 6.26 - METHOD OF CONTACTING FIRM IN VACANCY APPLICATION - TOTAL SAMPLE

Method of Contact	NO INTERVIEW OFFER		IMMEDIATE INTERVIEW OFFER		WAITING REPLY		NOT GIVEN		TOTAL						
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)					
Telephone	720	(82.8)	71.1	109	(12.5)	37.2	39	(4.5)	18.3	2	(0.2)	18.2	870	(100)	56.2
Write	236	(50.1)	23.3	70	(14.9)	24.0	165	(35.0)	77.5	0	(-)	-	471	(100)	31.8
Through Careers Office	11	(11.7)	1.1	70	(74.5)	24.0	5	(5.3)	2.3	8	(8.5)	72.8	94	(100)	6.2
Through Friend/ Relative	3	(30.0)	0.3	2	(20.0)	6.8	4	(40.0)	1.9	1	(10.0)	10.0	10	(100)	0.7
Speculative Visit	42	(50.6)	4.2	41	(49.4)	14.0	0	(-)	-	0	(-)	-	83	(100)	5.4
Total	1012	(66.2)	100	292	(19.1)	100	213	(13.9)	100	11	(0.7)	100	1528	(100)	100

Consequently, the proportion of interviews per written application may be greater still than previously suggested.

The figures for contacting firms through friends and relatives were comparatively small, only 0.7% of all applications were made using this method, and therefore demand little further attention. The figures on applications resulting from 'speculative visits' are, however, of significance. This type of application involved a journey by the job seeker to a firm which was thought possibly to have a job vacancy. The direct visit was made either with or without previous information on whether a vacancy existed at the firm. The effectiveness of this method of application was relatively favourable because about 50% of all journeys produce an interview. In this instance an interview may have involved a manager in a brief conversation with the job seeker or a formal interview may have been arranged. The 42 'no interview' cases (see Table 6.26) probably represent those instances where the firm clearly stated that there were no vacancies.

A speculative visit to the firm involved a journey by the job seeker and therefore these travel details have been included in data on 'Search Activity'. This means that the figures for the number of journeys in the analysis of 'Search Activity' could be greater than the number of interviews.

It is difficult to conclude whether the location of the applicant's home or the method of contact proved the most effective factor in terms of interview offers; though both were clearly important.

For instance it was probable that firms contacted by the Careers Office on behalf of the school-leaver were more likely to offer an interview than if the individual had simply telephoned the firm. The Aston respondents made proportionately more applications through the Careers Office (13.4% of all applications) than any other group. This may account for the higher interview offer/application rates (33.6%) for the Aston group compared to the other inner city groups. It has already been suggested in the case of the Handsworth group that the 'address' of the applicant possibly influenced potential employers decisions on whether or not to offer an interview. It follows therefore that written applications from school-leavers resident in Sutton Coldfield were given preference to applicants with an 'inner city' address. It is worth noting also that the Aston group included a significant proportion of respondents whose home was not in the inner city. This may also be a factor contributing to the higher interview offer/application ratio for the Aston group compared to the inner city groups (proper) (i.e. City and Handsworth) (note 1).

Note 1. The differences in the main stages in the process of job search between for 'locational divisions' of the four samples are investigated next.

Table 6.27 shows the breakdown of the Aston group for interview offers per vacancy application, compared with the other remaining groups. The table demonstrates that the non-inner area residents (i.e. Castle Vale and Erdington) obtained rates of interview offers/application similar to the suburban residents (i.e. the Sutton group). However, the residents from Aston (proper) also had relatively high interview offer/application rates. This might be explained by the fact that these job seekers lived in very close proximity of the Aston Careers Office and are known to have used the office very frequently.

TABLE 6.27 - INTERVIEW OFFERS/APPLICATION RATIO
FOR THE LOCATIONAL DIVISIONS OF THE ASTON SAMPLE GROUP

	INTERVIEW OFFERS		NO INTERVIEW		APPLICATIONS	
	No.	(%)	No.	(%)	No.	(%)
Sutton	194	(30.9)	433	(69.1)	627	(100.0)
(Erdington	45	(36.3)	79	(63.7)	124	(100.0)
(Castle Vale	14	(29.8)	33	(70.2)	47	(100.0)
(Aston (proper)	21	(31.3)	46	(68.7)	67	(100.0)
Handsworth	56	(16.5)	283	(83.5)	339	(100.0)
City	73	(22.5)	251	(77.5)	324	(100.0)
TOTAL	403	(26.5)	1125	(73.5)	1528	(100.0)

It is concluded that written applications enabled the potential employer to discriminate on the basis of the address of the job seeker. This discrimination tended to act against

inner city residents and the 'Handsworth' residents in particular. This is in agreement with the findings of Lee (1981), whose study reported that centrally located firms had no preference towards employing 'local' residents, while peripherally located firms did. This meant that a firm located in Sutton is more likely to offer an interview to an applicant who lives in Sutton than to an 'inner city' applicant. Moreover, it has already been shown that 'inner city' residents generally did not discover vacancies in suburban locations (see Map Supplement) and also 'rejected' a greater proportion of the few vacancies discovered which were located on the periphery of the city.

6.10.1 (c) Potential employers reasons for not offering interview to applicants - Table 6.28 displays a breakdown of reasons cited by potential employers for not offering an interview to respondents.

The two reasons most frequently cited by employers' were that sufficient applicants had been obtained and that the vacancy had already been filled. This clearly indicates the scarcity of job vacancies available to school leavers and the intense competition for the few job openings. In the previous analysis of Vacancy Rejection, the reason most frequently given by respondents for not applying for a discovered vacancy was that they were 'not sufficiently qualified/experienced to do the work'. Table 6.27 indicates that, certainly in terms of qualifications, the respondents did not choose to apply for many jobs which required qualifications not possessed (i.e. only 1.3% of applications were refused an interview because of inappropriate/insufficient qualifications).

TABLE 6.28 POTENTIAL EMPLOYER'S REASONS FOR
NOT OFFERING AN INTERVIEW

Reason	No.	%
Sufficient number of Applicants	250	(24.7)
Vacancy now filled	279	(27.5)
Applicant is too young	67	(6.6)
Applicant is not experienced enough	128	(12.6)
Applicant does not have sufficient/appropriate qualifications	13	(1.3)
No Vacancies (i.e. After general inquiry)	98	(9.7)
Applicant told to re-apply later	3	(0.3)
Other reasons	26	(2.7)
Reason Not Given	148	(14.6)
TOTAL	1012	(100.0)

On the other hand, Table 6.28 also shows that 'inexperience' has more frequently been given as a reason by potential employers. Clearly lack of experience is a major problem faced by school-leavers when they commence job search, and is currently being tackled in the form of work experience programmes and youth opportunities programmes. A significant proportion (14%) of applicants were turned-down without an accompanying reason. Not only is this discouraging to the job seeker but it may also represent the 'locational' preferences of potential employers.

6.10.2 Cognitive-Behavioural Relationships - The relationship

between rates of interview offers and awareness score is shown in Table 6.29. The proportion of interview offers per vacancy discovered has been included in Figure 6.7. The figure and table illustrate that the proportion of interview offers increased with an increase in awareness score. However, a similar trend was noted in the frequency of vacancy applications. The employer would, of course, be unlikely to appreciate the awareness score assigned to his form by the applicant. But the employer may indeed have considered the accessibility (as perceived by the employer) from the applicants home to the firm. Table 6.29 and figure 6.30 demonstrate a pattern of significant differences in interview offers per application for each awareness score. A break in the average proportion of interview is noted between awareness scores '2' and '3'. Awareness scores '3', '4' and '5' at least indicate that the respondent knew how to get to the area in which the firm offering the vacancy was located. Therefore, although awareness was not linearly related to distance from home, it was likely that accessibility to firms located in districts assigned scores '0', '1' and '2' presented more difficulties than to firms located in districts given scores '3', '4' and '5'.

FIGURE 6.13 AWARENESS SCORE AND INTERVIEW OFFERS PER APPLICATION
- TOTAL SAMPLE

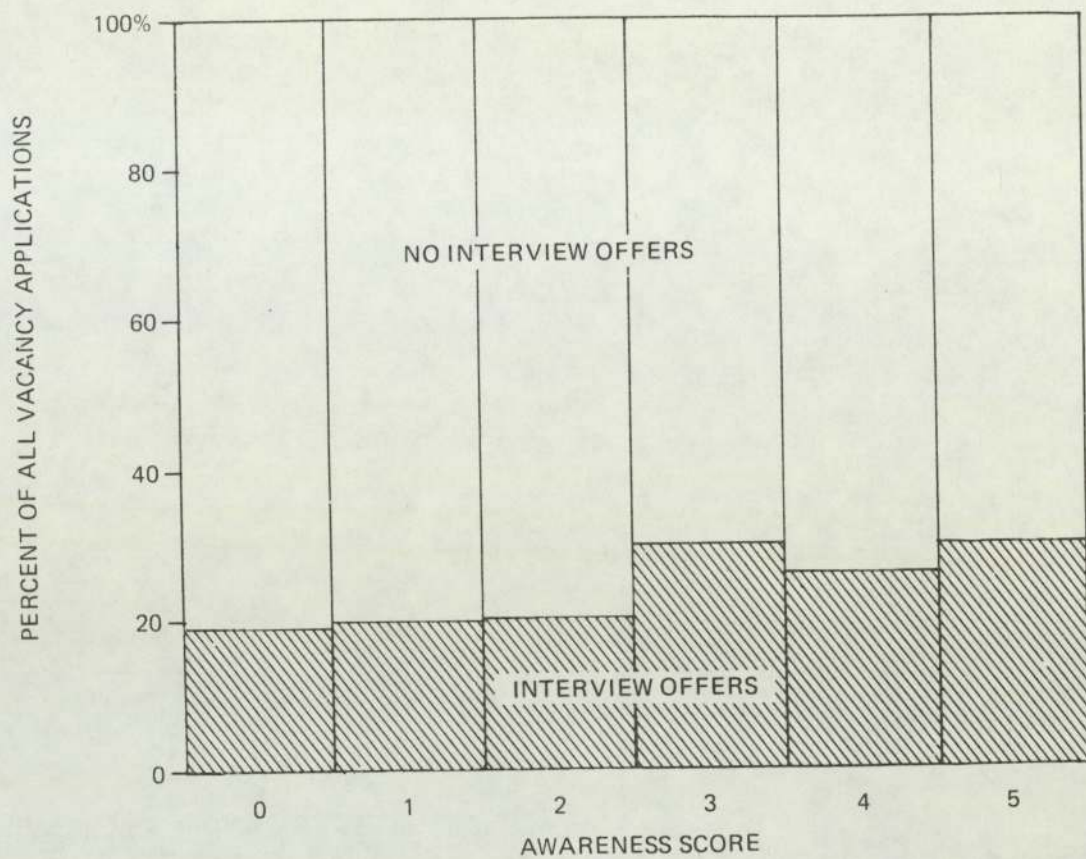


TABLE 6.29 - RATES OF INTERVIEW OFFERS

BY AWARENESS SCORE - TOTAL SAMPLE

AWARENESS SCORE	NO INTERVIEW OFFER		INTERVIEW OFFER		VACANCY (A) APPLICATION		VACANCY (B) DISCOVERY	
	No.	(%A) (%B)	No.	(%A) (%B)				
0	58	(80.6) (19.1)	14	(19.4) (4.6)	72	(100.0)		304
1	110	(80.3) (17.2)	27	(19.7) (4.2)	137	(100.0)		638
2	146	(81.1) (30.7)	34	(18.9) (7.2)	180	(100.0)		475
3	86	(70.5) (29.6)	36	(29.5)(12.3)	122	(100.0)		291
4	183	(73.8) (32.3)	65	(26.2)(11.5)	248	(100.0)		566
5	542	(70.5) (38.1)	227	(29.5)(15.9)	769	(100.0)		1424
TOTAL	1125	(73.5) (30.4)	403	(26.5)(10.9)	1528	(100.0)		3698

Chi-squared value is 10.79 with 5 degrees of freedom. Therefore, the null hypothesis that there is no statistically significant difference between the frequency of interviews offered per application to firms located in districts assigned to each awareness score is rejected at the 95% confidence interval.

It has already been demonstrated that locational/transport reasons were important for rejecting a vacancy located in areas of awareness score '2' and above. Therefore it is apparent that employers exercised some locational constraint on the pattern of interview offers.

Table 6.30 shows the rates of interview offers by awareness scores for the respondents in the four main groups of the sample. (See figure 6.14). The increase in the rate of interview offers from the three lowest to three highest awareness scores is apparent for each of the four sample groups. The proportion of interview offers per application is noticeably less for the Handsworth group, but the difference between awareness scores were generally consistent.

TABLE 6.30 - RATES OF INTERVIEW OFFERS BY AWARENESS SCORE
- THE FOUR SAMPLE GROUPS

AWARENESS SCORE	NO INTERVIEW OFFER No. (%A) [%B]	INTERVIEW OFFER No. (%A) [%B]	(A)VACANCY APPLICATION	(B)VACANCY DISCOVERY
ASTON				
0	6(100.0) [7.3]	0 (-) [-]	6 (100.0)	82
1	17 (77.3) [11.1]	5(22.7) [3.3]	22 (100.0)	153
2	19 (67.9) [14.7]	9(32.1) [7.0]	28 (100.0)	129
3	14 (63.6) [25.5]	8(36.4) [14.5]	22 (100.0)	55
4	15 (53.6) [19.8]	13(46.4) [17.0]	28 (100.0)	76
5	87 (65.9) [33.8]	45(34.1) [17.6]	132 (100.0)	257
TOTAL	158 (66.4) [21.0]	80(33.6) [10.6]	238 (100.0)	752
CITY				
0	17 (85.0) [37.0]	3(15.0) [6.5]	20 (100.0)	46
1	19 (70.3) [18.8]	8(29.7) [7.9]	27 (100.0)	101
2	23 (85.2) [46.2]	4(14.8) [7.4]	27 (100.0)	54
3	10 (62.5) [30.3]	6(37.5) [18.2]	16 (100.0)	33
4	37 (69.8) [33.6]	16(30.2) [14.6]	53 (100.0)	110
5	145 (80.1) [51.2]	36(19.9) [12.8]	181 (100.0)	283
TOTAL	251 (77.5) [40.0]	73(22.5) [11.7]	324 (100.0)	627
HANDSWORTH				
0	11 (91.7) [10.7]	1 (8.3) [1.0]	12 (100.0)	103
1	37 (84.1) [18.7]	7(15.9) [3.5]	44 (100.0)	198
2	46 (90.2) [34.3]	5 (9.8) [3.8]	51 (100.0)	134
3	26 (78.8) [21.2]	7(21.2) [5.6]	33 (100.0)	123
4	51 (91.1) [29.4]	5 (8.9) [3.0]	56 (100.0)	173
5	112 (78.3) [29.0]	31(21.7) [8.0]	143 (100.0)	386
TOTAL	283 (83.5) [25.3]	56(16.5) [5.0]	339 (100.0)	1117
SUTTON				
0	24 (70.6) [32.9]	10(29.4) [13.7]	34 (100.0)	73
1	37 (84.1) [19.8]	7(15.9) [3.8]	44 (100.0)	186
2	58 (73.8) [36.7]	16(26.2) [10.1]	74 (100.0)	158
3	36 (70.1) [44.9]	15(29.9) [18.8]	51 (100.0)	80
4	80 (72.1) [38.6]	31(27.9) [15.0]	111 (100.0)	207
5	198 (63.3) [39.8]	115(36.7) [23.1]	313 (100.0)	498
TOTAL	433 (69.1) [36.0]	194(30.9) [15.2]	627 (100.0)	1202

FIGURE 6.14 AWARENESS SCORE AND INTERVIEW OFFERS PER APPLICATION
 - THE FOUR GROUPS

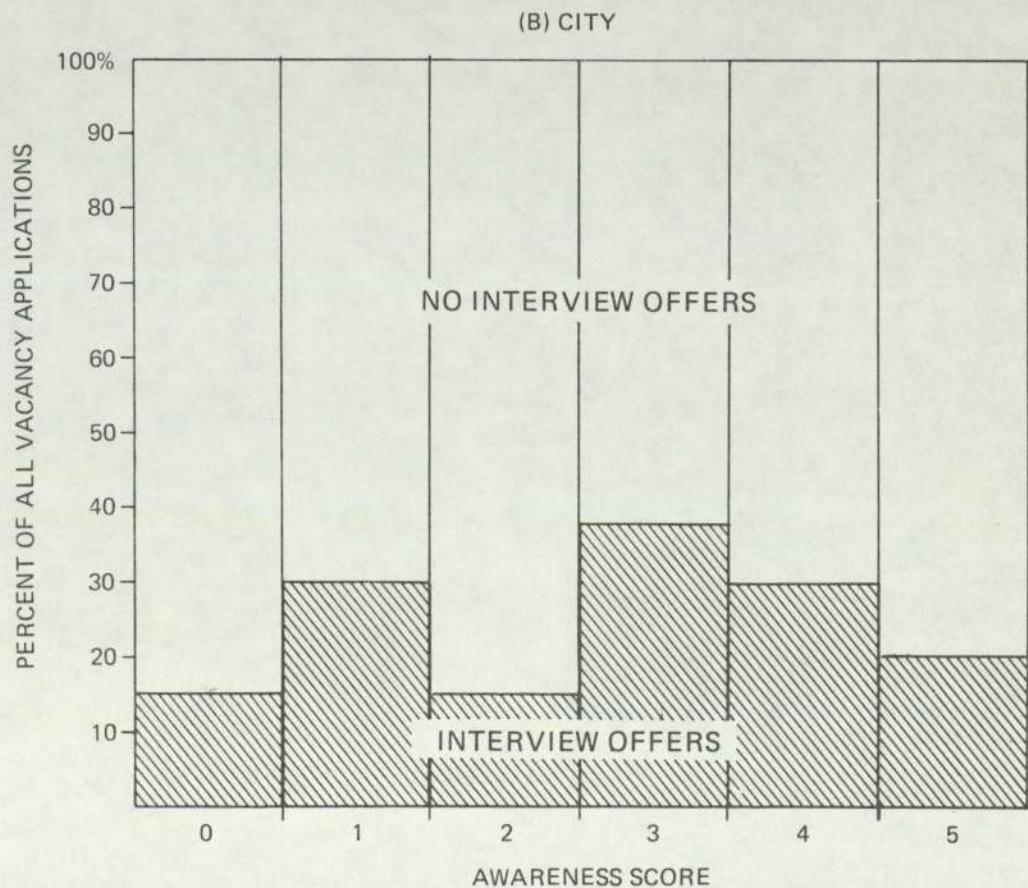
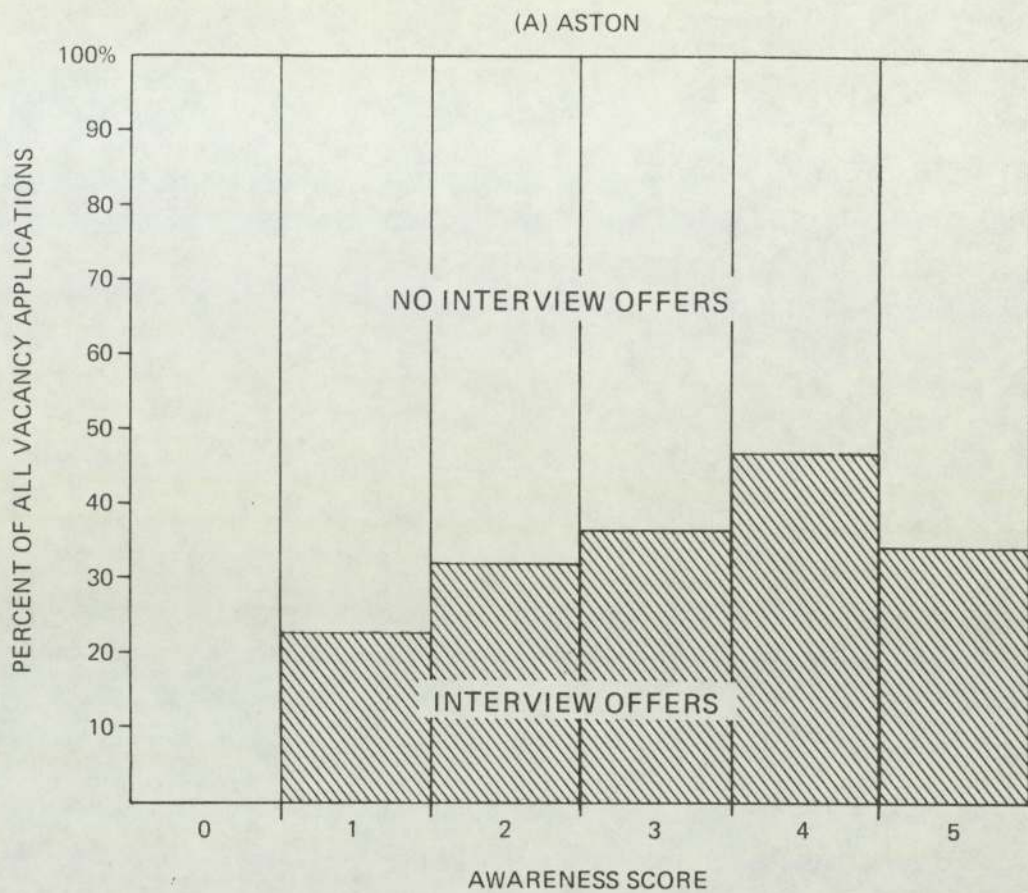
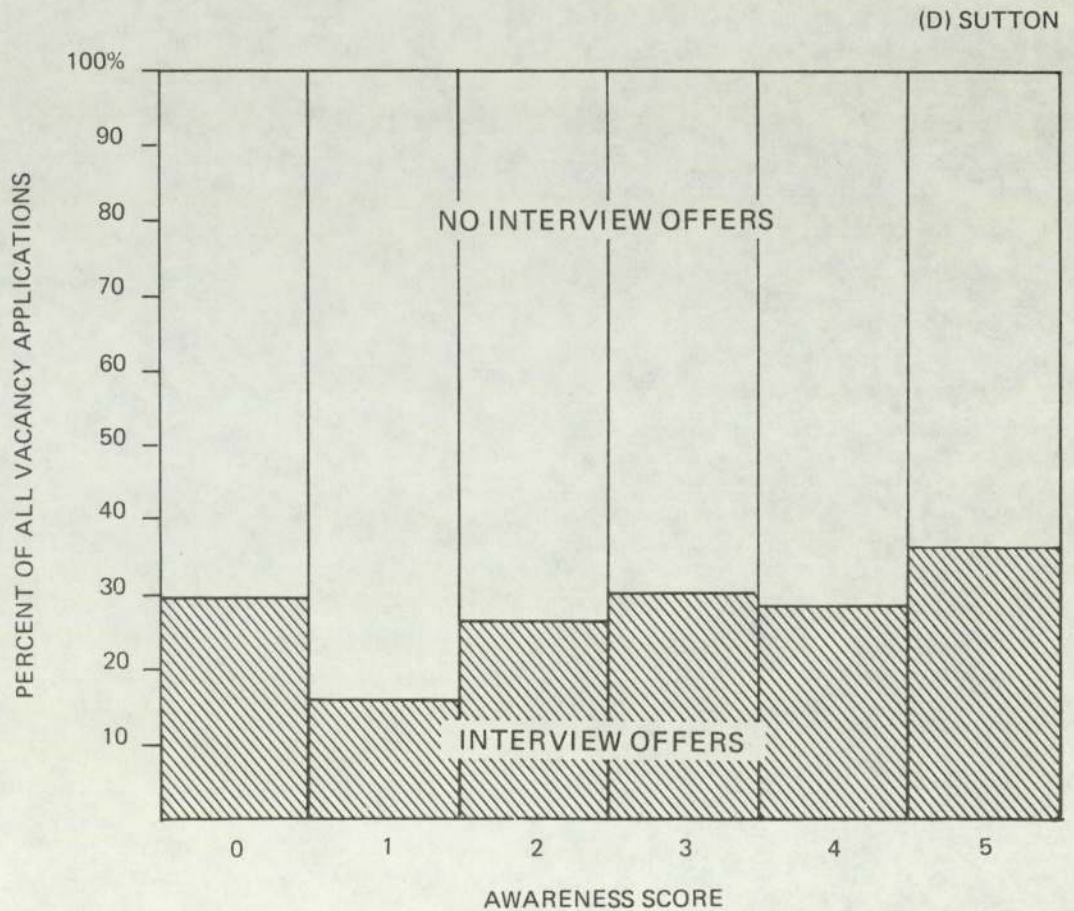
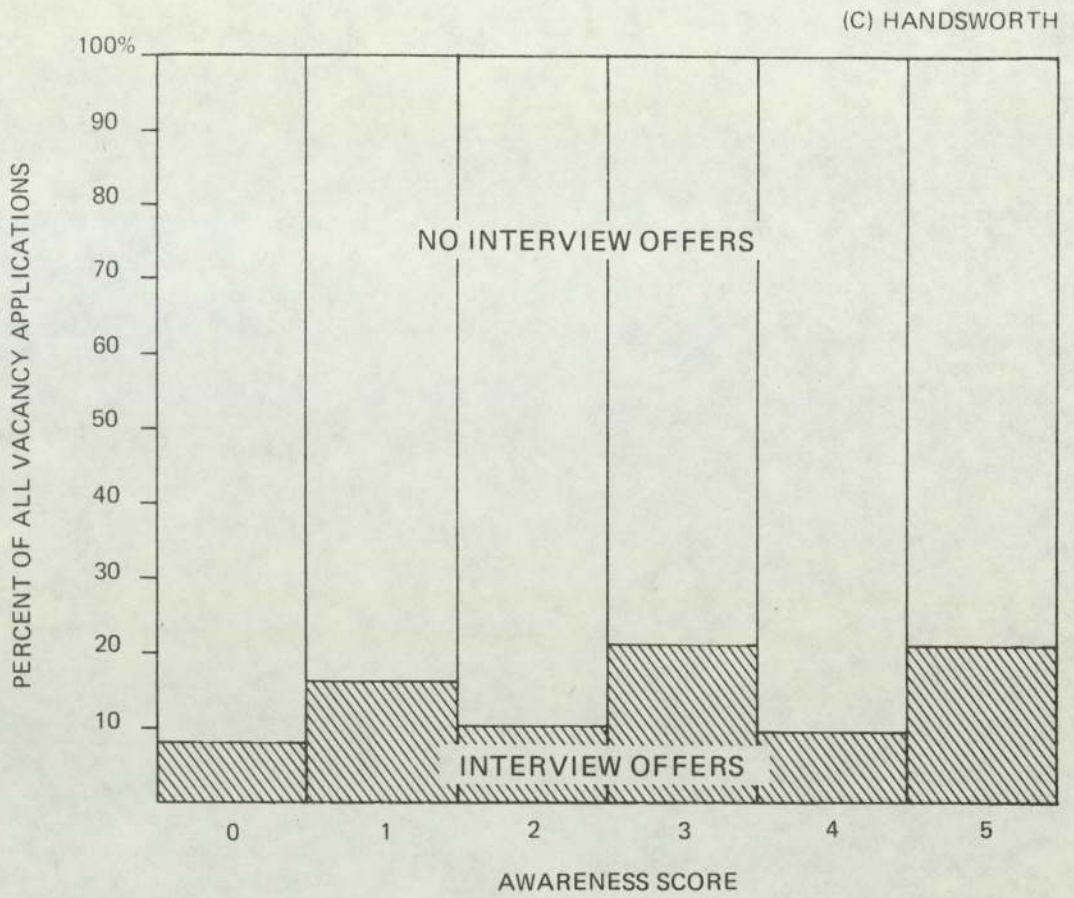


