Geographic mobility, adjustment & personality relationship

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THE RELATIONSHIP BETWEEN GEOGRAPHIC MOBILITY, ADJUSTMENT, AND PERSONALITY

by

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Abstract

Correlations were obtained between geographic mobility, psychological adjustment, and certain personality traits. Controls were implemented for age, education, sex, and marital status. It had been expected that increased geographic mobility would be associated with less effective psychological adjustment, but that the strength of that relationship would be modified by certain mediating variables. These mediating variables included personality traits relating to social skills, autonomy, flexibility and adaptability to change. It was further hypothesized that the mobile individuals would obtain higher scores on the relevant personality scales. The results indicated that geographic mobility was independent of psychological adjustment, and none of the personality scales were differentially associated with adjustment in mobile populations. Furthermore, mobile individuals were not different on any of the personality scales which were measured. These results were consistent across four different samples, three different age groups, and all of the varying measures of geographic mobility.

Doctorat PSYCHOLOGIE

LA RELATION ENTRE LA MOBILITE GEOGRAPHIQUE, L'ADAPTATION ET LA PERSONNALITE

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Sommaire

On a obtenu des correspondances entre la mobilité géographique, l'adaptation psychologique et certains traits de personnalité. On a établi des contrôles des points suivants: âge, éducation, sexe et état matrimonial. On s'attendait que la mobilité géographique accrue serait associée à une adaptation psychologique plus difficile, mais que la force de cette relation serait modifiée par certaines variables médiatrices. Ces dernières comprenaient des traits de personnalité reliés aux aptitudes sociales, à l'autonomie, à la souplesse et à la faculté d'adaptation au changement. On a de plus formulé l'hypothèse que les individus mobiles obtiendraient un plus grand nombre de points à l'échelle de personnalité appropriée. Les résultats ont indiqué que la mobilité géographique était indépendante de l'adaptation psychologique et aucune des échelles de personnalité n'a révélé d'écart sur le plan de l'adaptation parmi les populations mobiles. De plus, les individus mobiles n'étaient différents sur aucune des échelles de personnalité qu'on a mesurées. Quatre différents échantillonnages, trois groupes d'âges et toutes les mesures de mobilité géographique ont donné les mêmes résultats.

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Introduction

The studies reported in this paper are concerned with the relationship between geographic mobility, psychological adjustment and personality. The hypotheses which are tested relate to 1) the association between different kinds of geographic mobility and an index of psychological functioning, 2) the moderating effects certain personality, situational and demographic variables have on the relationship between geographic mobility and adaptive functioning, and 3) the association between mobility experience and certain personality traits, particularly those relating to interpersonal orientation, autonomy and flexibility.

By geographic mobility, the author is referring to any relatively permanent change in residence from one physical location to another. The research to be presented is concerned primarily with the correlates of inter-urban and inter-country mobility. Thus, both migration and immigration are being considered. The latter term implies a change in residence across national boundaries--the former implies a change in residence from one community to another while staying within the same national boundary (Kantor, 1969; McAllister, Butler and Kaiser, 1973). Some statisticians have reserved the term migration for moves across county lines (Shyrock, 1964). The term geographic mobility cuts across and includes all these definitions. Furthermore, it presupposes that the changes are both spatial and social (Kantor, 1969).

During a five year period in the United States, 20 per cent of the population moves across county lines (Taeuber and Taeuber, 1958). In Canada, the comparable figure is 16 per cent (George, 1970). The inter-provincial migration rate in Canada has been increasing since 1901, although

not as steeply as the rate of inter-state migration in the United States. During the Depression the annual American migration rate was 2.4 per cent, and between 1951 and 1961 it ranged between 6.1 and 6.7 per cent (Shyrock, 1964). Since the post war period however, migration rates have remained relatively stable.