FIGURE 6.14 (Continued)



The interview offers expressed as a proportion of all vacancies discovered in locations assigned each awareness score has been included in figure 6.8 for each of the four groups.

6.11 SPECULATIVE VISITS TO FIRMS

It should be recalled that just over 5% of all applications were made by a direct (speculative) visit to the firm, and that approximately half of those visits resulted in an interview either immediately or at a later date. Table 6.39 shows speculative visits to firms for each awareness score.

TABLE 6.31 - SPECULATIVE VISITS TO FIRMS AND AWARENESS SCORE:

AWARENESS SCORE	NO INTERVIEW OFFER	INTERVIEW OFFER	TOTAL NUMBER OF 'SPEC. VISITS'	TOTAL VACANCY APPLICATIONS
0	0	0	0	72
1	0	0	0	137
2	0	0	0	180
3	0	0	0	122
4	0	9	9	248
5	42	32	74	769
TOTAL	42	41	83	1528

The figures in the above table do not significantly affect the findings in section 6.5.2 on vacancy application rates by awareness score (Table 6.8). If 'speculative' visits are removed from the total for vacancy applications then the proportion of application per vacancy discovery is slightly reduced, but only from 43.8% to 43.2% and similarly for score '5' from 54.0% to 51.5%. This does not affect the pattern of increased applications per discovery, with an increase in awareness score. Also the removal of this data only slightly

reduces the interview offers per application.

It is evident that the inclusion of data in speculative visits does not significantly affect the relationship between the process of job search and awareness space. Previous studies (e.g. Community Development Project - Inter Project Report; 1974) have shown 'speculative visits' to be an important method of job search. The data from this survey demonstrates that this method of search is restricted to areas of highest awareness, which suggests that the effectiveness of this method of search, at least, is severely constrained by local knowledge. (Other methods of job search using different information sources are discussed later).

A further point is that speculative visits to firms involve the respondent in some travel. Therefore, data on speculative visits as a method of contact are explored in part three of this chapter, which examines Search Activity. The analysis of search activity is divided into four main sample groups and further divided into locational divisions. Therefore, it is useful, at this stage to describe, briefly, the figures for the stages in decision-making made by respondents in each of the locational divisions.

6.12 LOCATIONAL GROUPS AND JOB SEARCH

Table 6.32 summarises the main stages in the process of job search for the 'locational divisions' of the sample. The table shows that Rejection Rates were particularly high in Handsworth (proper) and Castle Vale groups. It is interesting to note however that, while geographical reasons were relatively important to the Handsworth sample, for the Castle Vale group geographical reasons were extremely important.

TABLE 6.32(A) - THE PROCESS OF JOB SEARCH - THE LOCATIONAL DIVISIONS
OF THE SAMPLE

	VACANCY REJECTION				VACANCY APPLICATION				DISCOVERY								
	GEOGRAPHICAL REASONS		NON-GEOGRAPHICAL REASONS		NO INTERVIEW OFFER		INTERVIEW OFFER										
	No.	%A	%C	No.	%A	%C	No.	%B	%C	No.	%B	%C	No.	%C	TOTAL C		
SUTTON	223	(38.8)	18.6	352	(61.2)	29.2	575	47.8	433	(69.1)	36.0	194	(30.9)	16.2	627	52.2	1202
CASTLE VALE	127	(67.2)	53.8	62	(32.8)	26.2	189	80.0	33	(70.2)	14.1	14	(29.8)	5.9	47	20.0	236
ERDINGTON	68	(27.9)	18.5	176	(72.1)	47.8	244	66.3	79	(63.7)	21.5	45	(36.3)	12.2	124	33.7	368
ASTON (proper)	29	(35.8)	19.6	52	(64.2)	35.1	81	54.7	46	(68.7)	31.1	21	(31.3)	14.2	67	45.3	148
LOZELLS	37	(18.0)	11.9	168	(82.0)	54.2	205	66.1	78	(74.3)	25.2	27	(25.7)	8.7	105	33.9	310
H HANDSWORTH	166	(29.0)	20.6	407	(71.0)	50.4	573	71.0	205	(87.6)	25.4	29	(12.4)	3.6	234	29.0	807
WEST CORE	22	(38.6)	14.2	35	(61.4)	22.6	57	36.8	79	(80.6)	50.9	19	(19.4)	12.3	98	63.2	155
SOUTH CORE	40	(32.5)	15.6	83	(67.5)	32.4	123	48.0	100	(75.2)	39.1	33	(24.8)	12.9	133	52.0	256
EAST CORE	27	(31.8)	21.4	58	(68.2)	46.1	85	67.5	29	(70.7)	23.0	12	(29.3)	9.5	41	32.5	126
ROGUE CORE	11	(28.9)	12.2	27	(71.1)	30.0	38	42.2	43	(82.7)	47.8	9	(17.3)	10.0	52	57.8	90
TOTAL	750	(34.6)	20.3	1420	(65.4)	38.4	2170	58.7	1125	(73.5)	30.4	403	(26.5)	10.9	1528	41.3	3698

A = Aston Group
H = Handsworth Group
C = City Group

Rogue Core is comprised of respondents not living in close proximity to any other respondents recruited from the City Centre Careers Office.

TABLE 6.32(B) - THE PROCESS OF JOB SEARCH

PER PERSON IN THE LOCATIONAL DIVISIONS OF THE SAMPLE

	VACANCY DISCOVERY		VACANCY APPLICATION		INTERVIEW OFFERS		RESPONDENTS NO.
	No.	Per Person	No.	Per Person	No.	Per Person	
SUTTON	1202	12.3	627	6.4	194	2.0	98
CASTLE VALE	236	21.5	47	4.3	14	1.3	11
ERDINGTON	368	15.3	124	5.2	45	1.9	24
ASTON (proper)	148	9.9	67	4.5	21	1.4	15
LOZELLS	310	16.3	105	5.5	27	1.4	19
HANDSWORTH	807	15.8	234	4.6	29	0.6	51
WEST CORE	155	15.5	98	9.8	19	1.9	10
SOUTH CORE	256	14.2	133	7.4	33	1.8	18
EAST CORE	126	15.8	41	5.1	12	1.5	8
ROGUE CORE	90	9.0	52	5.2	9	0.9	10
TOTAL	3698	14.0	1528	5.8	403	1.5	264

The main reason for further dividing the sample in this manner was to facilitate an examination of the patterns of search activity for respondents living in close proximity to each other. Travel statistics which include modal split, average distance, time and costs are discussed next, and the patterns representing these aspects of 'Search Activity' are also presented.

PART THREE

SEARCH ACTIVITY

By way of introducing 'part three' of this analysis, the relative position of the 'Search Activity' stage in the job search process has been highlighted in the reproduction of the model opposite. This section of the analysis deals with Search Activity in the same manner as the two preceding stages were analysed in parts one and two of this chapter.

6.13.1 Interview offers and Information Sources.

At the appropriate stages throughout this analysis reference has been made to the original information sources used to discover job vacancies. It will be recalled that local newspapers yielded the greatest number of discoveries and applications, despite a relatively large rate of rejection. Table 6.33 shows the number of interviews offered as a result of vacancies discovered by each information source.

TABLE 6.33 - INTERVIEW OFFERS AND INFORMATION SOURCES

INFORMATION SOURCE	INTERVIEW OFFERS		VACANCY DISCOVERY
	No.	(% of Discoveries)	
Local Newspaper	100 (24.8%)	(4.3%)	2321 (62.8%)
Careers Office/ Jobcentre	145 (36.0%)	(28.7%)	505 (13.9%)
Friend/relative	53 (13.2%)	(11.1%)	477 (12.9%)
Speculative visit	43 (10.7%)	(48.3%)	89 (2.4%)
Speculative ringing and writing	21 (5.2%)	(15.7%)	132 (3.5%)

Table 6.33 (Continued ...)

INFORMATION SOURCE	INTERVIEW OFFERS		VACANCY DISCOVERY
	No.	(% of Discoveries)	
Local Radio	8 (2.0%)	(16.3%)	49 (1.3%)
Other	31 (7.7%)	(24.3%)	125 (3.4%)
TOTAL	403 (100.0%)	(10.9%)	3698 (100.0%)

Table 6.33 demonstrates that local newspaper yielded the lowest proportion of 'interviews' per vacancy discovered (4.3%) and this information source produced only the second highest number of interviews. The largest number of interviews (145) was obtained by the use of the Careers Office/Jobcentre information service. This source was responsible for the second highest number of vacancies discovered (505) and consequently this information source yielded the most interviews. This does not, however, mean that the Careers Office/Jobcentre was the 'most efficient' information source. The table shows that 48.3% of all vacancies discovered by a 'speculative visit to a firm' resulted in an interview.

The lowest number of interviews were obtained through information broadcast on 'local radio' (8 interviews), but this information source also produced the lowest number of discovered vacancies. Table 6.33 shows that 65.3% of all the discovered vacancies are not 'followed-up' (i.e. rejected). It is concluded that local radio has a low effectiveness (i.e. only 16.3% of all discovered vacancies yielding interviews).

The least effective source of information was from 'friends and relatives'. Only 11.1% of all discovered vacancies yielded an

interview. However, this information source was the third highest in terms of number of interviews. Clearly 'friends and relatives' were not as efficient as Careers Office/Jobcentre because only 11.1% of all discovered vacancies resulted in an interview.

The 'efficiency' of an information source defined as the number of interviews per vacancies discovered has been considered along with (a) the frequency of which each source was used to discover vacancies and (b) the suitability of the vacancies discovered, as defined by rejection/application rates. It is concluded that 'local' newspapers were the most prevalent in discovering vacancies but the least 'efficient' in terms of the number of interviews per vacancy discovered. However, a relatively large number of interviews were offered. The most 'efficient' was 'speculative visit' to a firm, and this information source produced the fourth (out of seven) highest number of interviews, and the second most efficient source was the Careers Office/Jobcentre.

6.13.2 INTERVIEW OFFERS AND JOURNEYS TO INTERVIEWS

In 'Part-two' it was necessary to examine the number of interview offers in order to establish the influence of employers recruitment practices. However, an examination of search activity by job seekers must obviously include all journeys and not just those relating to offers of an interview.

A very small number, 14 (3.5%) of interview offers (403) were turned-down by job seekers. Three of the reasons for refusal given by respondents were of a geographical nature.

Although the numbers are small geographical factors for refusing an interview offer were less important than they were

for decisions (see table 6.13) not to follow-up a vacancy. Hence, the number of journeys were less than the number of interview offers. However, 83 firms were visited by respondents without a formal interview offer (i.e. speculative visit).

Several other factors affected the number of journeys. For example, a job seeker might have made one journey (say to a shopping centre or industrial estate) and carried out several speculative inquiries at a number of premises. Further, even after attending a formally arranged interview the job seeker might have made inquiries at adjacent firms and possibly obtained an interview. Also, a job seeker might have arranged, on the same day, interviews at several firms in close proximity (note 1). Consequently 'speculative visits' and 'multi-interview journeys', (which are not exclusive of each other) account for differences between interview offers and journeys to interviews. 'Search Activity' is therefore based on the number of journeys to firms. (note 2).

Note 1 It is possible that more than one interview was arranged at completely separate destinations. In this instance data was collected on the journey from home to firm, firm to firm, and finally firm to home.

Note 2 The location of every firm visited (either on spec or for a formal interview) is included in an examination of the locational aspects of 'Search Activity Space'.

Table 6.34 shows the number of interview offers and journeys to interviews made by respondents.

TABLE 6.34 INTERVIEWS AND JOURNEY TO INTERVIEWS

GROUP	INTERVIEW OFFERS	JOURNEYS
Sutton	194	175
Aston	80	74
Handsworth	56	50
City	73	77
TOTAL	403	376

The table shows that in all groups except City the number of interviews was greater than the number of journeys. This is because respondents in the Sutton, Aston and Handsworth groups made several single journeys that resulted in more than one interview (arranged 'on spec' or formally), and relatively few 'speculative' journeys which failed to result in an interview. In the 'City' group, two respondents made notably more speculative journeys - of which the majority did not result in a single interview. This does not mean, however, that the interview/application ratio was significantly

Note 1 The Term 'Journeys to Interviews' will be used in the analysis - although the figures include a small number of speculative visits which do not result in an interview (i.e. 42).

altered. It only meant that the City sample had a greater tendency than the other groups to use speculative visits as a 'method of contacting' a firm. (For example, the proportion of all firms contacted by speculative visit was 17.3% for City and 6.4% for the Aston Group). The reason why respondents in the City group contacted proportionately more firms by direct visit, might be explained by the fact that many individuals lived within walking distance of the city centre.

6.13.3 Frequency of Journeys to Interviews

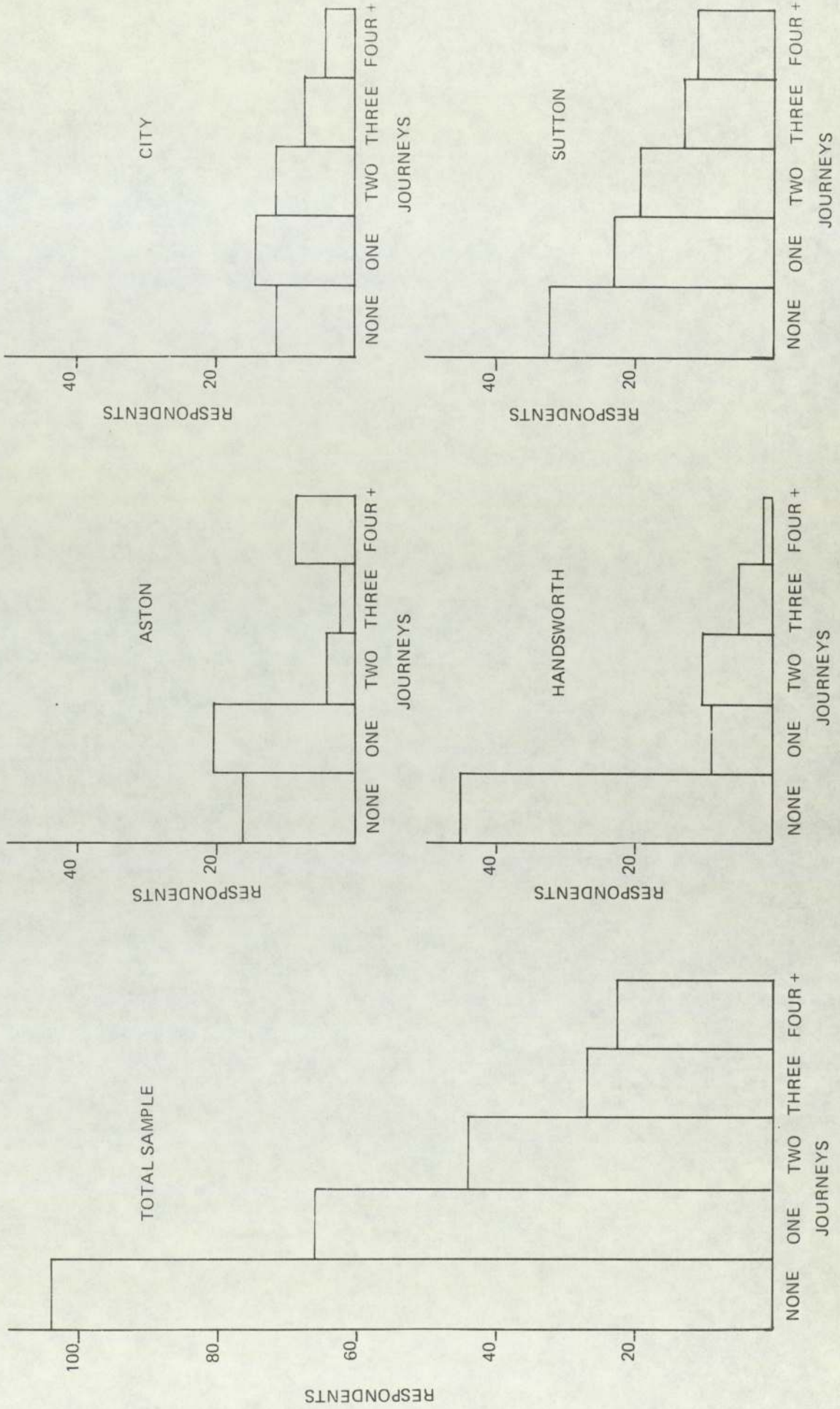
The total number of journeys made by the sample was 376 which was an average of 1.4 journeys per person during the survey period. Table 6.35 shows the distribution in the number of journeys made by respondents. These figures are illustrated graphically in figure 6.15.

TABLE 6.35 - FREQUENCY DISTRIBUTION OF JOURNEYS TO INTERVIEWS (1)

Journeys per respondent	Number of respondents making each number of journeys									
	ASTON		CITY		HANDSWORTH		SUTTON		TOTAL	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
NONE	16	(32.0)	11	(23.9)	45	(64.3)	32	(32.6)	104	(39.4)
ONE	20	(40.0)	14	(30.4)	9	(12.9)	23	(23.5)	66	(25.0)
TWO	4	(8.0)	11	(23.9)	10	(14.3)	19	(19.4)	44	(16.7)
THREE	2	(4.0)	7	(15.2)	5	(7.1)	13	(13.3)	27	(10.2)
FOUR AND MORE	8	(16.0)	3	(6.6)	1	(1.4)	11	(11.2)	23	(8.7)
TOTAL	50	(100.0)	46	(100.0)	70	(100.0)	98	(100.0)	264	(100.0)
TOTAL NUMBER OF JOURNEYS	74		77		50		175		376	
AVERAGE	1.5		1.7		0.7		1.8		1.4	

Note 1 Journeys to Interviews include speculative visits.

FIGURE 6.15 FREQUENCY DISTRIBUTION OF JOURNEYS TO INTERVIEWS



Nearly 40% of all respondents did not make a single journey during the survey. Less than 10% of the total sample travelled more than three times during the survey.

The Handsworth sample had a particularly large proportion of respondents making no journeys (64%). Hence the group exhibited relatively low average number of journeys per respondent (i.e. 0.71)

6.13.4. Journey Destinations and Awareness Score

TABLE 6.36 JOURNEYS TO INTERVIEWS BY AWARENESS SCORE

AWARENESS SCORE

	0		1		2		3		4		5		TOTAL	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
SUTTON	8	(4.5)	5	(2.9)	13	(7.4)	15	(8.6)	25	(14.3)	109	(62.3)	175	(100)
ASTON	0	(-)	5	(6.8)	9	(12.2)	4	(5.4)	12	(16.2)	44	(59.4)	74	(100)
CITY	3	(4.0)	7	(9.1)	4	(5.2)	8	(10.4)	16	(20.8)	39	(50.5)	77	(100)
HANDSWORTH	1	(2.0)	4	(8.0)	4	(8.0)	7	(14.0)	7	(14.0)	27	(54.0)	50	(100)
TOTAL	12	(3.2)	21	(5.6)	30	(8.0)	34	(9.0)	60	(16.0)	219	(58.2)	376	(100)

Chi-squared value is 17.7 with 15 degrees of freedom. Therefore the null hypothesis that there is no statistically significant difference in the distribution of journey destinations by awareness score between the four groups is accepted.

As figure 6.17 shows over half the number of journeys by respondents in each of the groups were to districts assigned to awareness score '5'. This is hardly surprising because the previous section demonstrated that vacancy applications were predominantly to firms located in districts assigned awareness score '5' (i.e. 50.3%).

Note 1 Journeys to Interviews include speculative visits.

FIGURE 6.16 JOURNEYS TO INTERVIEW BY AWARENESS SCORE – THE TOTAL SAMPLE

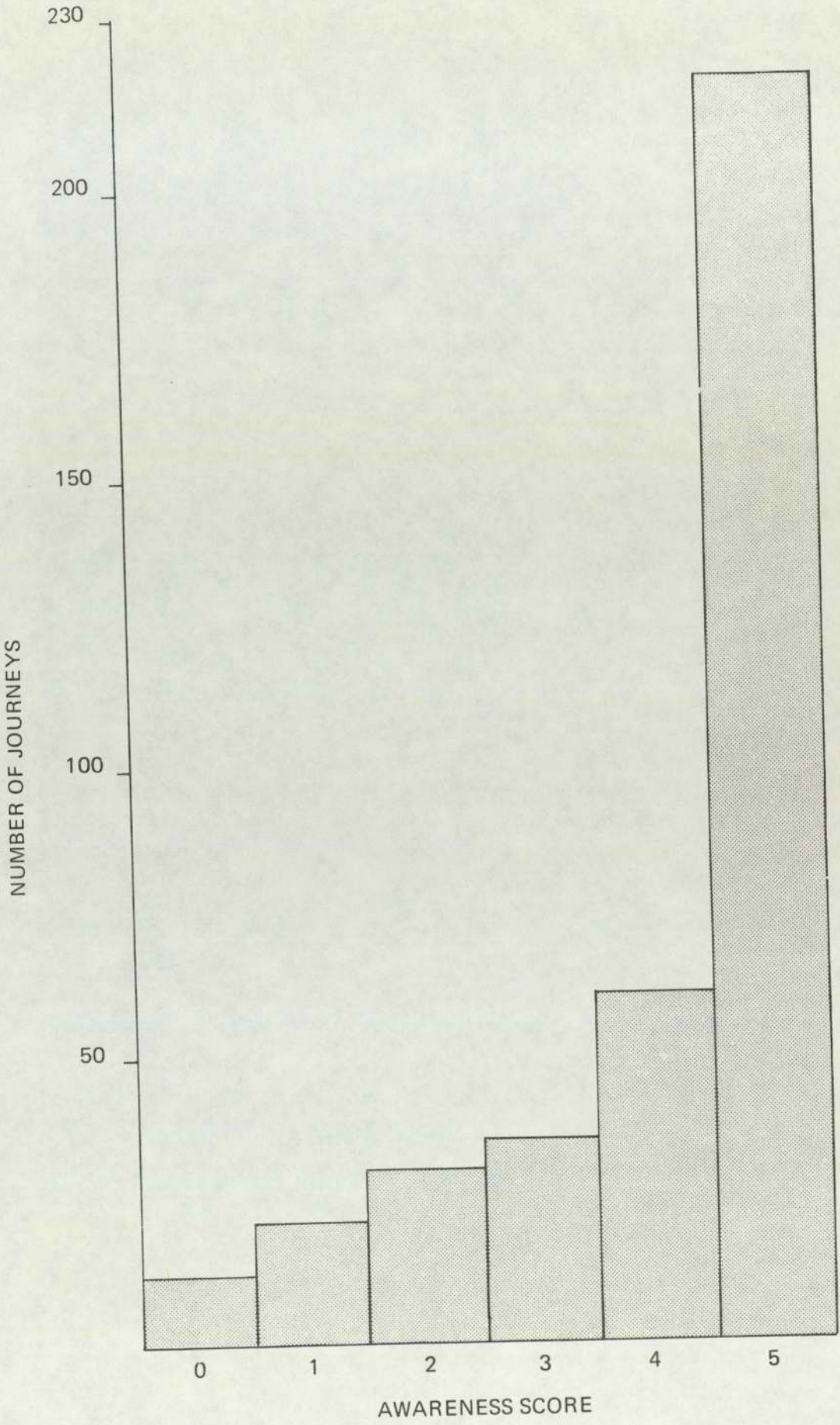
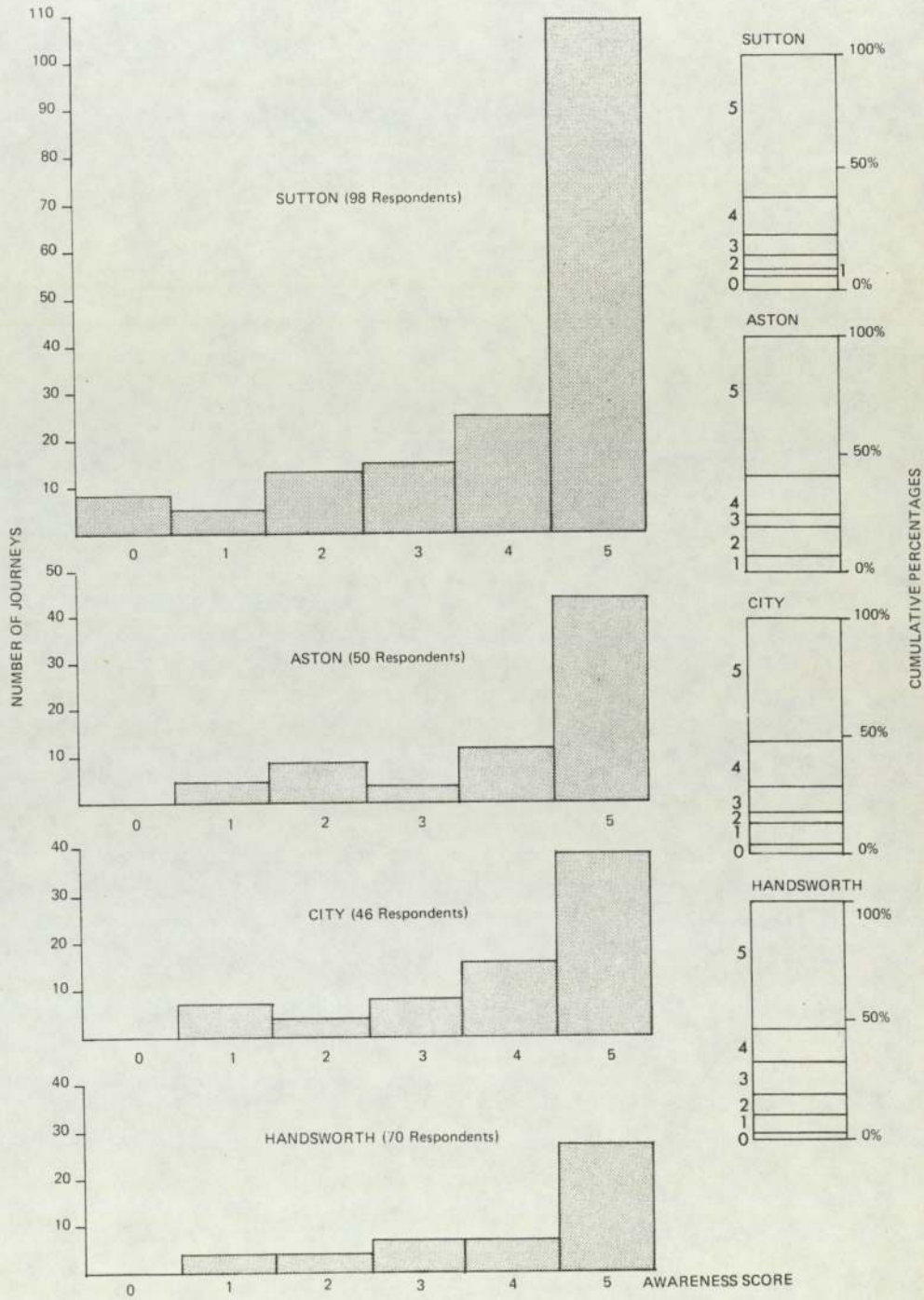


FIGURE 6.17 JOURNEYS TO INTERVIEW BY AWARENESS SCORE – THE FOUR GROUPS



6.14 SEARCH ACTIVITY SPACE

6.14.1 The Geographical Pattern - The standard deviational ellipse (SDE) summaries of 'search activity space' (i.e. all modes of travel) are included in the map supplement. The maps show that for each sample group the mean centre of 'activity' was located on an approximate straight line between the home location and the city centre, and was closer to each home location than the centres of the SDEs for vacancy discovery space and vacancy application space. The orientation of the SDEs for 'search activity space' demonstrates the attraction of the city centre. The coefficient of circularity is lower for search activity space than the two other 'spaces' which indicates the importance of the main arterial road which links the home location to the city centre and emphasises the 'linearity' of the locational pattern. The linearity is most noticeable in the SDEs for respondents from peripheral locations such as Sutton and Castle Vale.

6.14.2 Cognitive-behavioural Relationships - It was shown in section 6.13.4 that the highest frequency of journeys in search activity space were to locations assigned awareness score '5'. This is reflected in a comparison between awareness space and the search activity space summarised by the Standard Deviational Ellipse (see Map Supplement). The general relationship is that the Search Activity Space SDE is smaller in area than the Awareness Space '5' SDE. The mean centre of the Activity ellipse is located on an approximate straight line between the mean centres of awareness '1' and '5' SDEs. This denotes that the pattern of job search is confined to the patterns of awareness of the city and in particular focussed on districts of higher awareness.

6.15 MODAL SPLIT OF JOURNEYS

Table 6.37 shows the modal split of journeys and demonstrates the relatively high dependence on bus as a travel mode in search activity. The table shows that bus was the most frequently used mode of travel for the total sample. This is illustrated in figure 6.18.

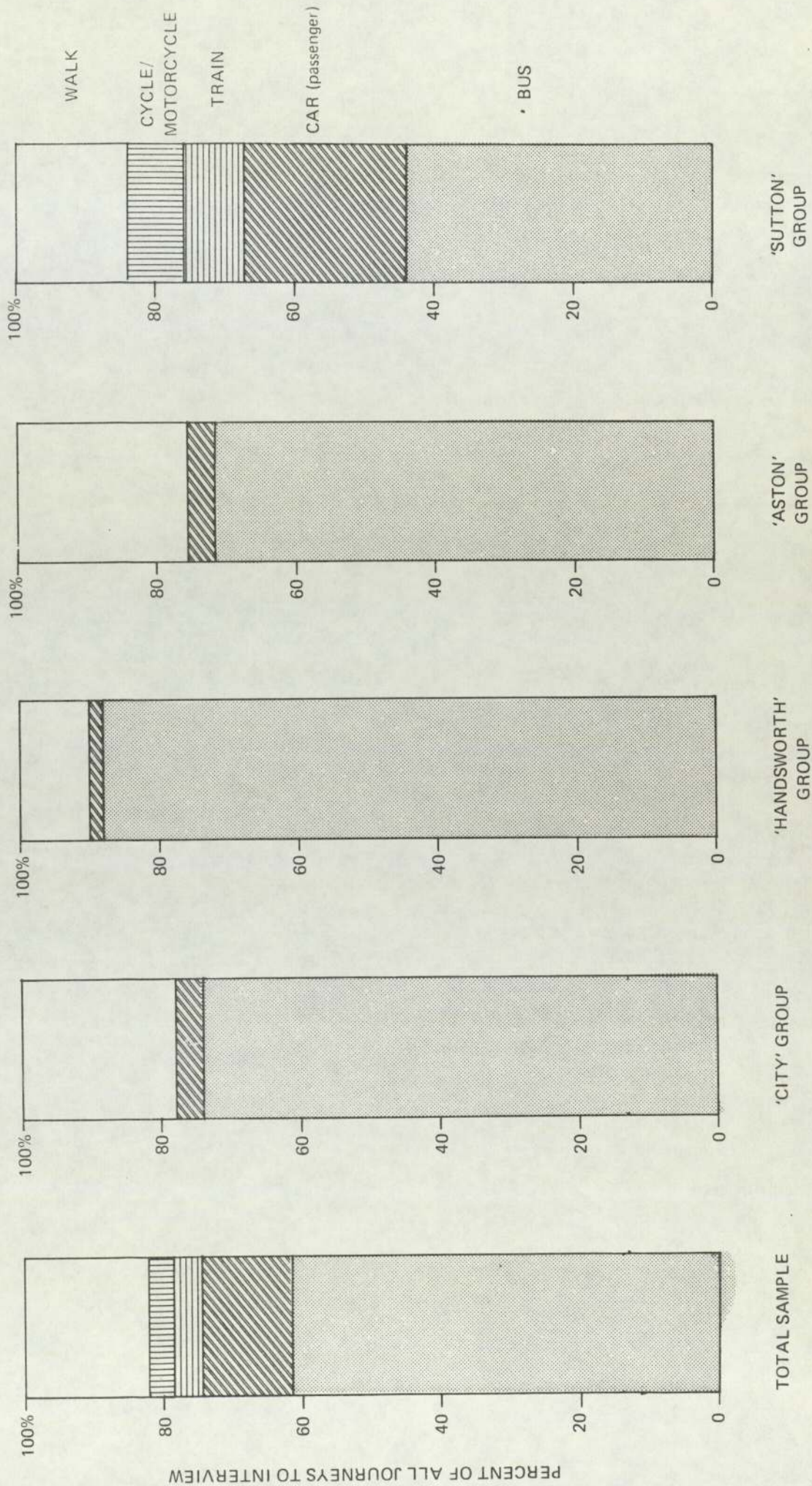
The most noticeable difference, in terms of modal split, was between the Sutton sample and the rest of the sample. Cycle/motorcycle was only used by the Sutton group and the use of car (passenger) by this group was 23.4% compared to less than 5% for all other groups. Obviously this reflects the generally greater affluence and higher levels of car ownership in the Sutton Coldfield population. It also suggests that family were more active in helping the job search activities of school leavers.

Table 6.37 also shows that in the case of Sutton the share of bus trips was reduced by the use of train, motorcycle/cycle and car (passenger). Little difference existed between groups in terms of the proportion of 'walk' journeys (average 18%). It is noticeable however that only 10% of journeys were on foot for the Handsworth sample and because other modes were not used by this group, extra emphasis was placed on travelling by bus. It can be summarised that the general pattern of modal split for journey to interviews was predominantly by bus and walking for the inner area residents while slightly more emphasis was placed on other modes for the suburban residents.

TABLE 6.37 - MODAL SPLIT OF JOURNEYS TO INTERVIEWS

	Car(Passenger)		Train		Bus		Cycle/ Motorcycle		Walk		TOTAL	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
East Core	-	-	1	(8.3)	11	(91.7)	-	-	-	-	12	(100)
West Core	1	(4.8)	-	-	14	(66.7)	-	-	6	(28.6)	21	(100)
South Core	1	(3.0)	-	-	22	(66.7)	-	-	10	(30.3)	33	(100)
Rogue Core	-	-	-	-	10	(90.9)	-	-	1	(9.1)	21	(100)
Total City Sample	2	(2.6)	1	(1.3)	57	(74.0)	-	-	17	(22.1)	77	(100)
Handsworth	1	(4.0)	-	-	22	(88.0)	-	-	2	(8.0)	25	(100)
Lozells	-	-	-	-	22	(88.0)	-	-	3	(12.0)	25	(100)
Total Handsworth Sample	1	(2.0)	-	-	44	(88.0)	-	-	5	(10.0)	50	(100)
Aston	1	(5.3)	-	-	15	(78.9)	-	-	3	(15.8)	19	(100)
Castle Vale	-	-	-	-	9	(81.8)	-	-	2	(18.2)	11	(100)
Erdington	2	(4.6)	-	-	29	(65.9)	-	-	13	(29.5)	44	(100)
Total Aston Sample	3	(4.1)	-	-	53	(71.6)	-	-	18	(24.3)	74	(100)
Total Sutton Sample	41	(23.5)	16	(9.1)	77	(44.0)	13	(7.4)	28	(16.0)	175	(100)
TOTAL SAMPLE	47	(12.5)	17	(4.5)	231	(61.4)	13	(3.5)	68	(18.1)	376	(100)

FIGURE 6.18 MODAL SPLIT OF JOURNEYS TO INTERVIEW



6.15.1 Financial Cost of Journeys - Table 6.38 shows the financial expenditure on each mode of travel used in search activity. The table shows that the major financial expenditure on travel for job search was on the use of public transport. This is important because bus travel represents 61% of all journeys to interviews. The average expenditure on bus travel for the total sample was 23 pence per journey. However, suburban respondents made proportionately less journeys by bus than did inner area respondents. The Sutton sample relied more on other modes of travel which cost the individual nothing - hence, the average journey cost for all modes is actually less for the suburban group than for inner area groups.

However the average cost of bus journeys was higher for Castle Vale and Sutton residents (on the periphery of the city) compared to the average bus journey cost for residents living closer to the city centre. This is because bus fares are related to distance and the former groups were travelling greater distances, on average, to interviews (see Section 6.15.3).

TABLE 6.38 - AVERAGE COST PER JOURNEY BY MODAL SPLIT

(Cost of one-way journey in pence)	MODE					Total
	Car (passenger)	Train	Bus (1)	Cycle/ M/Cycle	Walk	
East Core	-	20.0	23.0	-	0	22.0
West Core	0	-	21.0	-	0	12.0
South Core	0	-	20.0	-	0	13.0
Rogue Core	-	-	35.0	-	0	16.0
Total City Sample	0	20.0	22.0	-	0	15.0
Handsworth	0	-	20.0	-	0	17.0
Lozells	-	-	21.0	-	0	19.0
Total Handsworth Sample	0	-	21.0	-	0	18.0
Aston	0	-	15.0	-	0	12.0
Castle Vale	-	-	37.0	-	0	15.0
Erdington	0	-	23.0	-	0	15.0
Total Aston Sample	0	-	24.0	-	0	16.0
Total Sutton Sample	0	39.0	27.0	0	0	16.0
TOTAL SAMPLE	0	38.0	23.0	0	0	16.0

Note 1 The costs are for 1980 W.M.P.T.E. fares and the average cost of bus journeys exclude those trips on which a 'travelcard' was used.

6.15.2 Journey Times - Table 6.39 shows the average amount of time spent travelling to interviews by each mode for the total sample and its subdivisions. The average time spent travelling was 33 minutes for one-way journey.

TABLE 6.39 - AVERAGE TIME (1) PER JOURNEY BY MODAL SPLIT

	MODE					Total
	Car (passenger)	Train	Bus	Cycle/ M/Cycle	Walk	
East Core	-	25.0	35.0	-	-	34.0
West Core	35.0	-	38.0	-	20.0	32.0
South Core	30.0	-	30.0	-	18.0	26.0
Rogue Core	-	-	35.0	-	15.0	34.0
Total City Sample	33.0	25.0	34.0	-	16.0	30.0
Handsworth	25.0	-	33.0	-	18.0	31.0
Lozells	-	-	32.0	-	16.0	30.0
Total Handsworth Sample	25.0	-	33.0	-	17.0	31.0
Aston	47.0	-	25.0	-	18.0	25.0
Castle Vale	-	-	44.0	-	10.0	38.0
Erdington	25.0	-	36.0	-	27.0	33.0
Total Aston Sample	33.0	-	34.0	-	24.0	31.0
Total Sutton Sample	33.0	56.0	41.0	21.0	21.0	34.0
TOTAL SAMPLE	32.0	55.0	36.0	21.0	21.0	33.0

Note 1 Average times are to the nearest minute.

The average times for the two most commonly used modes (bus and walk) were 36 minutes and 21 minutes, respectively. Car (passenger) journeys were, on average, shorter in duration than bus journeys, while the small number of train journeys took the longest average time.

The average time of journeys by all modes for the various locational divisions of the sample reveal that journeys by inner area residents were slightly less than journeys by suburban residents. This is reflected in each mode of travel. The average time for a bus journey made by a job seeker from the Handsworth sample was 33 minutes compared with 41 minutes for Sutton job seekers. These differences are not very great and it might be that the difference in distance travelled by each group of respondents was in fact much greater.