Over the century, patterns of migration have varied considerably. In the earlier decades, many of the internal migrants were unskilled laborers, moving about in search of employment. Their socio-economic status was low and their life-style was characterized by many of the stresses typical of this social class (Beach and Beach, 1937). Other mobile individuals were rural youths who were seeking their fortunes in the large cities of North America (Burchinal and Jacobson, 1963). Their moves involved not only spatial and social changes, but also very gross changes in their styles of life (Kantor, 1969).

The immigrant populace has been quite heterogeneous. Some of these individuals were well educated and brought marketable occupational skills to their new country. Others had fewer adaptive resources and hence experienced greater difficulties. Moreover, the reasons for immigration have varied; sometimes immigrants have been fleeing political oppression, at other times economic uncertainty (Fried, 1965).

Presently, the mobile population is derived from the upper layers of the socio-economic strata. Movers are often important elements of the corporate manpower structure and also of the academic community. Moreover, educational and economic incentives are now the primary factors motivating modern-day moves (George, 1970; Lansing and Mueller, 1967; Packard, 1972; Whyte, 1953). Though American negroes were quite mobile during certain

decades (e.g. late 1940's) their present migration rate is considerably below that of the American whites (Lansing and Mueller, 1967).

A substantial part of the North American population is thus residentially mobile, and this, in itself, is a social phenomenon of considerable import. Information about mobile individuals has been accumulated in a number of different ways. Census studies have revealed many demographic characteristics, while social scientists have demonstrated relationships between mobility, mental health, and certain personality characteristics. In the following sections some of the studies will be briefly reviewed.

Present-Day Migrants: Their Social Class, Their Reasons For Moving, and Their Expectations About Mobility.

Census studies have revealed that mobile individuals differ from non-mobile ones in certain significant ways. The nature of these differences have varied with the decade being examined. Presently (post World War II), mobile populations are better educated and more skilled than non-mobile ones of similar age composition. They are also younger than the general populace, and usually range in age from twenty to forty-five (George, 1970; Lansing and Mueller, 1967).

Lansing and Mueller (1967) found that economic incentives were among the primary motivators for inter-urban moves. A majority of these moves were job transfers, while others were motivated by the prospects of obtaining higher ranking or better paying jobs. Presented in Tables 1 and 2 are the frequency distributions of these various kinds of moves.

Transfers were most frequent among the white collar workers, especially within the sales and managerial classes. Individuals with college educations and higher incomes (above $7500) were also more liable to be

Table 1

Reasons for Moving Among Primary Migrants (age: 18-64)*

	%	
To take a job	49.9	Economic Reasons 63.3%
To look for work	13.2	
Housing problems	15.0	
Change in marital status	3.5	Non-economic Reasons 37%
Health	2.7	
Other	15.7	

* From Lansing and Mueller, The Geographic Mobility of Labor, 1967, p. 37

Table 2

Kinds of Economic Reasons**

		%
i)	Transfer	25
ii)	Unemployment; desire for more or steadier work; to enter labor force	20
iii)	Higher rate of pay; better prospects or chances for advancement	39
iv)	Other	16

** From Lansing and Mueller, The Geographic Mobility of Labor, 1967, p. 62.

transferred. In general, the more frequently a person had moved, the more likely it was that his most recent move had been a transfer.

Although monetary incentives have often been given as reasons for moving, Lansing and Mueller (1967) found that mobile people did not have higher salaries. Furthermore, despite popular belief that unemployment motivates moving, Lansing and Mueller found that this was rarely the case. Only very harsh unemployment experiences (e.g., ones that were very long lasting or ones that involved substantial financial losses) could incite an individual to move. These findings were in keeping with the observation made by Thomas (1958) that unemployment inhibits migration while favorable economic opportunities stimulate it.

On the other hand, moves were affected by social considerations. Excluding transfers, 70% of all moves were to areas where the "movers" already had friends or relatives. Moreover, moving was inhibited by the presence of a close social network in the area where the person was residing. Only a few of the "recent movers" had family or friends in the community where they had been living. Conversely, a substantial number of the non-movers did (Lansing and Mueller, 1967).