6.15.3 Journey Distances - Table 6.40 shows that on average, car (passenger) and train journeys were the longest, while walk, cycle and motorcycle were the shortest and bus journeys (of which there are more than the sum total of trips by all other modes) were not surprisingly close to the average distance for all modes which was 4.8 kilometres (nearly 3 miles). (note 1).

The two modes most commonly used by all four sample groups were bus and walking. Journeys to interviews on foot varied by only 0.5 Km between groups. Clearly these journeys were limited to the destinations very close to the individual's home. The average distance of journeys by bus tend to vary by

Note 1 Distance is calculated at the straight line from the home of the job seeker to the exact location of the firm offering the interview. Hence, distance figures are one-way and in kilometres.

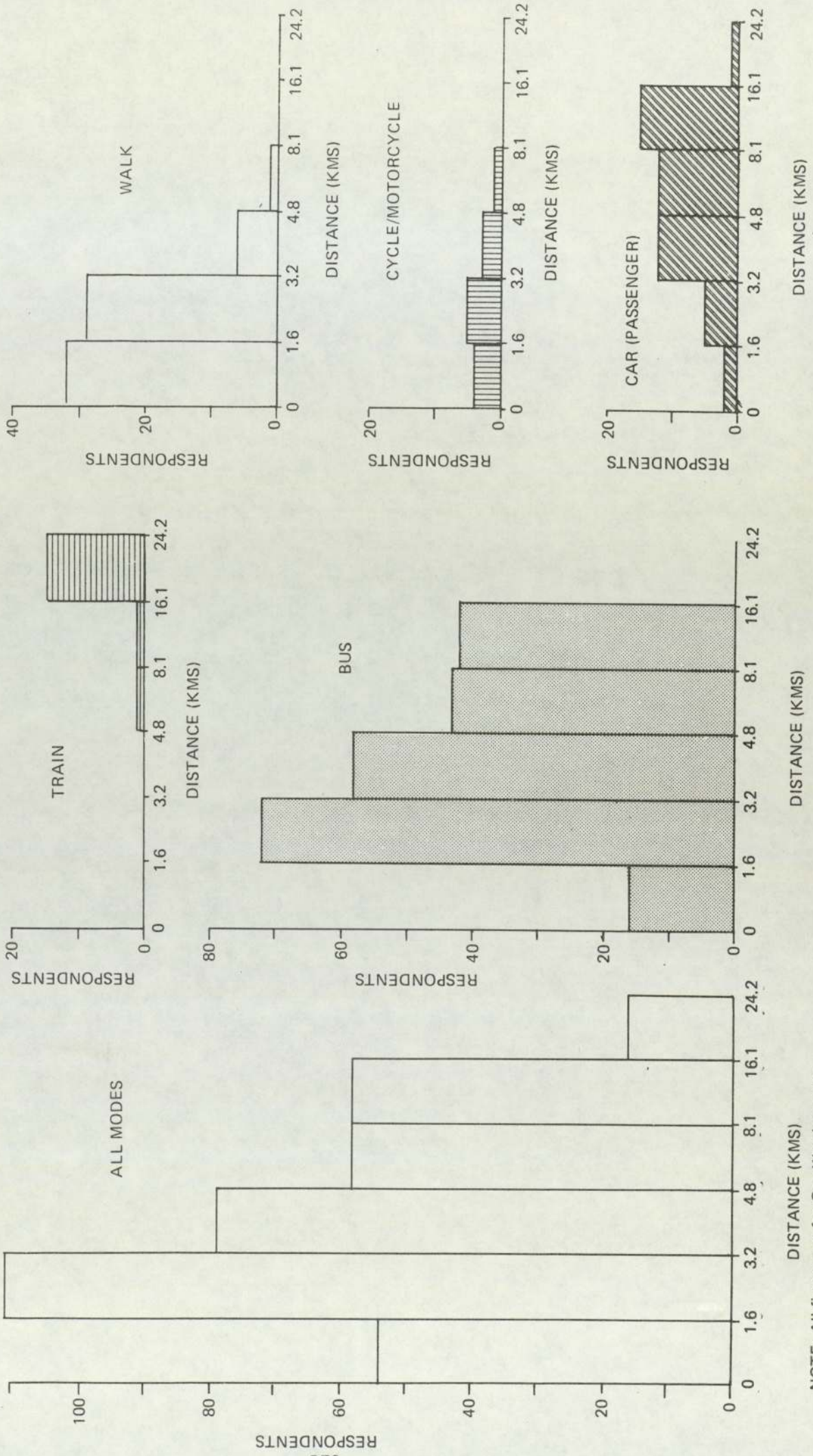
the distance of the aggregate home location of the group from the city centre (for instance the average distance for the 'South Core' group (3.0 Kms for the City Centre) is 3.2 Kms; while the average distance by bus for the Erdington group (5.8 Kms from the city centre) is 5.6 Kms). (note 1).

TABLE 6.40 - AVERAGE DISTANCE OF JOURNEYS BY MODAL SPLIT

(Distance in Kilometres)	Car (passenger)	Train	Bus	Cycle/ M/Cycle	Walk	Total
East Core	-	6.4	3.8	-	-	4.0
West Core	4.0	-	3.6	-	1.3	3.0
South Core	10.2	-	3.2	-	1.5	2.9
Rogue Core	-	-	5.1	-	0.3	4.7
Total City Sample	7.1	6.4	3.8	-	1.4	3.4
Handsworth	5.0	-	4.1	-	3.1	4.0
Lozells	-	-	3.7	-	1.1	3.4
Total Handsworth Sample	5.0	-	3.9	-	1.9	3.7
Aston	4.6	-	2.6	-	1.7	2.6
Castle Vale	-	-	6.9	-	2.1	6.1
Erdington	7.8	-	5.6	-	1.8	4.6
Total Aston Sample	6.7	-	5.0	-	1.8	4.3
Total Sutton Sample	7.5	11.4	6.2	2.3	2.0	6.0
TOTAL SAMPLE	7.4	11.1	4.9	2.3	1.7	4.8

Note 1 These figures imply, but do not prove that job 'Search Activity Space' is necessarily oriented to the City Centre. The geographical characteristics of journey destinations are considered later.

FIGURE 6.19 DISTRIBUTION OF DISTANCES TRAVELLED BY EACH MODE – TOTAL SAMPLE



NOTE: All figures are for One-Way journeys

Table 6.41 displays the distribution of distances travelled by each mode to interviews, or speculative visits to firms for the total sample (Figure 6.19 graphically illustrates this table).

TABLE 6.41 - FREQUENCY DISTRIBUTION OF DISTANCE TO INTERVIEW BY MODAL SPLIT - TOTAL SAMPLE

Distance (Kms)	Car (passengers)	Train	Bus	Cycle Motor- cycle	Walk	Total
Less than 1.6	2	0	16	4	32	54
1.6 - 3.2	5	0	72	5	29	111
3.2 - 4.8	12	0	58	3	6	79
4.8 - 8.1	12	1	43	1	1	58
8.1 - 16.1	15	1	42	0	0	58
16.1 - 24.2	1	15	0	0	0	16
Greater than 24.2	0	0	0	0	0	0
Average Distance	7.4Kms	11.1Kms	4.9Kms	2.3Kms	1.7Kms	4.8Kms
Standard Deviation	+3.7Kms	+2.2Kms	+3.1Kms	+1.5Kms	+1.7Kms	+3.4Kms
	-	-	-	-	-	-

The largest standard deviation was for car (passenger) and bus travel. Evidently, these modes were used to travel the widest range of distances. Despite the similarity in the range of distances, the average distance of each journey was greater for car (passenger) journeys. Walk and Cycle/motorcycle trips were confined to a narrower range of distances. Travel by train was also restricted to a relatively narrow range of journey distances, albeit greater than the average distance.

Table 6.42 and Figure 6.20 show the distribution of distances travelled by all modes for each of the four main groups of the sample. (The equivalent histogram for the total sample - all modes, is found in figure 6.19). As expected the table indicates that a relatively large number of bus journeys were made by Sutton respondents to destinations 8.1-16.1 Kms distances. Bus journeys for the City group were most commonly limited to 1.6 Kilometres and 3.2 Kilometre distances, while for the Handsworth

TABLE 6.42 - FREQUENCY DISTRIBUTION OF DISTANCE TO INTERVIEW BY MODAL SPLIT -
 THE FOUR SAMPLE GROUPS
 (All distances in Kilometres - Average distance in brackets)

DISTANCE	MODE					TOTAL
	Car (passenger)	Train	Bus	Cycle/ M/Cycle	Walk	
<u>SUTTON</u>						
Less than 1.6	2	0	5	4	12	23
1.6- 3.2	5	0	25	5	13	48
3.2- 4.8	9	0	11	3	2	25
4.8- 8.1	11	0	8	1	1	21
8.1-16.1	13	1	28	0	0	42
16.1-24.2	1	15	0	0	0	16
Greater than 24.2	0	0	0	0	0	0
TOTAL	41 (7.49)	16 (11.43)	77 (6.18)	13 (2.30)	28 (1.96)	175 (6.00)
<u>ASTON</u>						
Less than 1.6	0	0	4	0	9	13
1.6- 3.2	0	0	13	0	7	20
3.2- 4.8	2	0	9	0	2	13
4.8- 8.1	0	0	19	0	0	19
8.1-16.1	1	0	8	0	0	9
16.1-24.2	0	0	0	0	0	0
Greater than 24.2	0	0	0	0	0	0
TOTAL	3 (6.73)	0 (-)	53 (4.97)	0 (-)	18 (1.75)	74 (4.26)

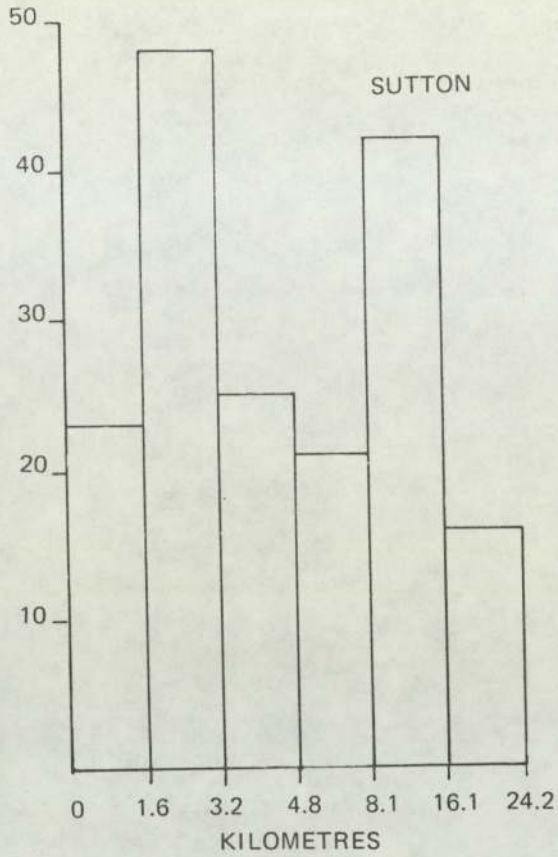
TABLE 6.42 (CONTINUED)

<u>CITY</u>									
Less than 1.6	0	0	0	5	0	9	14		
1.6- 3.2	0	0	20	20	0	7	27		
3.2- 4.8	1	0	20	8	0	1	22		
4.8- 8.1	0	1	4	0	0	0	9		
8.1-16.1	1	0	0	0	0	0	5		
16.1-24.2	0	0	0	0	0	0	0		
Greater than 24.2	0	0	0	0	0	0	0		
TOTAL	2 (7.10)	1 (6.40)	57 (3.76)	0 (-)	17 (1.35)	77 (3.35)			
<u>HANDSWORTH</u>									
Less than 1.6	0	0	2	0	2	4			
1.6- 3.2	0	0	14	0	2	16			
3.2- 4.8	0	0	18	0	1	19			
4.8- 8.1	1	0	8	0	0	9			
8.1-16.1	0	0	2	0	0	2			
16.1-24.2	0	0	0	0	0	0			
Greater than 24.2	0	0	0	0	0	0			
TOTAL	1 (5.00)	0 (-)	44 (3.90)	0 (-)	5 (1.86)	50 (3.69)			

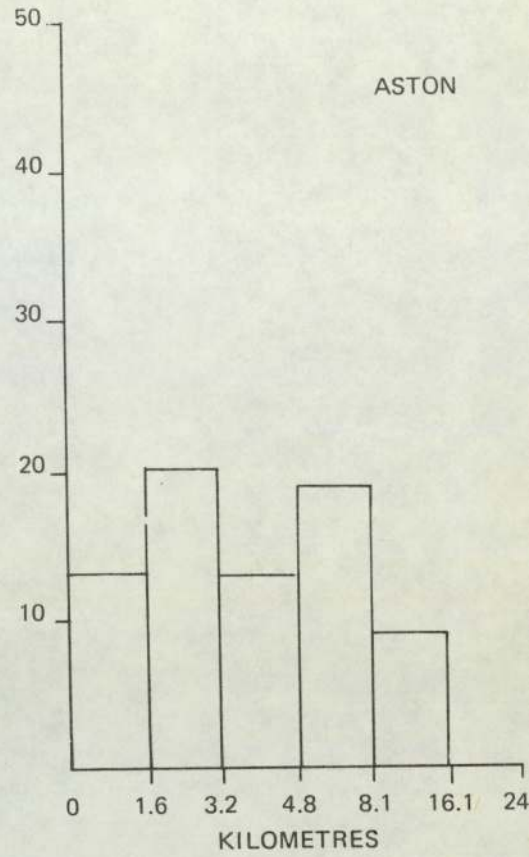
(One-way journeys)

FIGURE 6.20 DISTRIBUTION OF DISTANCE TRAVELLED TO INTERVIEW
 - THE FOUR GROUPS

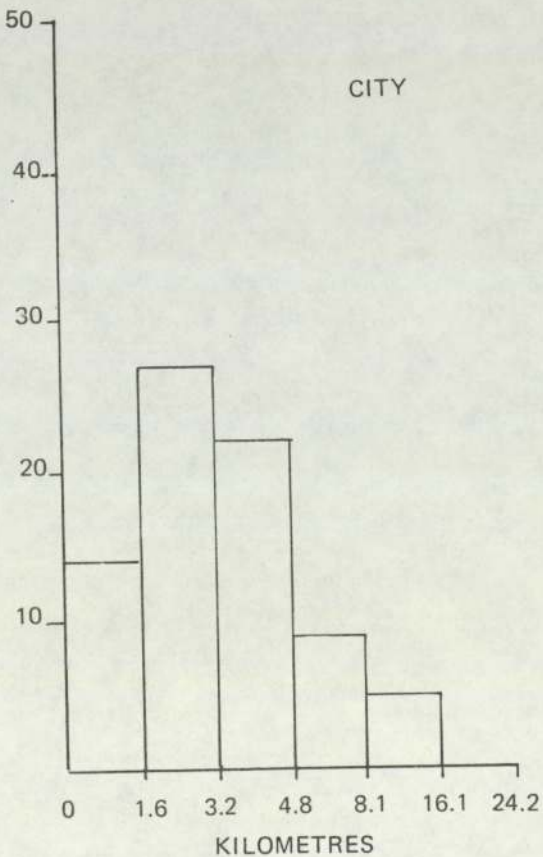
NUMBER OF JOURNEYS



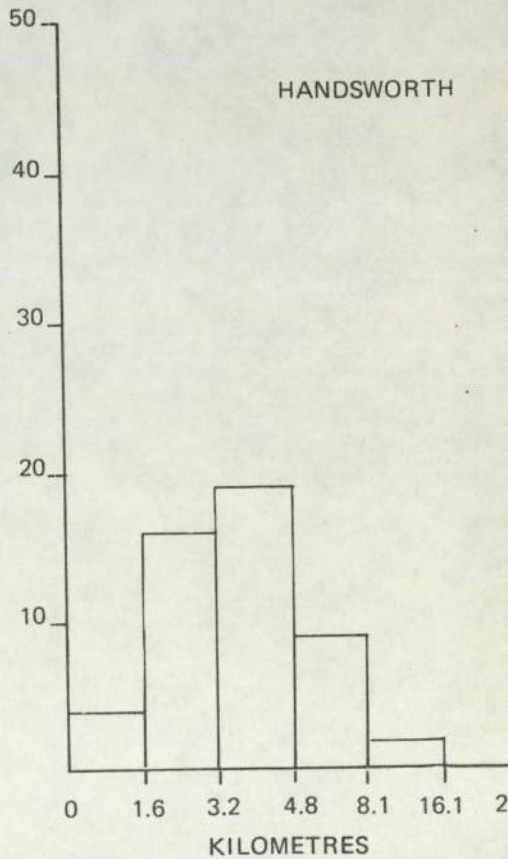
NUMBER OF JOURNEYS



NUMBER OF JOURNEYS



NUMBER OF JOURNEYS



sample the modal point lay between 3.2 and 4.8 Kilometres. The apparent split in frequency of bus journey lengths for the Aston sample can be attributed to the make-up of the sample (i.e. the 'inner city' group and the suburban group). The Sutton sample also shows a split in most frequent journey distances (i.e. 1.6-3.2 Kms and 8.1-16.1 Kms). This is likely to have been the result of journeys to Sutton Town Centre and journeys to Birmingham City Centre.

6.15.4 Modal Split and Awareness Score of Journey Destinations

Section 6.6 demonstrated that locational/transport reasons for rejecting a vacancy decreased as awareness score increased. An underlying factor in the decision-making process was the availability of transport to each job seeker. Hence it is informative to study the modal split and the awareness scores of journey to destinations.

Table 6.43 and Figure 6.21 illustrate the modal split of journeys by awareness score. The figure reveals that travel to districts of lower awareness score was comprised of a noticeably large proportion of car (passenger) journeys, and that the proportion of journeys by bus was relatively consistent for all awareness scores.

TABLE 6.43 - MODE TO INTERVIEW BY AWARENESS SCORE

	AWARENESS SCORE							Total
	0	1	2	3	4	5		
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Car (passenger)	5 (42)	5 (24)	4 (13)	8 (23)	8 (13)	17 (8)	47 (2.5)	
Train	0 (0)	2 (10)	2 (7)	0 (0)	8 (13)	5 (2)	17 (4.5)	
Bus	7 (58)	14 (66)	23 (77)	20 (59)	38 (63)	129(59)	231(61.5)	
Motorcycle/ cycle	0 (0)	0 (0)	0 (0)	0 (0)	2 (3)	11 (5)	13 (3.5)	
Walk	0 (0)	0 (0)	1 (18)	6 (18)	4 (6)	57(26)	68(18.0)	
TOTAL	12 (100)	21(100)	30(100)	34(100)	60(100)	219(100)	376(100)	

Table 6.44 demonstrates that there was no statistically significant difference between the proportion of all journeys which were by bus to destinations assigned to each awareness score.

TABLE 6.44 - BUS VERSUS ALL OTHER MODES OF TRAVEL
BY AWARENESS SCORE

AWARENESS SCORE	BUS		ALL OTHER MODES		TOTAL	
	No.	(%)	No.	(%)	No.	(%)
0	7	(58)	5	(42)	12	(100)
1	14	(66)	7	(34)	21	(100)
2	23	(77)	7	(23)	30	(100)
3	20	(59)	14	(41)	34	(100)
4	38	(63)	22	(37)	60	(100)
5	129	(59)	90	(41)	219	(100)
TOTAL	231	(61.5)	145	(39.5)	376	(100)

Chi-squared value is 3.81 with 5 degrees of freedom. Therefore the null hypothesis that there is no statistically significant difference between the proportion of all journeys by bus for destination assigned each awareness score is accepted.

Figure 6.21 shows that the proportion of car (passenger) journeys generally decreased from '0' to '5' while walk journeys were not made to destinations of scores 0 and 1 but it increased from '2' to '5' scores. All awareness scores in the figure were comprised of a relatively small proportion of "other" journeys. A general summary of modal split for journeys to interviews by awareness score is illustrated in Figure 6.22. It is worth bearing in mind however, that for all modes (see table 6.43) the actual number of interviews increased as awareness score increased. Hence, the actual number of car (passenger) journeys increased as awareness score increased despite the fact that its share of all journeys to districts assigned each awareness score tended to decrease from '0' to '5'. This is because of the relatively large numbers of

FIGURE 6.21 AWARENESS SCORE AND MODE TO INTERVIEW – TOTAL SAMPLE

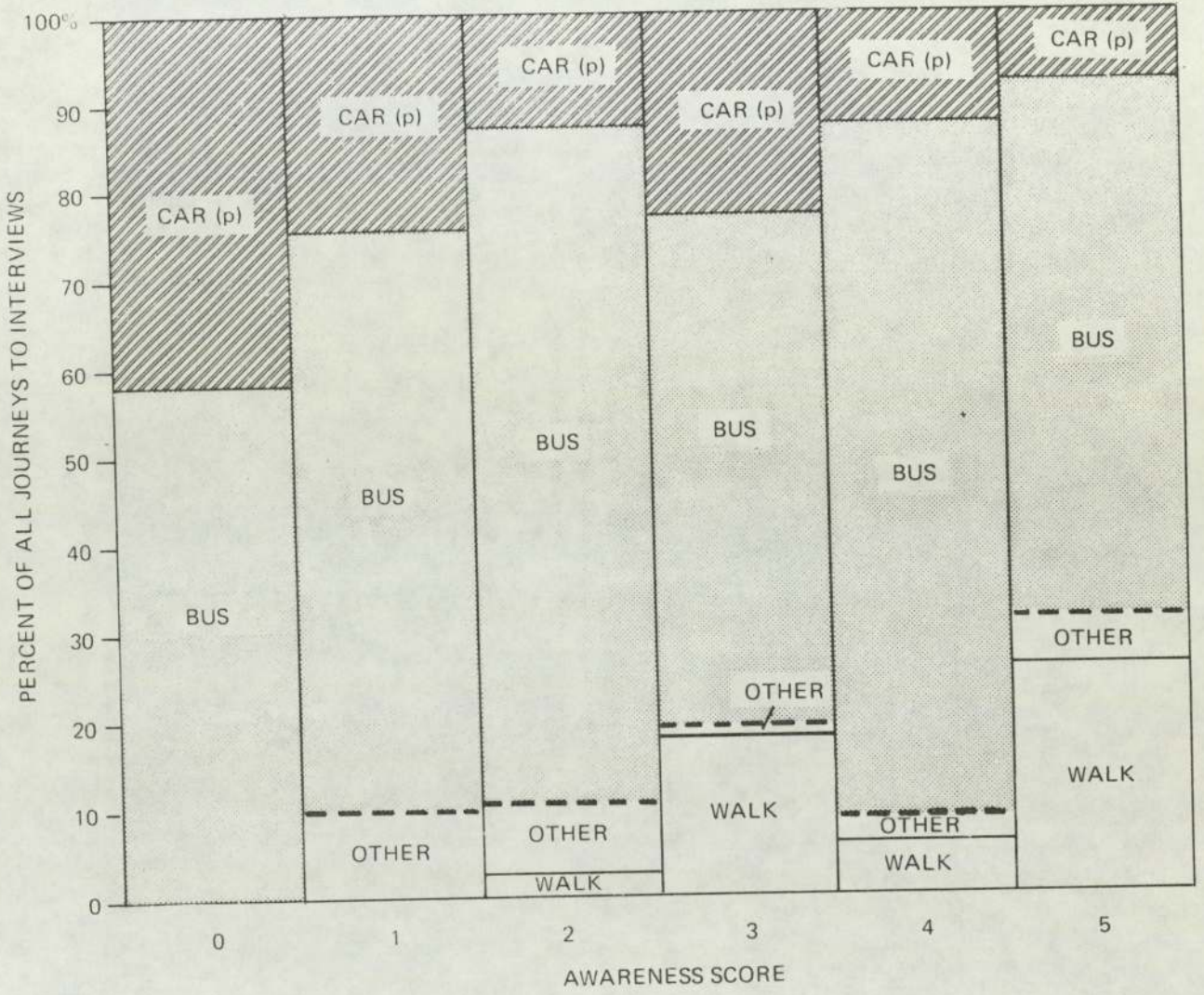
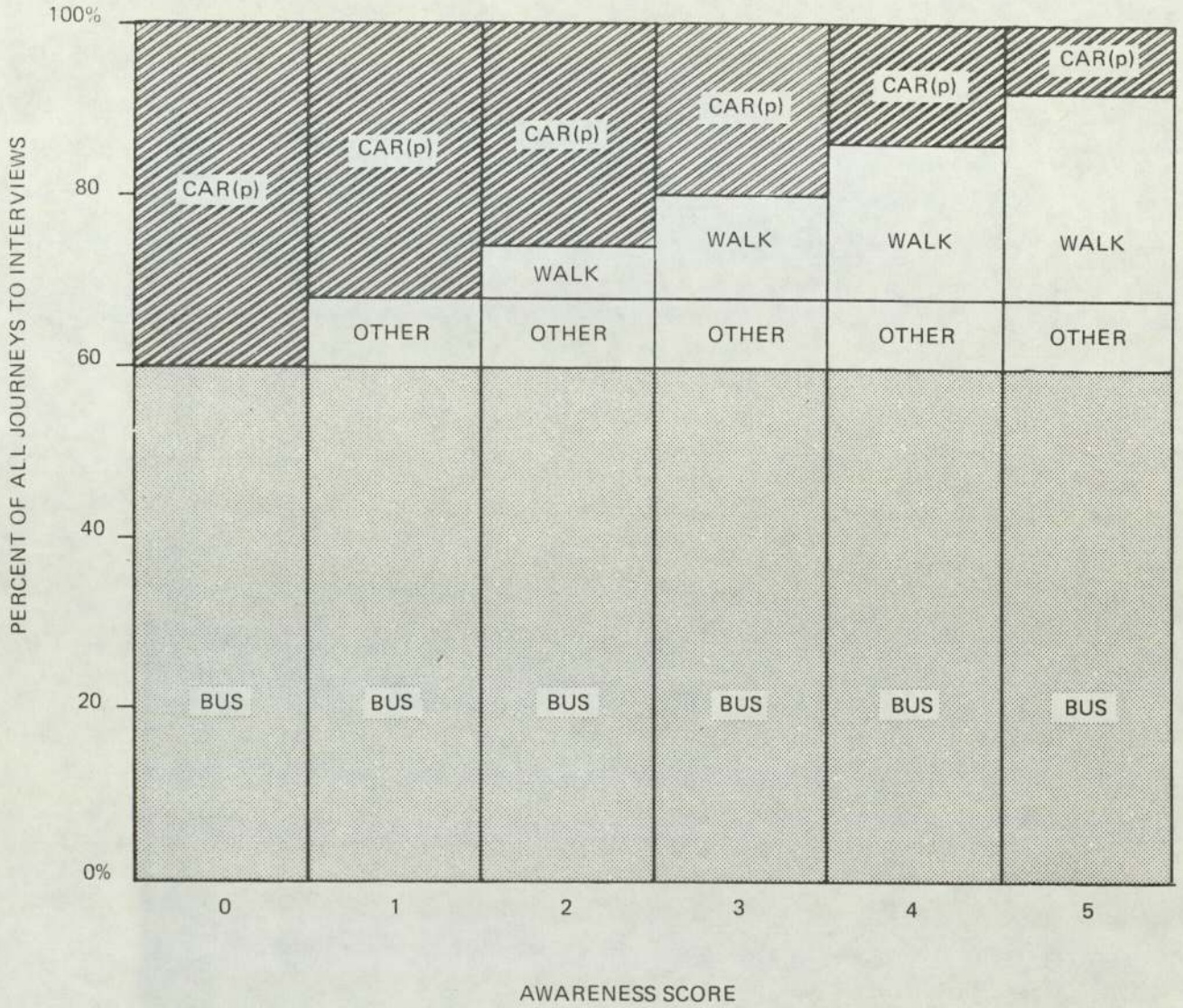


FIGURE 6.22 GENERALIZED SUMMARY OF AWARENESS SCORE AND MODE TO INTERVIEW



journeys by bus, which did not significantly vary between awareness scores.

Table 6.45 shows the modal split of journeys by awareness score for the four sample groups. The statistics are illustrated in Figures 6.23 a,b,c,d. The table shows that a wider variety of modes of travel were used by the Sutton respondents. It is evident from the diagram that car (passenger) trips represented a substantial proportion of the journeys made by Sutton respondents to districts assigned awareness scores 0 and 1. However, the 'inner city' respondents were dependent on knowledge and availability of the bus network to extend job search activity into less familiar districts (note 1). This suggests that Sutton school leavers probably received assistance (i.e. car passenger) from their family, which also implies that assistance may have also been available to these school leavers at other stages in the process of job search.

Note 1 The knowledge of bus routes and its relationship with search activity and awareness space is examined in Section 6.17.

TABLE 6.45 - MODE TO INTERVIEW BY AWARENESS SCORE - THE FOUR

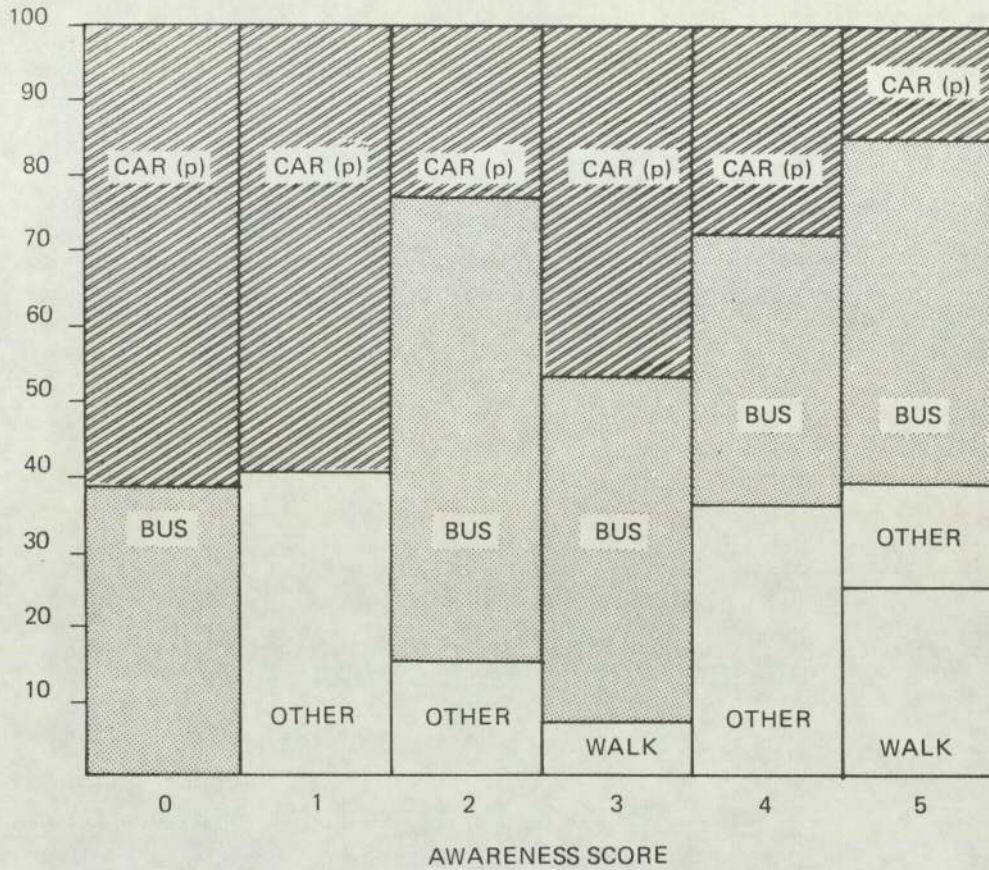
SAMPLE GROUPS

MODE TO INTERVIEW	AWARENESS SCORE							Total No. (%)
	0 No. (%)	1 No. (%)	2 No. (%)	3 No. (%)	4 No. (%)	5 No. (%)		
<u>(A) SUTTON</u>								
Car (passenger)	5 (62.5)	3 (60.0)	3 (23.1)	7 (46.7)	7 (28.0)	16 (14.7)	41 (23.1)	
Train	0 (-)	2 (40.0)	2 (15.4)	0 (-)	7 (28.0)	5 (4.6)	16 (9.1)	
Bus	3 (37.5)	0 (-)	8 (61.5)	7 (46.7)	9 (36.0)	50 (45.9)	77 (44.4)	
Cycle/Motorcycle	0 (-)	0 (-)	0 (-)	0 (-)	2 (8.0)	11 (10.1)	13 (7.4)	
Walk	0 (-)	0 (-)	0 (-)	1 (6.7)	0 (-)	27 (24.8)	28 (16.2)	
TOTAL	8 (100)	5 (100)	13 (100)	15 (100)	25 (100)	109 (100)	175 (100)	
<u>(B) ASTON</u>								
Car (passenger)	0 (-)	1 (20.0)	1 (11.1)	0 (-)	1 (8.3)	0 (-)	3 (4.4)	
Train	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (12.2)	
Bus	0 (-)	4 (80.0)	8 (88.9)	1 (25.0)	10 (83.4)	30 (68.1)	53 (71.1)	
Cycle/Motorcycle	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	
Walk	0 (-)	0 (-)	0 (-)	3 (75.0)	1 (8.3)	14 (31.8)	10 (24.4)	
TOTAL	0 (100)	5 (100)	9 (100)	4 (100)	12 (100)	44 (100)	74 (100)	
<u>(C) CITY</u>								
Car (passenger)	0 (-)	1 (14.3)	0 (-)	1 (12.5)	0 (-)	0 (-)	2 (2.8)	
Train	0 (-)	0 (-)	0 (-)	0 (-)	1 (6.3)	0 (-)	1 (1.4)	
Bus	3 (100.0)	6 (85.7)	3 (75.0)	7 (87.5)	13 (81.3)	25 (64.1)	57 (74.4)	
Cycle/Motorcycle	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	
Walk	0 (-)	0 (-)	1 (25.0)	0 (-)	2 (12.5)	14 (35.9)	17 (22.4)	
TOTAL	3 (100)	7 (100)	4 (100)	8 (100)	16 (100)	39 (100)	77 (100)	
<u>(D) HANDSWORTH</u>								
Car (passenger)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	1 (3.7)	1 (2.8)	
Train	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	
Bus	1 (100.0)	4 (100.0)	4 (100.0)	5 (71.4)	6 (85.7)	24 (88.9)	44 (88.8)	
Cycle/Motorcycle	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	0 (-)	
Walk	0 (-)	0 (-)	0 (-)	2 (28.6)	1 (14.3)	2 (7.4)	5 (10.0)	
TOTAL	1 (100)	4 (100)	4 (100)	7 (100)	7 (100)	27 (100)	50 (100)	

FIGURE 6.23 AWARENESS SCORE AND MODE TO INTERVIEW – THE FOUR GROUPS

% OF ALL JOURNEYS

(a) SUTTON



% OF ALL JOURNEYS

(b) ASTON

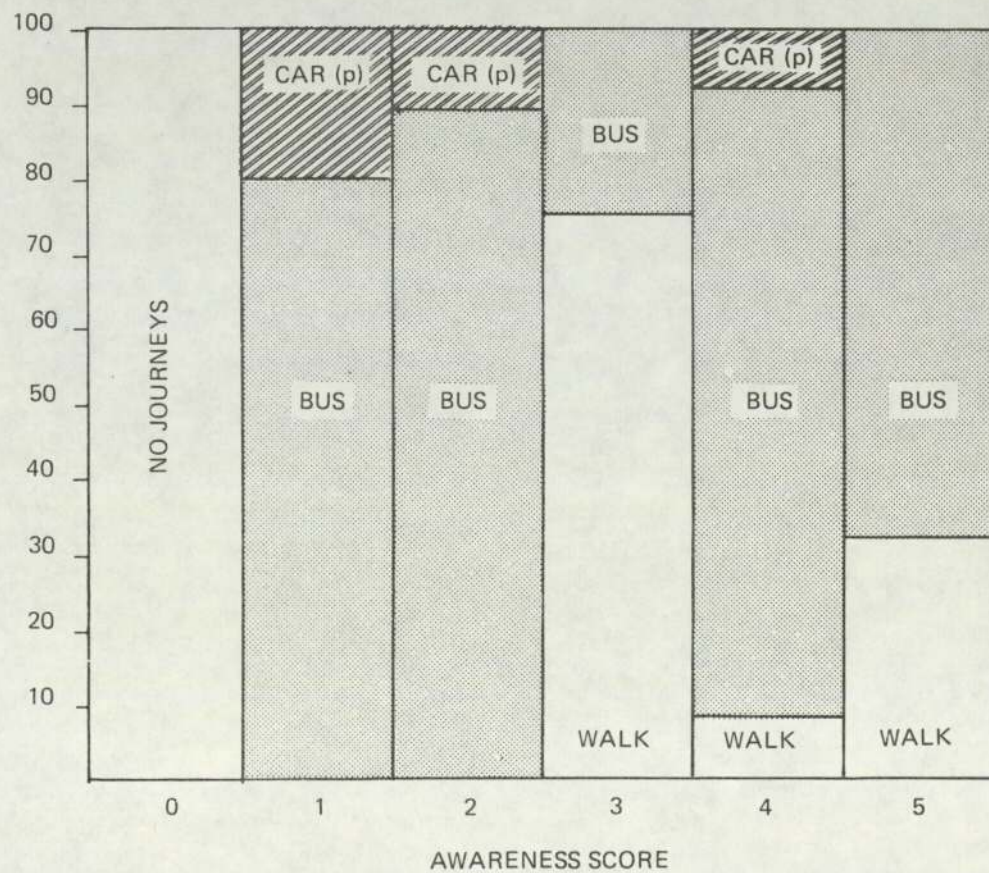
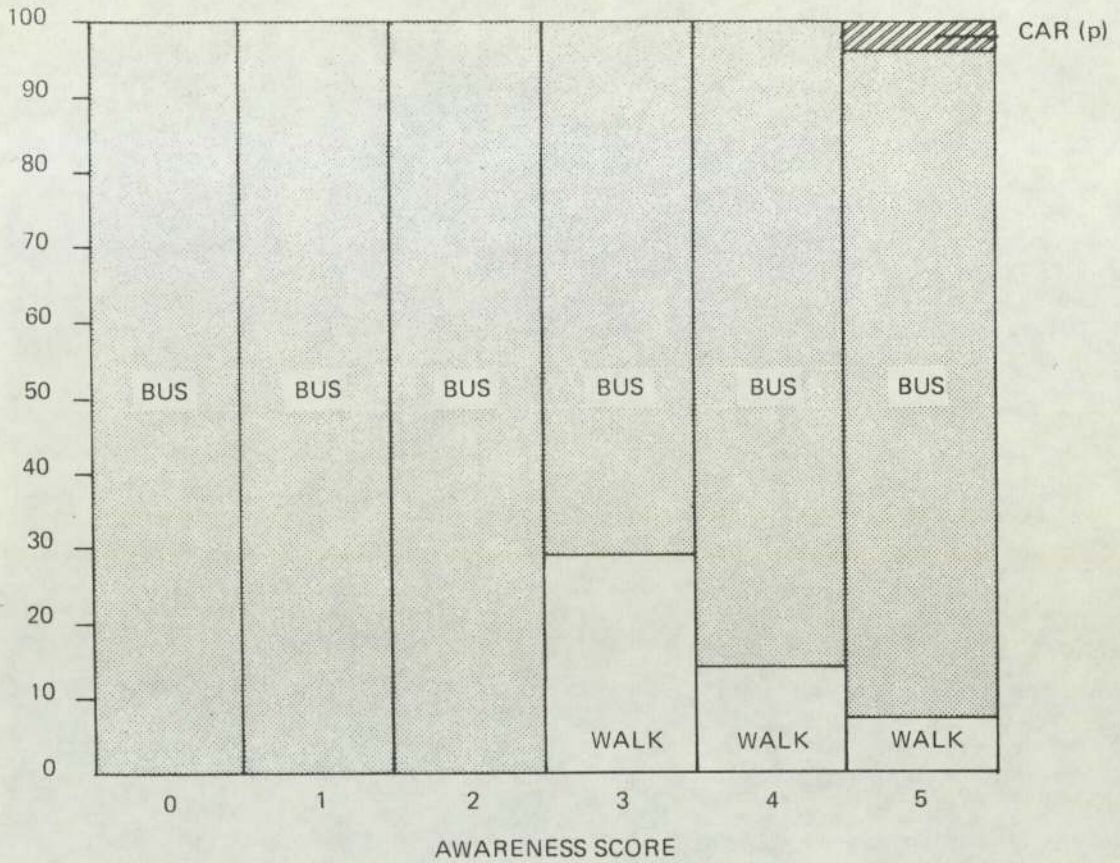


FIGURE 6.23 (Continued)

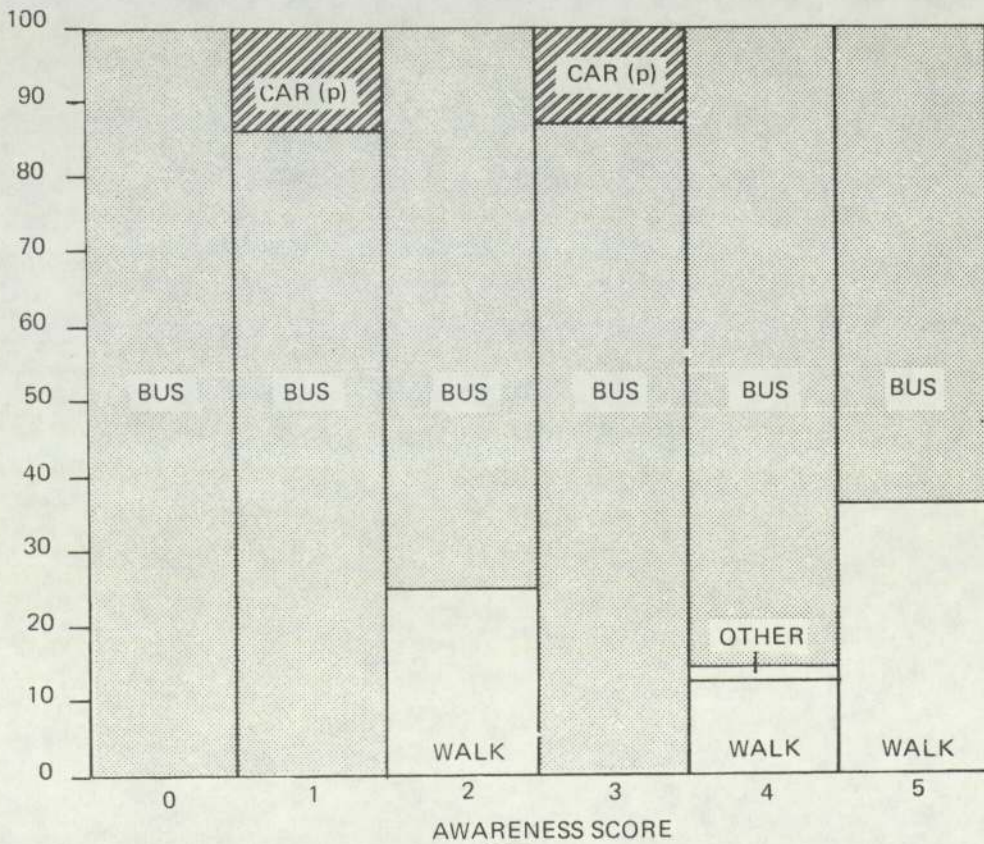
% OF ALL JOURNEYS

(c) HANDSWORTH



% OF ALL JOURNEYS

(d) CITY



6.16 MODAL SPLIT OF SEARCH ACTIVITY SPACE

6.16.1 The Geographical Pattern - The Map Supplement includes standard deviational ellipses (SDEs) for each mode of travel, which demonstrates the importance of the use of the bus mode and of the city centre as a journey destination. It would be expected the SDE's for journeys on foot illustrate how these journeys were restricted to an area immediately around the home location. The SDE's representing the modes of travel for the inner area groups were relatively similar because of the orientation of Search Activity to the city centre and the restricted use of modes of travel other than bus. The map supplement shows that in the instances where modes other than bus were used by respondents in the inner area groups, the patterns were generally restricted to the inner city. Car (passenger) journeys were the only patterns which were noticeably different from the majority of other journeys.

In the case of Sutton respondents a greater use was made of modes other than bus. Hence, differences in the SDE's for each mode of travel were more noticeable. The SDE for train journeys had a small area and was centred on the city centre, which demonstrates that train journeys were almost totally all at city centre destinations. Bus journeys, although oriented to the city centre, were not however restricted to the city centre. Hence journeys by bus ended at a variety of destinations between the home location and city centre. This is reflected in table 6.41 which shows the wide range in the distribution of distance travelled by bus. A wide range of distances were also exhibited in the car (passenger) journeys. However, the parameters

(i.e. the high coefficient of circularity and the large area) of the SDE for car (passenger) journeys by the Sutton group demonstrate that this mode of travel included a greater variety (i.e. more dispersed) journey destination.