When asked about their future mobility plans, one in five individuals said that they would prefer to move within the coming year. However, only one in ten expected that they would move, and of these merely one in twenty actually did (Lansing and Mueller, 1967).

In sum, it can be said that most North American moves are made for economic reasons, and that social incentives play an important but secondary role. Moreover, although a substantial number of people would like to move, only a small proportion of them actually have this wish fulfilled.

Geographic Mobility and Adaptive Behavior

Numerous social scientists have investigated the correlates of geographic mobility, and psychological functioning has been one of the variables of primary interest. Many investigators found that geographically mobile individuals were over-represented in psychiatric institutions (Malzberg and Lee, 1956; Ødegaard, 1932; Thomas, 1956), but they differed in their explanation of that data. The most frequently used interpretations usually fell into the following three categories:

> "1) ....certain mental disorders incite their victims to migrate.
>
> 2) ....the process of migration creates mental stresses which in turn, precipitate mental disorder in susceptible individuals.
>
> 3) ....there is a non-essential association between migration and certain other predisposing or precipitating factors, such as age, social class, and culture conflict. (Murphy, 1965, p. 5)."

The relevant studies can be divided into two general categories: 1) those which consider external migrants (immigrants) and (2) those which deal with internal migrants. The investigations have varied in their measures of both mobility and psychological functioning. Implementation of controls and assessment of mediating factors has also been variable. Thus, the following sections contain both a summary of findings and a description of methodological procedures.

Studies of External Migration

Most of the research in this area has compared the proportion of foreign-born individuals in state mental institutions with their proportion in the general population. Much of the early research dating from the late 1800's to the early 1900's showed that the foreign-born were over-represented in these state hospitals (Thomas, 1956). This fact was abused by exophobic politicians who were attempting to inhibit the entry of new immigrants into the country. In time, however, it became apparent that much of the early work was invalid. The immigrants were younger than the indiginous inhabitants, and thus their mental illness rates may have been artificially inflated.

Ødegaard (1932) implemented controls for age, sex, and diagnosis and found that Norwegian immigrants living in Minnesota had higher first admission rates than both natives of Norway and natives of Minnesota. The differential was greater for females than for males but decreased with each successive decade studied (1889-1929). Malzberg's early work (1940) showed a similar excess of mental disease among the foreign-born of New York State. In later studies (1962, 1967, 1968, 1969) and with Lee (Malzberg and Lee, 1956), Malzberg implemented controls for age, sex, race, diagnosis and area of residence (rural vs. urban). He found that in both New York State and Canada the foreign born had higher rates of first admission for schizophrenia, but were not significantly different with respect to overall first admission rates.

Lemert (1948) found that the foreign born had higher rates of mental illness in rural Michigan, while Clark (1948) found that the foreign born in most occupational categories had higher age-adjusted rates of schizo-

phrenia. In Chicago, Faris and Dunham (1960) found that the foreign born had higher rates of schizophrenia in all of the 11 ecological zones that they examined.

Locke, Kramer, and Pasamanick (1960) replicated Malzberg's findings in the state of Ohio and Lazarus, Locke and Thomas (1963) duplicated the results in the states of New York, Ohio, and California. It is worth noting that in none of the investigations quoted thus far were there any controls effected for social class variables. This was unfortunate because social class variables have frequently been found to be associated with indices of mental illness (Dohrenwend and Dohrenwend, 1969; Hollingshead and Redlich, 1958; Srole, Langner, Michael, Opler and Rennie, 1962; Lazarus, Locke and Thomas, 1963).

In 1963 Lee repeated Malzberg's study of New York State, but this time controlled for education and marital status. Once again, the conclusions did not change. Fried (1964) however, commenting on Lee's (1963) study, noted that with education controlled, the foreign-born exhibited higher admission rates primarily within the 20-29 group; but within the 30-49 and 40-59 age groups, the foreign born had lower rates. Thus, Fried suggested that it would be necessary in the future to not only standardize for all relevant social class variables, but also to examine relationships within certain social class dimensions. Only in that way would realistic etiological cues be discovered. The present investigations attempt to investigate these kinds of relationships.

In contrast to the previous studies, a few American investigators have obtained negative findings. In Texas, Jaco (1960) found no association between one's birth place and the probability of being diagnosed as a psy-

chotic. Malzberg (1967) however, felt that Jaco's design was unsatisfactory since he had failed to adequately differentiate internal from external migrants. In the Midtown Manhattan Study, Srole et al (1962) found no association between a rating of psychiatric disturbance and a nativity variable called "generation in U.S.". It is notable that this was one of the few studies which did not use "treatment status" as its criterion of mental illness.

In the 1952 Canadian census, the post war immigrant group exhibited the lowest mental hospital admission rates (Murphy, 1965). Murphy noted that this contradictory finding may have been due to the fact that the social class composition of this immigrant group was very similar to that of the native population. Fried (1964) has noted that many of the refugees from Nazi Germany adapted quite well to life in the United States and he too has attributed this to their higher educational and occupational status. Similarly, Srole et al (1962) found that although generation in U.S. was not related to a mental health rating, a certain type of immigrant group was more likely to have mental health problems. This group consisted of immigrants who were of lower social status and who had migrated primarily from rural areas. Thus, the amount of social change experienced seemed to be an important mediating variable (Kantor, 1969).

Although migrants to Israel from Asia and Africa have been experiencing difficulties of adaptation, the European immigrants, despite their traumatic wartime experiences, have not been exhibiting elevated rates of mental illness (Murphy, 1965). In a survey done by Weinberg (1949) it was found that most of the people who had emigrated to Israel from Holland had adjusted quite well. The only abnormalities which Weinberg observed were

temporary increases in "nervousness" and/or loss of sleep. Similarly, Murphy (1965) has found that in Singapore, immigrants did not have higher admission rates.

The contradictory results imply that mediating variables may be modifying the direction of the association between geographic mobility and mental health. Kantor (1969) has suggested that one relevant mediating variable may be the similarity of the sending and receiving communities. Some research data supports this assumption. Malzberg (1969) found that the mental illness rates of British immigrants living in the French-speaking Province of Québec were higher than those of British immigrants living in the English-speaking Province of Ontario. Similarly, Murphy (1965) has observed that the mental illness rates of Canada's Chinese population have varied inversely with the size of the Chinese community in the area where the immigrants were living. In Chicago, Faris and Dunham (1960) found that in areas where the foreign born were a majority their rates of mental illness were lower.

Variations in the personality characteristics of those individuals who become immigrants (i.e. Selection Processes) have also been implicated as relevant mediating variables. It may be that those who become immigrants are not representative of the populations from which they come, but rather are pre-selected in various ways depending on the reasons for their immigration. Thus Ødegaard (1932) attributed a number of discrepant correlations to variations in selection processes. For example, since he found that the migrant-native differential was decreasing steadily for each consecutive decade that he studied, Ødegaard postuiated that the kind of person who was becoming an immigrant had been changing from decade to decade. Malzberg and

Lee (1956) have made a similar observation. Ødegaard (1932) further felt that selection processes could only plausibly account for differentials among males, since it was usually they and not their wives who had made the decision to emigrate. Thus he ascribed the male differential to negative selection processes, since he felt that emigration was often the result of the restlessness and dissatisfaction characterizing pre-psychotic individuals. The female differential, on the other hand, was explained as being due to the strains of migrant life, against which the constitutional protection was weaker in the female sex.

Malzberg's research has also pointed to the necessity of invoking selection processes. For example, in New York State, Malzberg (1969) found that the rates of mental illness among different foreign-born groups varied considerably. English, Italian and Jewish immigrants had rates identical to, or lower than, those of the native population. On the other hand, the Irish and Polish groups had consistently higher rates. Similar ethnic variations have been observed among Canadian immigrants (Malzberg, 1968). In addition, Malzberg (1964) has found that rates vary with the period of immigration being studied.