6.16.2 Cognitive - behavioural relationships - Figure 6.21 illustrated that a relatively greater proportion of journeys to destinations of low awareness scores (i.e. '0' and '1' were made by car (passenger). This mode of travel was therefore most likely to have been used to extend search activity beyond areas of relatively high familiarity. The previous section has demonstrated the high dependence upon public transport for the total sample, and in particular the respondents resident in the inner city. The implication is that suburban respondents were more able than inner city residents to extend job search into less familiar areas. This is significant if travel by bus was restricted to routes already known to the respondents and if bus route knowledge was related, on aggregate, to awareness of the city.

6.17 BUS ROUTE KNOWLEDGE

The fact that bus was used for 61% of all journeys, and that 83% of all journeys were to destinations of awareness score 3, 4 and 5, implies that the availability, knowledge and use of bus routes was related to Search Activity and was also an implicit factor governing awareness space, and in turn the job search decision making process. This is endorsed by the fact that the proportion of transport and locational reasons for rejecting vacancies decreased as awareness score increased.

6.17.1 Travel Information - Table 6.46 demonstrates that less than one third of all journeys involved the collection of some travel information. The most frequently used sources were A to Z Map and the advice of friends and relatives. More significantly, the table reveals that comparatively few journeys required information on bus travel, which suggests that respondents tended not to travel by bus to destinations they did not already know how to get to. The comparatively large proportion of respondents in the 'Sutton' group who used an 'A' to 'Z' map reflects the larger number of journeys made by these suburban residents as a car passenger, especially to 'low' awareness score destinations.

TABLE 6.46 - USE OF TRAVEL INFORMATION SOURCES

INFORMATION SOURCE	GROUP				TOTAL	
	SUTTON No. (%)	ASTON No. (%)	CITY No. (%)	HANDSWORTH No. (%)	No. (%)	No. (%)
Not given	0 (0)	0 (0)	0 (0)	1 (3.6)	1 (0.8)	
A to Z Map Street Map	21 (58.3)	12 (37.5)	3 (17.6)	6 (21.4)	42 (37.3)	
Display	1 (2.8)	1 (3.1)	0 (0)	1 (3.6)	3 (2.7)	
Friend/Relative	8 (22.2)	6 (18.8)	3 (17.6)	8 (28.6)	25 (22.1)	
Stranger in Street	1 (2.8)	4 (12.5)	0 (0)	4 (14.3)	9 (8.0)	
Bus Route Map	0 (0)	0 (0)	0 (0)	1 (3.6)	1 (0.8)	
Bus/Inspector	0 (0)	2 (6.3)	0 (0)	0 (0)	2 (1.9)	
Travel Enquiry Office	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	
Careers Office	2 (5.6)	4 (12.5)	8 (47.0)	3 (10.7)	17 (15.0)	
Employers Offering Job	1 (2.8)	2 (6.3)	2 (11.8)	0 (0)	5 (4.4)	
Other	2 (5.6)	1 (3.1)	1 (5.9)	4 (14.3)	8 (7.1)	
Total	36 (100)	32 (100)	17 (100)	28 (100)	113 (100)	

Table 6.47 shows the proportion of all journeys to interview which required travel information for the four groups. It is noted that the Sutton group obtained travel information on proportionately less journeys than any other group. This might be the result of the relatively large number of journeys by car (passenger) which may have been made because the parent knew location of the firm, hence the respondent did not indicate that he/she had obtained travel information.

TABLE 6.47 - JOURNEYS TO INTERVIEW USING TRAVEL INFORMATION

	Information		No Information		Total	
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
SUTTON	36 (20.6)	139 (79.4)	175	(100)		
ASTON	32 (43.2)	42 (56.8)	74	(100)		
CITY	17 (22.0)	60 (78.0)	77	(100)		
HANDSWORTH	28 (56.0)	22 (44.0)	50	(100)		
TOTAL	113 (30.1)	263 (69.9)	376	(100)		

The main point to emerge from the above table is that, on average, two out of three journeys did not require travel information. This corresponds with the figures in table 6.35 which shows that over two-thirds of journeys were relatively well known destinations (i.e. awareness scores '4' and '5'). The predominance of the use of the 'A' to 'Z' map and the fact the respondents reported that they were trying to find the exact location of the firm indicates that much of the information was only collected in order to assist travel to a district which was relatively familiar to the job seeker.

Table 6.46 shows that for the total number of journeys only three required travel information relating specifically to bus travel. Given the high proportion of bus journeys, the implication is that very little travel in the search for employment was by bus routes unknown to an individual. This also suggests that knowledge of bus routes was related to districts allocated an awareness score of '5'. If a relationship between awareness space and bus route knowledge is established then it can be inferred that knowledge of bus routes influenced decision-making in the process of job search.

6.17.2 Bus Route Knowledge and Search Activity - In the initial stages of the survey respondents were asked to report the bus routes they knew and the districts to which the bus operated. Table 6.48 demonstrates that very few 'unknown' (note 1) bus routes were used by school leavers in Search Activity.

Note 1 'Unknown' is defined as a bus route not reported in the initial stages of the survey. It is possible that individuals failed to recall all bus routes. Therefore the high percentage of journeys by 'known' bus routes could be under presented.

TABLE 6.48 - JOURNEYS BY BUS AND BUS ROUTE KNOWLEDGE

Respondents	Bus Routes		
	'Known'	'Unknown'	Total
SUTTON	76 (98.7%)	1 (1.3%)	77 (100%)
ASTON	47 (88.7%)	6 (10.3%)	53 (100%)
HANDSWORTH	41 (93.2%)	3 (6.8%)	44 (100%)
CITY	50 (87.7%)	7 (10.3%)	57 (100%)
TOTAL SAMPLE	214 (92.6%)	17 (7.4%)	231 (100%)

It is interesting to note that in the above table only one journey by a 'Sutton' respondent involved an 'Unknown' bus route. The table supports the finding that the 'inner city' respondents were dependent upon public transport to extend job search activity beyond the most familiar areas of the city. This implies that knowledge of the network of bus routes was correlated with the awareness of the city.

Table 6.49 shows the total and average number of bus routes mentioned by respondents recruited from each careers office.

TABLE 6.49 - TOTAL NUMBER OF BUS ROUTES MENTIONED BY SCHOOL LEAVERS

	TOTAL NUMBER OF BUS ROUTE MENTIONS	NUMBER OF RESPONDENTS	AVERAGE PER PERSON
SUTTON	479	98	4.9
ASTON	393	50	7.9
HANDSWORTH	519	70	7.4
CITY	349	46	7.6
TOTAL	1740	264	6.6

The table shows that on average 'Sutton' respondents named fewer bus routes on average, compared with the respondents in the other 'inner city' groups. This might mean that the 'inner city' school leavers possessed a superior knowledge of the bus network. It is accepted that a greater variety of bus routes were closer to the homes of inner city compared to suburban respondents. However, both sets of respondents were asked to report their knowledge of the same bus network. It is concluded that the 'suburban' respondents knew, on average, fewer bus routes, and discovered fewer otherwise 'Unknown' bus routes in the process of job search. Compared to the 'inner city' counterpart, a 'suburban' school leaver depended more on car (passenger) journeys in exploring the city in search of work.

6.17.3 Bus route knowledge and Awareness Space - Figures 6.24 to 6.27 show the bus routes most frequently mentioned by respondents in the four sample groups. These bus routes are superimposed on a shaded map containing all the districts in the city. The maps have been shaded according to the frequency with which respondents

Bus route knowledge and districts mentioned as accessible by known bus routes

Total 'Aston' sample (50 respondents)

Number of mentions per respondent

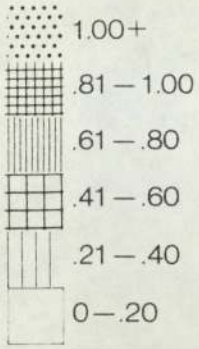
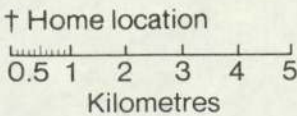
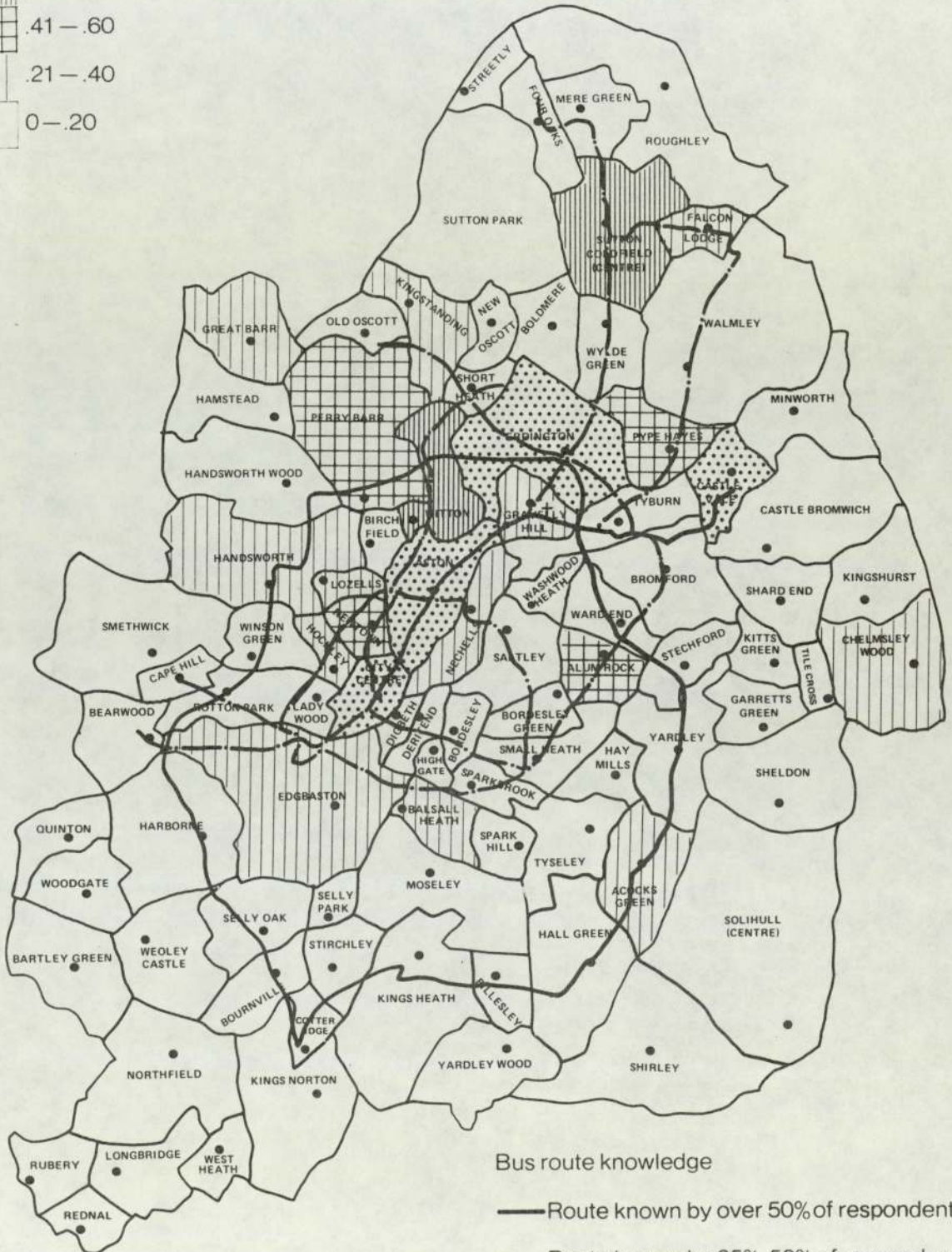


Figure 6.24



Bus route knowledge and districts mentioned as accessible by known bus routes

Total 'City' sample (46 respondents)

Number of mentions per respondent

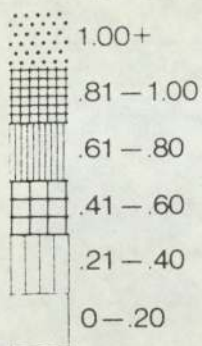
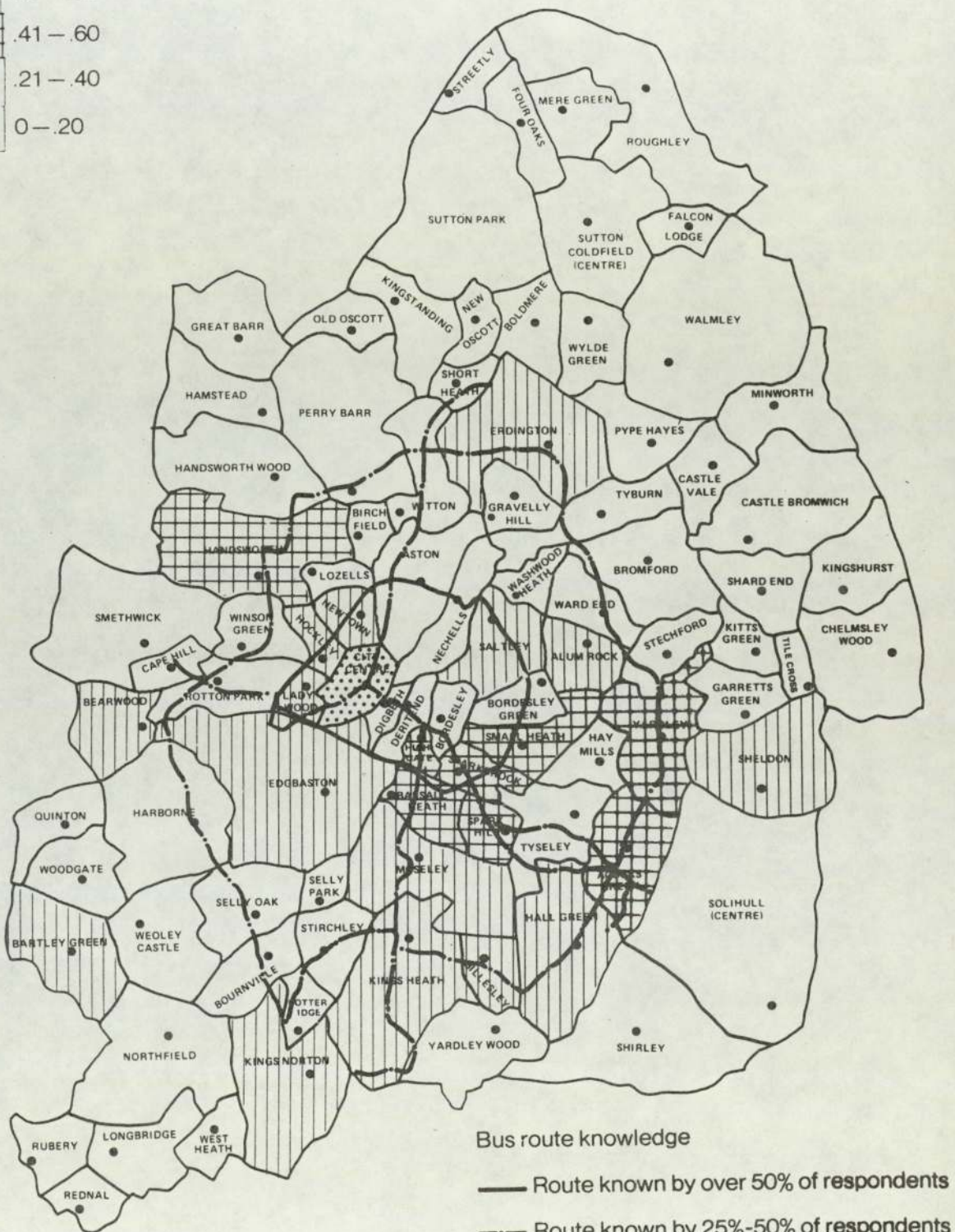
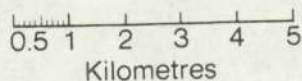


Figure 6.25



† Home location

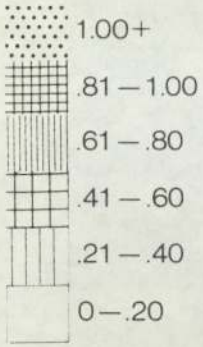


Bus route knowledge and districts mentioned as accessible by known bus routes

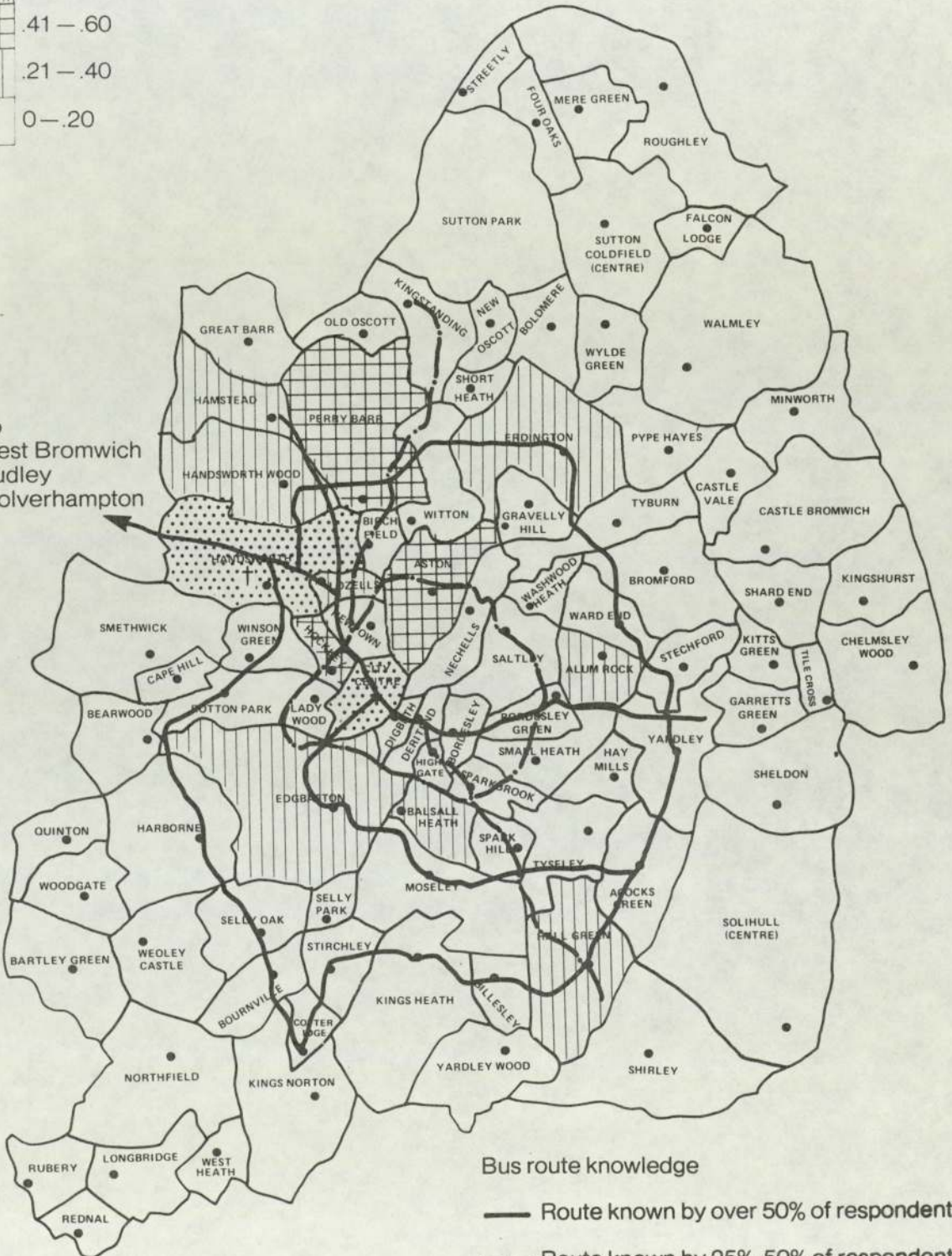
Total 'Handsworth' sample (70 respondents)

Number of mentions per respondent

Figure 6.26



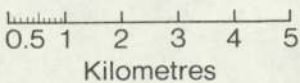
To
West Bromwich
Dudley
Wolverhampton



Bus route knowledge

- Route known by over 50% of respondents
- - - Route known by 25%-50% of respondents

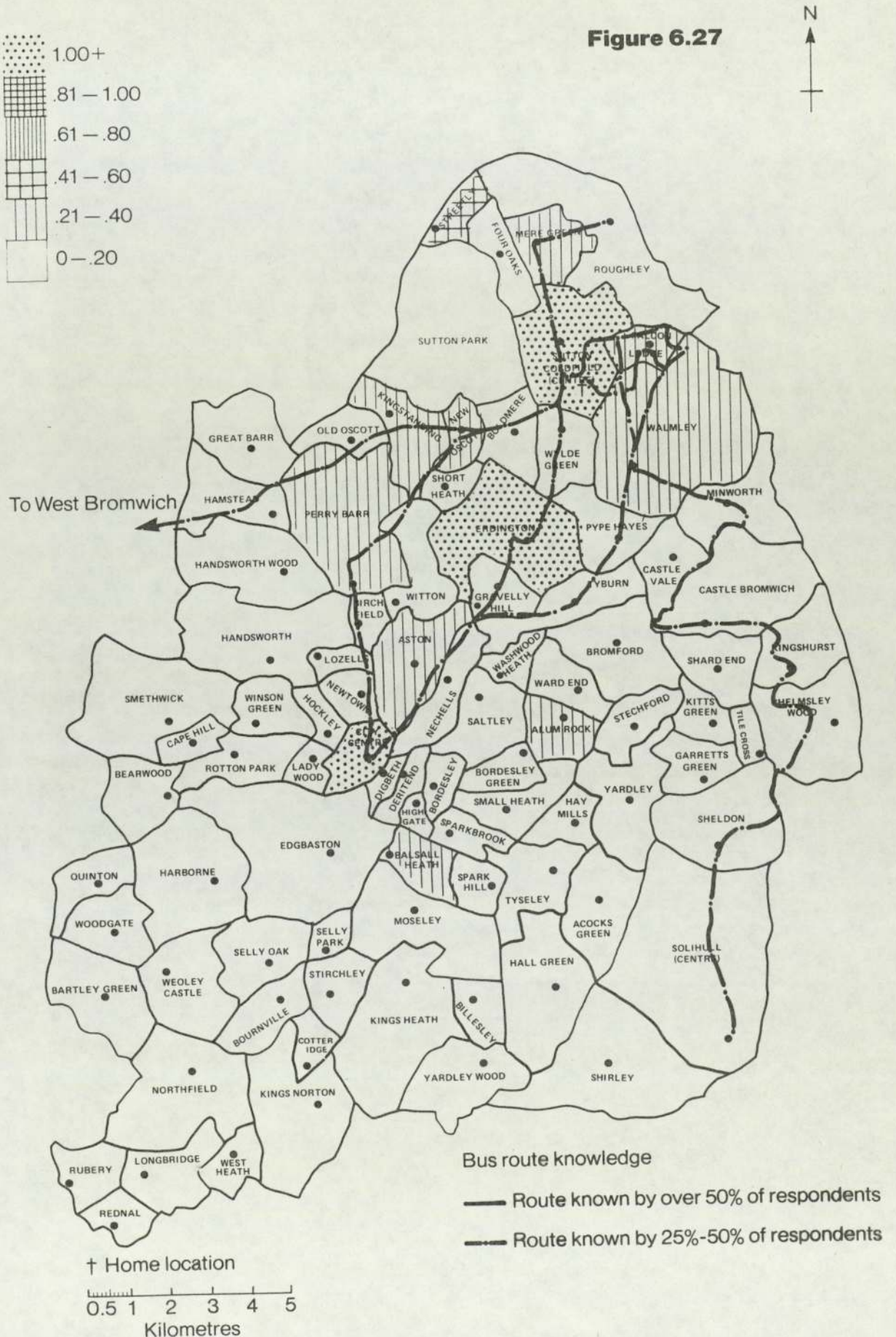
† Home location



Bus route knowledge and districts mentioned as accessible by known bus routes

Total 'Sutton' sample (98 respondents)

Figure 6.27



mentioned that the districts were served by one of the 'known' bus routes.

In some instances, districts along a bus route were less frequently mentioned than others. For example, the Sutton respondents did not report that Aston was accessible by bus as frequently as Erdington or the City Centre. This is probably because respondents less frequently disembarked in Aston. In the case of the 'Aston' sample, it is noticeable that Castle Vale, Erdington, Aston and City Centre districts were all mentioned frequently. This is because the 'Aston' sample is comprised of respondents from a wide distribution of locations. In all cases the city centre completely dominated that pattern of districts mentioned as accessible by bus. This is because the majority of bus routes radiate from the city centre. Very few 'cross-city' bus routes are operated by the West Midlands Passenger Transport Executive. This probably explains why few districts were mentioned on the side of the city centre opposite to the home location. The circular routes do not focus on the city centre, (i.e. number 8 inner circle, and number 11 outer circle bus routes) and they influenced the locational pattern of districts mentioned as accessible by bus. In the three 'inner city' examples both circular routes were important. It does not follow however that all districts linked by a circular route were mentioned. The shaded maps indicate that the school leavers generally reported that districts were served by a circular bus route up to 90° in either direction from his or her home district.

A comparison of the four shaded maps (note 1)(figures 6.24 to 6.27) with shaded 'awareness' maps (Map Supplement) reveals a close similarity in the two patterns. It is interesting to note that the knowledge of the circular bus routes could have influenced the locational pattern of 'awareness space' for the 'inner city' groups, possibly by the influence of destinations displayed on the front of vehicles. For example over 66.7% of Handsworth respondents had at least heard of (i.e. awareness score '1') Hall Green, and the number 90 bus route (which terminates in Hall Green) was also frequently mentioned. Intervening districts, such as Tyseley and Sparkhill (which were not displayed on a number 90 bus) were 'never heard of' (i.e. awareness score '0') despite being nearer to the home location of the Handsworth respondents.

Note 1 The number of times a district is mentioned by a respondent as being accessible by bus are summarized in Figures 6.24 to 6.27 using six categories. These categories have been constructed by studying the data for each group. The highest frequency (except that for the city centre) was noted and divided by six (six divisions have been selected to correspond with the six divisions used in 'awareness space' maps - and to correspond with the number of points in the awareness scale). The city centre accounts for over 50% of the total frequency in all groups hence, although the shading which represents the maximum frequency has been used for the city centre district, it should be made clear that the actual frequency is considerably higher than for other districts also in this top category.

In order to test the statistical validity of this apparent relationship, a product moment correlation coefficient was calculated between data on the number of times each district was reported as accessible by bus and the aggregate awareness score assigned to each district (note 1).

TABLE 6.50 - CORRELATION COEFFICIENTS - AGGREGATE AWARENESS SCORE & ACCESSIBILITY BY 'KNOWN' BUS ROUTE

	Coefficient	't' value
SUTTON	0.62	6.78
ASTON	0.69	6.20
HANDSWORTH	0.64	6.31
CITY	0.59	6.55

Table 6.50 shows the significant correlation between the two sets of data for all groups. (note 2). Further emphasis is attributed to these coefficients because data on accessibility by 'known' bus route is based on reported data, hence some districts through which a bus travels might have been 'known' by the respondent but not reported.

Note 1 Each awareness score (0 to 5) has been weighted by its own value in order to calculate a meaningful aggregate awareness score.

Note 2 't' tables are used because degrees of freedom are greater than 30, hence the confidence interval is 99.9%.

The strong correlation between bus route knowledge and awareness space suggests that the availability and knowledge of the bus network influenced the process of job search. However, knowledge of the bus network does not by itself provide a complete approach for examining decision making in job search. It has been demonstrated that other modes of travel were important in 'search activity' hence it is argued that 'awareness space' provided the more useful concept to aid understanding of decisions made by unemployed school leavers in the process of job search. It is concluded that knowledge of available bus routes is an important component in the pattern of 'awareness space' and probably contributes much to the 'framework' on which awareness of a city is based. The knowledge of, and availability of, the bus network was important in determining travel behaviour, and it is probably an important factor influencing decisions made in the earlier stages of the process of job search.

6.18 INTERVIEWS AND JOB OFFERS

The next stage in the model after the interview is the decision of the employer as to whether or not offer the job to the applicant. The total number of interviews offered was 403, but 14 were refused (see table 6.33). Figure 6.2 shows that only 68 job offers were recorded during the survey, therefore the majority (82%) of interviews were unsuccessful. This of course has implications for the continuation of job search by respondents still unemployed (note 1).

Note 1 The decisions by job seekers whether or not to continue search is examined in the final part of the analysis of the process of job search - part five.

If a job is offered and accepted by the applicant, then that individual would move into the 'Employed' stage in the Model. Figure 6.1 shows that 57 respondents became employed within the survey period. The reasons given by respondents for the eleven instances when job offers were refused are summarised in table 6.51.

TABLE 6.51 - JOB OFFER REFUSALS - TOTAL SAMPLE

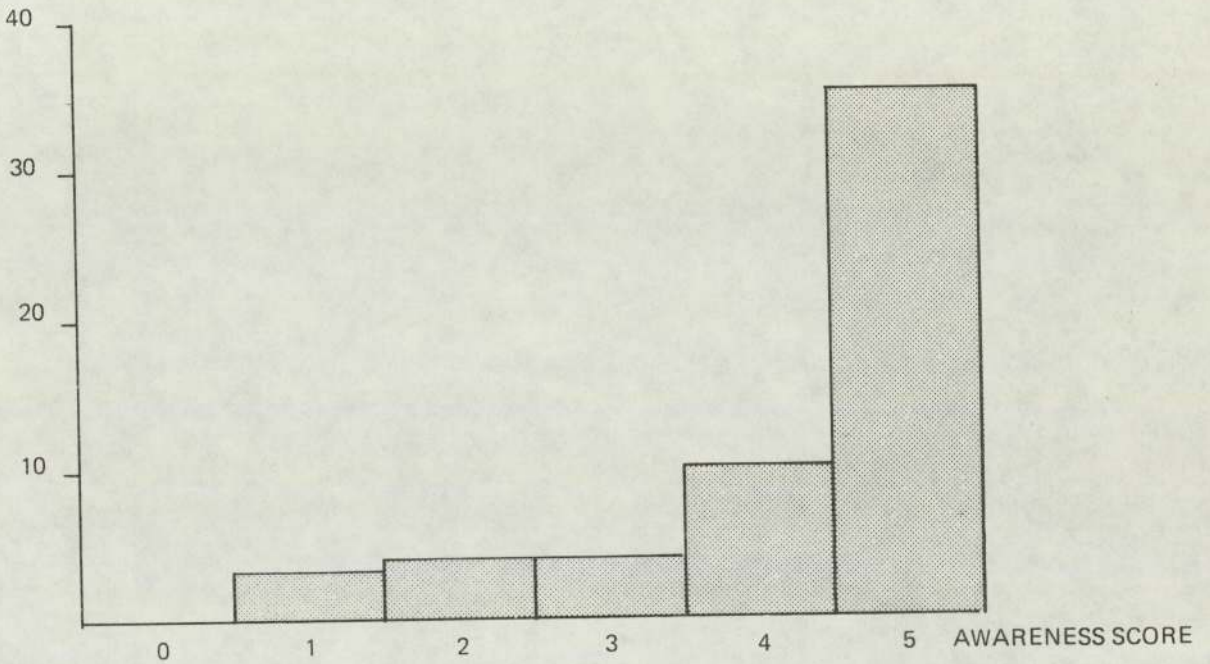
GEOGRAPHICAL REASONS		NON-GEOGRAPHICAL REASONS		TOTAL	
No.	%	No.	%	No.	%
2	(18.2)	9	(81.8)	11	(100)

The table shows that 9 of the 11 reasons were associated with the job characteristics or personal reasons. A 'geographical' reason (note 1) for refusal was based on the experience of the individual in making the journey to interview. Although the numbers are small, it is noticeable that locational reasons for refusal become less important in the latter stages of the model (i.e. 34.6% in Vacancy Rejection, 21.4% in Interview Refusal and finally 18.2% in Job Refusal). This further supports the argument that job seekers exercise a definite locational constraint on each decision where applicable, in the job search process. This is reflected in the distribution of awareness scores assigned to the districts in which jobs were obtained.

Note 1 A geographical reason includes locational reasons (A - D) and transport reasons (E - M), which have already been outlined in table 6.11 in section 6.6 on Vacancies Rejection.

Figure 6.28 illustrates that the locational aspects of decision-making in the job search process meant that over 68% of all obtained jobs were located in districts very familiar (i.e. awareness score '5'). Hence the maps summarising 'awareness space' (see Map Supplement) indicate where jobs are most likely obtained.

FIGURE 6.28 JOB OFFERS BY AWARENESS SCORE – TOTAL SAMPLE



PART FOUR

EMPLOYMENT

6.19 EMPLOYMENT

The 'Model of the Job Search Process' (see figure opposite) demonstrates how a discovered vacancy is taken through a series of decisions by an individual job seeker. During the survey period fifty-seven respondents discovered a vacancy which proceeded through each stage in the decision-making model and resulted in the job seeker becoming 'employed'. In chapter 4 few significant differences were found between the background characteristics of employed and unemployed respondents (note 1). A possible explanation for this division into employed and continuing unemployed respondents might therefore be found in an investigation into possible differences in decision-making and cognitive-behavioural relationships in the job search process between the two groups (note 1).

- 6.19.1 Decision Making - Table 6.52 shows the number of vacancy discoveries, applications and interview offers for those respondents 'employed' and those continuing unemployed at the end of the survey.

Note 1 The only statistically significant difference in job take-up rates is between Handsworth and the rest of the sample. The 'unemployed' groups is comprised of 37 respondents recruited from the Aston Careers Office, 31 from the City Centre Careers Office, 72 from the Sutton Coldfield Careers Office and 67 from the Handsworth Careers Office.

TABLE 6.52 - DIFFERENCES IN THE PROCESS OF JOB SEARCH
BETWEEN RESPONDENTS CONTINUING "UNEMPLOYED" AND THOSE
EMPLOYED AT THE END OF THE SURVEY

	Vacancy Rejection	Vacancy Application	Vacancy Discovery
Employed	328 (44.9%)	403 (55.1%)	731 (100%)
Unemployed	1842 (62.1%)	1125 (37.9%)	2967 (100%)
TOTAL	2170 (58.7)	1528 (41.5%)	3698 (100%)

Chi-squared value is 63.3 with 1 degree of freedom. Therefore the null hypothesis that there is no statistically significant difference in the rate of vacancy application between the two groups is rejected at the 99.9% confidence interval.

	No Interview Offer	Interview Offer	Vacancy Application
Employed	251 (62.3%)	152 (37.7%)	403 (100%)
Unemployed	874 (77.7%)	251 (22.3%)	1125 (100%)
TOTAL	1125 (73.6%)	403 (26.4%)	1528 (100%)

Chi-squared value is 36.3 with 1 degree of freedom. Therefore the null hypothesis that there is no statistically significant difference in the rate of interviews offered per application between the two groups is rejected at the 99.9% confidence interval.

The table shows that the 'employed' respondents applied for proportionately more discovered vacancies than the continuing 'unemployed' group. There was little difference in the average number of vacancies discovered per respondents between the two groups (13 for the 'employed' and 14 for the

continuing 'unemployed' respondents). This suggests that the 'employed' respondents made more effort to obtain employment.

Table 6.53 shows the breakdown of rejection reasons into transport/locational reasons and job characteristics/personal/other reasons for 'employed' and continuing 'unemployed' respondents. (The figures are for 'most important reasons given by respondents'). Clearly transport and locational reasons were proportionately more important for the 'unemployed' group.

TABLE 6.53 REJECTION REASONS FOR "EMPLOYED AND "CONTINUING UNEMPLOYED" RESPONDENTS

	TRANSPORT/LOCATIONAL REASONS	JOB CHARACTERISTICS/ PERSONAL/OTHER REASONS	TOTAL VACANCY REJECTION
EMPLOYED	73 (22.2%)	255 (77.8%)	329 (100.0%)
UNEMPLOYED	677 (36.8%)	1165 (63.2%)	1842 (100.0%)
TOTAL	750 (34.6%)	1420 (65.4%)	2170 (100.0%)

Chi-squared value is 25.9 with 1 degree of freedom. Therefore, the null hypothesis that there is no statistically significant difference in the proportion of vacancies rejected for locational reasons between the two groups is rejected at the 99.9% confidence interval.

This implies that those respondents who failed to gain employment by the end of the survey experienced greater travel difficulties in job search, than the 'employed' respondents. It was noted in Chapter Four that the 'employed' group comprised proportionately more respondents from car-owning households.

If transport provision was allocated to the continuing 'unemployed' respondents then perhaps proportionately more vacancies would have been applied for, which would result in more interview offers. However, two further points should be made; firstly, the 'employed' respondents would have dropped-out of the survey once they obtained a job, hence although the average number of vacancies discovered by respondents in the two groups is relatively similar, the figure for the 'employed' respondents probably represents an average number of discoveries over a time period shorter than the duration of the survey. Therefore it might be that 'employed' respondents discovered more vacancies per person, on average, during each person's spell of unemployment. Secondly, the significantly greater proportion of transport/location reasons for rejection given by the continuing 'unemployed' respondents may have been caused by these individuals possessing lower levels of awareness of the city and/or by these individuals discovering proportionately more vacancies in districts of lower awareness.

Differences in the relationship between job search and awareness score for these two groups of respondents is investigated next. At this stage it appears that a combination of two factors operates to explain why some respondents obtained work while others remained unemployed. The continuing 'unemployed' group experienced greater travel difficulties, while the 'employed' respondents were more 'active' in their job search behaviour.

6.19.2 Cognitive-Behavioural Relationship - The comments of the previous section suggests that differences in rates of application and differences in the types of rejection reasons given by these two groups might be attributable to a different distribution of vacancy discoveries and applications by awareness score and/or different average levels of awareness. This section examines these suggestions.

Table 6.54 shows the distribution of vacancies discovered by awareness score for the 'employed' and continuing 'unemployed' groups of respondents.

TABLE 6.54 - VACANCY DISCOVERIES BY AWARENESS SCORE - THE 'EMPLOYED' AND CONTINUING 'UNEMPLOYED' RESPONDENTS

	AWARENESS SCORE						TOTAL
	0	1	2	3	4	5	
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Employed	42(5.7)	89(12.2)	74(10.1)	53(7.3)	114(15.6)	359(49.1)	731(100)
Un-employed	262(8.8)	549(18.5)	401(13.5)	238(8.0)	452(15.2)	1065(35.9)	2967(100)
	304(8.2)	638(17.3)	475(12.8)	291(7.9)	566(15.3)	1424(38.5)	3698(100)

Chi-squared value is 52.7 with 5 degrees of freedom. Therefore the null hypothesis that there is no statistically significant difference in the distribution of vacancies discovered by awareness score between the two groups is rejected at the 99.9% confidence interval.

The table demonstrates that a greater proportion of vacancies discovered by continuing 'unemployed' respondents were located in districts allocated to lower awareness scores (0 to 3), compared with the 'employed' group. As mentioned earlier the continuing 'unemployed' respondents had a significantly greater rejection rate than the 'employed' respondents. It is possible that this higher

rejection rate, and indeed the higher proportion of transport/location reasons, can be attributed to the differences between the two groups in the distribution of discoveries by awareness score. Table 6.55 shows the distribution of vacancies by awareness scores for the 'employed' and the continuing 'unemployed' group of respondents.

TABLE 6.55 - VACANCY APPLICATIONS BY AWARENESS SCORE - THE 'EMPLOYED' AND CONTINUING 'UNEMPLOYED' RESPONDENTS

	AWARENESS SCORE						TOTAL
	0	1	2	3	4	5	
	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Employed	18(4.1)	28 (6.9)	37 (9.2)	33 (8.2)	66 (16.4)	221(54.8)	403(100)
Un - employed	54(4.9)	109 (9.7)	143(12.7)	89 (7.9)	182 (16.2)	548(48.7)	1125(100)
	72(4.7)	137 (9.0)	180(11.8)	122 (8.0)	248 (16.2)	769(50.3)	1528(100)

Chi-squared value is 8.0 with 5 degrees of freedom. Therefore the null hypothesis that there is no statistically significant difference in the distribution of vacancy applications by awareness score between the two groups is accepted.

The table shows that the proportion of all applications was slightly higher in the lower awareness scores for the continuing 'unemployed' group but the differences were relatively small and not statistically significant. It can be concluded therefore, from tables 6.54 and 6.55 that the 'unemployed' respondents rejected a larger proportion of discovered vacancies, than did the 'employed' group, because a greater proportion of these discoveries were in districts of relatively low awareness (0 to 3 scores). The distribution of vacancy discoveries by awareness score obviously depend upon the average

level of awareness of the city held by respondents in each group. Tabel 6.56 shows how the respondents in each group assigned the six possible awareness scores to each of the 'districts' of Birmingham.

TABLE 6.56 - DISTRIBUTION OF DISTRICTS ASSIGNED TO EACH AWARENESS SCORE -
THE 'EMPLOYED' AND 'UNEMPLOYED' GROUPS

		AWARENESS SCORE						TOTAL
		0	1	2	3	4	5	
		No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)	No. (%)
Employed	1977(33.3)	2217(37.4)	711(12.0)	330(5.6)	291(4.9)	402(6.8)	5928(100)	
Un- employed	7843(36.4)	7558(35.1)	2662(12.4)	1180(5.5)	1034(4.8)	1251(5.8)	21528(100)	
		9820(35.8)	9775(35.6)	3373(12.3)	1510(5.5)	1324(4.8)	1653(6.0)	27456(100)

Chi-squared value is 27.2 with 5 degrees of freedom. Therefore the null hypothesis that there is no statistically significant difference in the distribution of districts assigned to each awareness score between the two groups is rejected at the 99.9% confidence interval.

The main difference between the two groups was that those respondents who had obtained employment assigned an awareness score of 1 to 5 to proportionately more districts in the city. In other words the 'employed' group had at least some minimum awareness (i.e. "heard the name") of a greater proportion of the districts in the city. Indeed if each "score" assigned by a respondent is weighted by its own number (e.g. awareness score 2 is weighted as twice each occurrence), then the 'Weighted Average Awareness Score' is 1.32 and 1.26 for 'employed' and continuing 'unemployed' school leavers respectively.

The above findings must be considered against the size and geographical distribution of the 'districts' to which the awareness scores have been assigned. The differences in the distribution of awareness scores noted above, might possibly be the result of a predominance of inner city residents in the unemployed group, (i.e. inner city districts are smaller). However, it has been demonstrated in Chapter 4 that a statistically significant difference did not exist between the proportion of 'inner city' and 'suburban' respondents who obtained employment during the period of the survey.

6.19.3 CONCLUSION - The conclusion is that a significant difference exists between the two groups in terms of the distribution of vacancies discovered by awareness score. Compared to the 'employed' group, the continuing 'unemployed' respondents discovered a greater proportion of vacancies in districts of lower awareness and they had a higher rejection rate, (of which a greater percentage of reasons were transport/location). The higher rejection rate was more important in the lower awareness scores, hence a statistically significant difference was not found in vacancy application by awareness score. Finally it was apparent that more districts were assigned to the lower awareness scores (0 to 3) by the continuing 'unemployed' group. Hence, the respondents unemployed at the end of the survey generally had a lower level of awareness which resulted in higher rates of rejection and a greater significance to transport/location reasons for rejection.

In chapter 2 it was stated that one objective of this research was to investigate possible changes in decisions made by unemployed school leavers in their job search with the duration of unemployment. A longer survey would have more adequately investigated these possible temporal changes.

However, as discussed in Chapter 3, a longer survey (note 1) would have sacrificed the detail of data obtained in this survey necessary to thoroughly understand the decision-making process and test the conceptual model of job search.

This section provides a summary of the investigation into data on the duration of unemployment. The details of the investigation are in Appendix G1, and not in this chapter because temporal changes are not a specific stage in the model and because the conclusions can only be tentative, given the length of the survey.

A conclusion from Appendix G1 is that the most successful method, used by the 'employed' respondents was to continue to discover the same distribution of vacancies by awareness score; but to apply for a greater proportion of vacancies located in districts of low awareness score. The other method, generally adopted by the 'unemployed' group was to discover a greater proportion of vacancies in districts of lower awareness, but to reject a greater proportion of these vacancies by awareness score in the second period. Also, it was revealed that a significantly smaller proportion of discovered vacancies were applied for by the 'unemployed' respondents in the second fortnight of job search, while no

Note 1 Possible methods of further research into changes in job search with the duration of unemployment are discussed in Appendix C1.

significant difference was noted in the application rate between the first and second fortnight for the 'employed' respondents. This implies that the 'employed' respondents were more effective in terms of widening the locational aspects of their applications (i.e. 'Vacancy Application Space') to include a relatively greater proportion of vacancies in locations of lower awareness score, with the duration of unemployment. This is endorsed by the facts that vacancy applications by the 'employed' group comprised a large proportion of respondents from car owning households, and that the 'unemployed' group reported significantly more transport/locational reasons for rejections, as well as rejecting a greater proportion of discovered vacancies. The implication for local authority employment initiatives is that aiding unemployed job seekers' travel greater distances may not be the most 'economical' nor the most 'effective' method of improving the job search process. This topic is discussed fully in the next and final chapter.

CHAPTER SEVEN

DISCUSSION AND CONCLUSION

CHAPTER SEVEN - CONCLUSION

7.1 Discussion of the Main Conclusion

Having presented the results of the analysis in some detail in the previous chapters it is now useful to take stock of the main conclusions to emerge, to develop them further and to discuss their implications.

The conceptual model postulated in Chapter 2 provided the framework for a cognitive-behavioural study of the job search process. The model included all aspects of decision-making but it was the locational aspects which were the particular concern of this research. Hence, the locational aspects of job search intentions and of subsequent job search behaviour were investigated. Here the central hypothesis was that the pattern of job search behaviour would be related to the geographical awareness of the city. This hypothesis was verified and it was concluded that patterns of job search generally reflected awareness of different parts of the city. Moreover, this probably accounts to some extent for the fact that individuals were less likely to cite transportation as a major obstacle in job search if they were unaware or would not consider job opportunities located in unknown or unfamiliar parts of the city.

Clear distinctions were found in the patterns of awareness between school leavers resident in suburban areas and those resident in inner areas. The typical pattern of geographical awareness of the former group was of a sectoral nature focussed on the city centre while the pattern for the latter group was semi-circular and generally covered a smaller

area and excluding peripheral districts of the city. Neither group exhibited much awareness of districts located on the side of the city centre opposite to the home location. This could be a function of the general scarcity of cross-city bus routes given the positive correlation established between awareness and bus route knowledge and the high dependence of unemployed school leavers on public transport. These patterns of awareness were found to be related to patterns of Intended Travel to Work Area (ITWA) at the outset of job search. The two patterns were especially similar when the individual had at least some knowledge of the relative location of the district. This implied that school leavers were only prepared to travel to work to 'known' locations of the city. The Intended Travel to Work Areas were not entirely coincident with the time respondents were prepared to travel to work nor the average maximum distance that respondents were prepared to travel from their home to work.

The diary survey provided data on decisions made by job seekers which verified the central hypothesis. The percentage of vacancies applied for was 24% for vacancies located in districts which the respondents had never heard of, and 54.0% for vacancies located in districts which were most familiar to the respondents. The most marked increase in applications was between vacancies located in districts which individuals had heard of, but had no idea of their relative locations in the city and those found in districts which individuals did know their relative locations in the city.

The diagrams contained in the 'Map Supplement' showed how the pattern of Vacancy Discovery Space differed from Vacancy Application Space in a manner corresponding to the

difference between the general pattern of awareness and the pattern of awareness for the highest score only (i.e. '5'). This is explained by the relationship between reasons for vacancy rejection and awareness score. Reasons which included a geographical element accounted for at least one-third of all rejected vacancies, and the proportion of these reasons increased as awareness score of the location of the firm offering the vacancy decreased. Respondents considered locational and transport reasons to be more important than 'other' reasons for rejecting vacancies located in districts which they, at best, only knew of their relative locations in the city. It was concluded that if an individual at least knew how to travel to a district where a firm was located then the 'other' job characteristics would assume greater importance. Another finding was that destinations to which an individual 'knew' how to travel were not necessarily the most accessible destinations. Inner city residents reported proportionately more transport and locational reasons for rejecting vacancies located in districts of lower awareness scores (i.e. respondents did not know how to travel to the district) than did suburban residents. The geographical pattern of these relatively low awareness districts for the inner area groups included the periphery of the city and the 'opposite' side of the city centre. The diagrams in the 'Map Supplement' depicting vacancy rejection reflected this pattern and the point was further emphasised by the 'narrowing' of 'Vacancy Discovery Space' to 'Vacancy Application Space'. This suggested that inner area job seekers did not consider 'reverse commuting' because of perceived and real travel difficulties,

and, moreover, because of the influence of restricted patterns of awareness of the city. The pattern of vacancy rejection for suburban groups showed that most vacancies discovered outside the 'sector' of high awareness were rejected more often for geographical reasons.

Respondents recruited from the Handsworth Careers Office rejected proportionately more vacancies for 'other' reasons than any other group. It was also noted that non-whites with a Handsworth address were offered significantly fewer interviews by potential employers. It is not clear whether these respondents were less 'active' in their search for jobs because of expected (or experienced) low rates of interview offers, or whether potential employers offered proportionately fewer interviews because of the attitude of the job seekers concerned. Probably, a combination of both factors was responsible.

Employers' recruitment practices clearly influenced the process of job search for all respondents. Differences between 'Vacancy Application Space' and 'Search Activity Space' indicated the geographical bias asserted by recruitment practices. The decisions by both potential employers and the job seekers themselves, resulted in the fact that nearly three-quarters of all journeys to interviews were to districts which were most familiar to the jobseekers. The most common mode of travel was by bus (60%), suburban residents relied more on cars than any of the inner city groups. The proportion of all journeys which were made by bus was relatively consistent for all awareness scores while journeys by car were relatively more important to destinations of low awareness. It is

concluded therefore that suburban residents had a wider variety of choice of mode of travel which, in particular, included travel by car which facilitated visits to firms located in less familiar districts of the city. Inner City residents, on the other hand, were almost totally dependent on the buses to explore less familiar parts of the city in their search for employment.

An examination of bus route knowledge demonstrated that the availability knowledge and use of bus routes was related to Search Activity and was also an implicit factor in awareness space and therefore in job search decisions. A general conclusion was that despite a wide range of vacancy discoveries the actual search activity was concentrated in districts of high awareness between the home location and the city centre and limited to a small number of familiar bus routes. It was also interesting to note that inner area respondents generally travelled to very few destinations away from the City Centre (i.e. on the periphery of the city) despite knowledge of a bus route which would provide easy access to these districts. The result was that suburban residents would be competing with inner area residents for inner area job opportunities - but the reverse was not apparent despite the availability of suburban jobs demonstrated by the pattern of 'Search Activity Space' for the groups of suburban respondents. Turning to the analysis of differences in the entire decision-making process between respondents who were successful and those unsuccessful in gaining employment, a number of other conclusions were drawn. In comparison with the individuals 'unemployed' at the end of the survey, the 'employed' individuals had applied for a

greater proportion of the vacancies they had discovered. Also, a fact which reflects the generally higher levels of urban awareness possessed by the 'successful' job seekers was that those respondents discovered proportionately more vacancies in districts assigned high awareness scores. Furthermore, those individuals continuing in unemployment reported a greater proportion of travel difficulties as a reason for rejecting discovered vacancies.

As far as sources of job information were concerned, the local newspaper was most frequently cited and accounted for the highest proportion of vacancies located in districts assigned low awareness scores. However, it proved the least effective source in terms of interviews per discovery, because the largest proportion of discoveries were rejected (71%). The high frequency of discoveries and rejection of vacancies through the local newspapers implied that if awareness levels could be raised then many of these rejections might be retrieved and result in higher rates of vacancy applications.

Further research based on a longer survey would be necessary to understand fully the temporal changes in job search after the entire spell of an individual's period of unemployment. (This is discussed in Appendix C1). However, some interesting findings did result from a comparison of data between the first and second fortnight of job search. The distribution of vacancies discovered by awareness score did not significantly differ with the duration of unemployment for those individuals who obtained employment during the survey. But the same group applied for a greater proportion of the vacancies located in lower awareness scores in the second fortnight of unemployment. On the other hand, the 'unemployed'

individuals discovered more vacancies in lower awareness scores in the second period but also rejected a greater proportion of these discoveries and reported an increase of travel difficulties as reasons for not following-up a discovered vacancy. Furthermore, the vacancy application rates of the 'unemployed' group noticeably decreased which possibly indicates the first signs of the 'discouraged worker'. It appears that the 'unemployed' individuals (the sample of which included a greater proportion of inner area residents) experienced difficulties in extending job search with the duration of unemployment because of a combination of lower levels of awareness and possibly lower rates of car ownership. Hence, the most accessible jobs were obtained by the most mobile job seekers leaving the 'unemployed' with job search difficulties compounded by travel obstacles. The changes in the patterns of vacancy application space emphasised this point. The suburban respondents extended their applications into districts of lower awareness and into more of the inner areas with the duration of unemployment. On the other hand, the pattern of applications for the inner city groups was not extended into districts slightly within the confines of a given area of awareness. A 'reverse flow' of increased application by inner city residents to peripherally located vacancies was not recorded. The patterns of search activity became less adventurous in that journeys were almost entirely concentrated in the districts most familiar to respondents and increasingly restricted to locations adjacent to the home and along a narrow corridor to the city centre.

The main conclusions of this research have several clear implications which are developed and discussed in the next section. The most important conclusion to emerge from this research is that patterns of job search generally reflected awareness of different parts of the city. This conclusion has many implications, of which the most fundamental are for policies of economic regeneration.

7.2 Implications

This research has many implications for policy makers at national and local authority level and concerned with local employment initiatives, economic regeneration and transport. However as far as interaction of these policy areas is concerned the main issue in this context obviously relates to the verification of the central hypothesis and the conclusion that urban awareness is a significant factor governing job search. This suggests that transport policies which aim to improve 'accessibility' per se, may not be the most effective method of assisting the job search process. The conclusions also suggest that employment initiatives (for example, to create 'centres' of employment) should not only ensure adequate and/or improved accessibility to areas of high unemployment, but must also consider potential patterns of job search of individuals living in the areas. In other words, measures to improve accessibility to employment must ensure that the available vacancies are considered seriously by job seekers. The implication is that a policy of increasing and/or changing the urban awareness of job seekers should be pursued

in conjunction with transport policies. In fact, it may be that transport is not the immediate problem and that attempts to improve people's awareness of the city and its transport system might be the single most effective method of enhancing the job search process. This is especially significant for the most vulnerable job seekers such as school leavers living in the inner city, who are dependent upon public transport.

The patterns of 'urban awareness' for inner city residents are generally limited in extent and are focussed on the city centre. Districts on the periphery of the city and inner area districts on the 'opposite' side of the city centre are generally unknown. In the short term at least, it perhaps seems more practicable to attempt to increase an individual's awareness from 'never heard of the district' (i.e. awareness score '0') to knowledge of a main road that goes to the district (i.e. awareness score '3'), rather than increase the individual's knowledge of a district to a very detailed and intimate level (i.e. awareness score '5'). It has been shown that many school leavers had no idea of the relative location of about three-quarters of the districts of the city (i.e. scores '0' and '1'). Hence, a policy to increasing awareness levels of individuals living in areas of high unemployment should have a profound affect on job search. This affect is likely to be especially significant if awareness of districts assigned '0' and '1' are raised to at least score '2' or '3'. In geographical terms this means that inner city residents would be more likely to compete for peripheral vacancies and redress the imbalance of competition for inner city jobs from suburban residents.

This has particular relevance to a policy of peripheral industrial developments as a stimulus to economic regeneration, and ensuring that new locations are accessible to inner area residents and particularly the most vulnerable groups. A policy of this nature suggests a similar development of the 'Reverse Commute' experiments in the United States (see Chapter One) and which are therefore unlikely to be successful without carefully considering the conclusion of this thesis. Indeed, a firm conclusion, for school leavers at least, is that new job opportunities at peripheral locations would have to be carefully marketed (using both formal and informal channels) in order to bring them within the "awareness" of the most vulnerable job seekers. Without such an approach, new jobs in areas not well known may be less relevant to residents of areas of high unemployment. The frequency of the types of reasons given by school leavers for not applying for (i.e. rejecting) a discovered vacancy endorses the argument that improving levels of urban awareness may be more effective than a transport scheme to improve accessibility. The reasons which included a geographical element accounted for 34.6% of all rejections. Of these over three-quarters were perceptual while only the remaining quarter were specific transport reasons. The research demonstrated that school leavers' awareness of the city and knowledge of the bus network are interrelated. This suggests, therefore, that a policy of improving an individual's knowledge of the bus network should facilitate greater knowledge of places accessible by bus, and should therefore increase levels of urban awareness. This would seem to be more 'effective' in terms of job search than altering the provision

of bus services or reducing the relative 'cost' of bus travel to the job seeker. However, the research also indicated that bus fares do represent a significant cost to an unemployed job seeker and it appears that an optimum policy would be a combination of improving both accessibility and urban awareness of the job seekers. It is useful, therefore, to discuss initially, ways of increasing levels of urban awareness and then examine schemes which improve accessibility and those which could possibly also increase urban awareness.

The research demonstrated that job seekers used only one or two bus routes in their journeys to interviews and that these journeys were to 'familiar' destinations. Sources of information on bus routes are very limited, and there is an obvious potential for increased 'marketing' of bus services. The West Midlands Passenger Transport Executive issue timetables for each route, and a map showing the total network for the whole of the West Midlands County. The timetables are difficult to understand and the bus route map is very confusing. (See Appendix - Annex). It is not surprising therefore that few school leavers reported that they obtained further information on bus routes in their 'search activity'.

One possibility is to break-down the areas covered by the bus route maps and enlarge the detail on each of the resulting maps. The maps, at present, only show roads which buses used and exclude other details of the road network. Consequently, a job seeker would require a generally high level of cartographic skill in order to find out how to travel to firm because an A to Z map would be required in conjunction with the bus route map. Therefore, one possibility is to

improve the bus route map so that it is more 'meaningful' to the layman rather than to employees of the West Midlands Passenger Transport Executive. Another possible method for improved 'marketing' of bus routes is to produce a schematic representation of the network in a similar fashion to the London underground network. British Rail have also produced a similar representation of its 'overground' network. A schematic diagram of the bus network has not been produced for the West Midlands bus network. Obviously a bus route can be more tortuous than a rail route, but there does appear to be value in attempting to simplify the bus network into a schematic representation which would clearly indicate 'districts' linked by each route. Another possibility is to include on the back of a bus timetable leaflet, a map section of the city with the route followed by the bus clearly marked.

Of course the above suggestions assume that the individual will attempt to gather further information. What might prove more effective is to market bus routes by actively advertising. Buses are used as a means of advertising a variety of products. There is an obvious potential to advertise the bus route itself and the places and facilities accessible by each route. For instance a map of the route could be displayed on the side of the bus with features indicated such as, district centres, adjacent roads, other 'feeder' bus and rail services, leisure facilities, industry and other landmarks. Similarly, advertising space on bus stops could be usefully employed to promote services. (See plates in Appendix).

In the longer term it would seem that a programme of 'urban education' could be included in schools, especially those located in areas of high unemployment and low car ownership. One possible method would be for pupils to be given a description of the roads followed by a bus route and then be expected to mark the route on a detailed map of the city (1:10,000). Certainly this research demonstrates a need to increase the awareness of the city for certain of its residents, not only in term of employment opportunities, but for all the other facilities a rich urban environment has to offer.

Returning to possible methods of increasing 'accessibility' of job seekers, the notion of heavily subsidised public transport fares and more especially concessionary travel for the unemployed has recently received attention from metropolitan local authorities. One possibility is the wholesale provision of free travel to the unemployed. Such a measure would presumably encourage job seekers to make more speculative visits to firms, to gain information and/or apply for any vacancies. This research has shown that this method is the most efficient in terms of interviews per application. Speculative visits were also shown to be exclusively to destinations assigned the two highest awareness scores and were predominantly made on foot. Free or reduced price 'travelcards' (1) might enable and encourage non-car owning unemployed to make speculative visits to more distant

Note 1 A travelcard permits unlimited travel on all bus and trains within the West Midlands County.

and or less familiar destinations. Car owners or individuals with friends and relatives who owned a car could probably make more speculative visits to a greater number of less familiar locations in the city. This research could not demonstrate this because of the nature of the sample but further research could examine differences in the awareness scores of firms visited by non-car owning and car-owning job seekers. However, there is evidence from this study which shows that school leavers from Sutton Coldfield (middle class suburb) were the only group to make substantial journeys as a car passenger and these were generally to districts of low awareness.

Therefore, providing free or concessionary fares might be justified for non-car owning job seekers. But of course it would probably be necessary to make such a provision available to all unemployed job seekers.

An argument against free travel for the unemployed is that individuals who have no intention of finding work would simply use the provision for joy-rides. But, even this might usually have one benefit through widening awareness of the city, and if at a later date the individual hears of a job in a district previously visited because of this increased mobility, then that person might subsequently decide to apply for the vacancy or even make a speculative visit to the firm. The implementation of a reduced fares policy which included a 2p flat fare for under 16's which was administered by the County Council during winter 1981/82, clearly demonstrated that joy-riding resulted from this travel subsidy. Many letters of complaint were printed in the local press and school teachers

reported that truants were more difficult to locate because of their increased mobility. The subsidy lasted only a few months but it is interesting to contemplate what effect this greater ability to travel might have had on urban awareness of 15 year olds and subsequently on the patterns of job search when they left school.

The main constraint on subsidised travel for the unemployed is the expense of such a policy, especially if it was made available to all the unemployed. In any case, it would have to be demonstrated that such a policy was effective in achieving objectives of economic regeneration and relieving areas of high unemployment. The survey in this research could have been extended into a small experiment, by providing half the respondents who were unemployed at the end of the survey with free travelcards. The remaining individuals would not have been given any travel concession and both groups would have continued entries into their 'Job Seekers Diary'. The aim would have been to establish whether there was any scope for improving the extent, intensity and success of job search for inner area unemployed school leavers by assisting them with free or partially subsidised travelcards for a limited time. A description of the proposal, its development and the cost of a major experiment is included in the Appendix H1. An experiment of this nature is expensive, but there are less expensive alternatives to wholesale free travel to the unemployed. For example, fares could be reduced for off-peak travel or travel cards could be given to unemployed which are only valid between working hours to avoid use of the concession for pleasure trips in the evening. A further possibility is reduced fares on

reverse commuting journeys to encourage inner city residents to compete with job opportunities on the periphery of the city. The nature of the provision would depend upon the emphasis of local authority employment initiatives. It is concluded therefore that some form of travel concession for the most vulnerable job seekers might be a fruitful policy, mainly because of its potential for widening and changing patterns of urban awareness.

The discussion has so far only considered implications of the research within the context of the existing public transport network. It is now relevant to discuss implications with respect to schemes which change the provision of bus and rail services. The opening of the Four Oaks to Longbridge cross-city rail services was completed less than a year before data-collection for this research and knowledge of the facility may not have been widely obtained by the sample. But, the results did not reveal any substantial cross-city use of the service for respondents who lived close to the line, although the service was used for a significant number of journeys to the city centre by individuals recruited from the Sutton Careers Office. Journeys to interviews from an inner area (e.g. Aston) to stations along the line away from the city centre were not recorded. This reflects the traditionally low patronage of rail services by inner city residents compared with suburban residents. Hence, this suggests that an improved and modified rail services (such as the Four Oaks to Longbridge line and the W.M.C.C. proposed Stourbridge to Solihull/Shirley line) is more likely, in the short term, to result in increased competition for jobs in the 'inner city'

than for jobs in the periphery. However, the cross-city rail service has been a relatively new introduction to the public transport network of the West Midlands and the potential for such a rail service to facilitate 'reverse commuting' and aid policies of economic regeneration, in particular the development of peripheral industrial sites, should not be overlooked. However, it is clear for this research that a carefully designed policy of improving knowledge of the new rail service and raising levels of familiarity with surrounding districts would be necessary before the potential for reverse commuting could be realised.

Similarly, there is a potential for improving accessibility, increasing awareness, and widening patterns of job search to include locations on the 'opposite' side of the city centre. Job seekers in the 'Sutton' sample travelled four or five stops by train to the city centre for a job interview. Therefore, in terms of 'accessibility', an 'inner area' job seeker should be prepared to travel four or five stops out of the city or to other inner area destinations on the opposite side of the city centre. Less than five of the West Midlands Passenger Transport bus services are operated from one side of Birmingham to another. The majority of services 'loop' the City Centre and return along the same route. Hence, as with rail services, an introduction of cross-city bus routes could have a significant affect on patterns of job search, especially if these were marketed correctly and to the appropriate population. Moreover, awareness patterns have been shown to correlate with bus route knowledge for school leavers. Therefore, changes in the provision of bus services could have

an affect on patterns of urban awareness and subsequently job search. An area for further research therefore is to examine job search in relation to urban awareness of cities with a history of cross city routes.

A policy of improving public transport services in conjunction with increased urban awareness could be the most positive method of assisting job search of the most vulnerable groups of the unemployed, especially if co-ordinated with local authority schemes to create peripheral centres of employment growth. Similarly, a policy of developing and expanding industry in districts most 'familiar' to residents of high areas of unemployment would also be a valuable measure to assist economic regeneration. However, probably the most effective policy for economic regeneration and relieving areas of high unemployment would be to create job opportunities wherever there is a potential and attempt to raise levels of urban awareness of the unemployed in conjunction with a policy to improve accessibility. What is needed is a more innovative approach to transport policy which will not only improve accessibility but more especially will increase levels of urban awareness. Perhaps the way ahead lies in a series of co-ordinated experiments in transport and local employment policy exploring in more depth the effectiveness of measures discussed in this research such as free travel, enhanced marketing on public transport, possible alterations to the bus network and improved bus route information. With careful monitoring of these experiments and above all, a willingness to innovate, it should at the very least be possible to extend understanding of how to tackle best the mobility and

accessibility problems that are experienced by the job seeker, and hence make a positive contribution to a longstanding, but increasingly urgent issue.

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Note References for further reading and more detailed review of relevant literature can be found in Volume II.