Although selection processes have often been hypothesized to account for migration differentials, the validity of these factors are yet to be ascertained. They are, in fact, among the most difficult to prove, especially when the data are correlational in nature. Other mediating variables which appear to be important are age and sex. Both Ødegaard (1932) and Malzberg (1969) found that differentials were greater among females than males. Furthermore, Ødegaard (1932) found that greatest excess occurred among the very young (20-29) and the very old (over 70). Both these variables will

be given consideration in the studies to be reported in this paper.

Culture conflict, a frequent concomitant of geographic mobility, probably also contributed to the variations in research findings. Malzberg and Lee (1956) for example, found that children of mixed parentage had among the highest rates of schizophrenia. Malzberg (1969) also noted that the variation in mental illness rates exhibited by the different ethnic groups in New York State may have been due to the differing amount of culture conflict each group had experienced.

Though it is plausible that variations in constitutional factors could account for some of the migrant-native differentials, Malzberg's (1969) data did not support that thesis. If ethnic stock alone were responsible for the observed relationships, then both the foreign-born immigrants and their native-born children should have comparable rates of disorders. On the other hand, Malzberg (1969) found that children of foreign-born parents had lower rates of schizophrenia than the foreign-born of similar ethnic stock. Thus, it seemed that migration per se, not race, was responsible for the observed relationship.

It would seem that the personality characteristics of an individual would be related to his ability to cope with the adaptations that immigration entailed. This has rarely been investigated but will be in the present study. Weinberg (1949) has found that of those individuals who migrated to Israel, the ones with passive personalities adapted less easily. Brein and David (1971), in a excellent review paper, concluded that adjustment to life in a foreign country was significantly associated with the kinds of social interactions the individual had experienced at his place of destination. Those who were able to speak the language and who made friends

with the natives adjusted most readily (David, 1972). In the present study, it is similarly being hypothesized that inter-personal facility will decrease the strength of the relationship between mobility and maladaptive behavior.

Back and Pittman (1965), Mezey (1960), and Murphy (1961) all have stressed the importance of cognitive attitudes about mobility. Certainly effects of moves will differ according to whether or not the move is perceived as a positive or negative step. Another potential mediating variable is the size of the migrating group (Mezey, 1960; Murphy, 1965). One would expect that the transition would be easier if there were other individuals in similar situations.

It is important to learn what meaning an individual attaches to his move since the effects will probably differ according to the motivating circumstances. Is the person moving in order to escape an intolerable situation? to improve his social status? As Back and Pittman (1965) have stated: "mobility cannot be measured in any meaningful way by the fact of residential change alone (p. 206)." In the present study attempts were made to control for this kind of factor by including measures of the reasons for moves.

In sum, there are definite inconsistencies in the research data. Sometimes immigrants exhibit higher rates of mental illness, sometimes they show lower rates, and at other times no differences are observed. The possibility exists that many studies are invalid because certain mediating variables have not been considered. Murphy has said:

> "What was temporarily forgotten was that if differences in age and sex distributions between the native and immigrant sections of the population could account for the bulk of the difference in rates, other differences between these two groups of the population might be able to account for the rest (Murphy, 1961, p. 283)."

In a later section, methodological problems inherent in much of the mobility research will be reviewed. For the moment one can conclude that many questions are yet to be answered.

Internal Mobility

Many of the investigators who have dealt with the relationship between internal mobility and mental health have compared the proportion of internal migrants in the state mental institutions with their proportion in the general population. Usually internal migrants were considered as such if they were living in a state other than the one in which they were born. Often, the index of mental illness was the rate of first admissions to the state mental institutions. Malzberg's early studies (1936a, 1936b) found a significant association between internal mobility and mental disease. Later with Lee (Malzberg and Lee, 1956) Malzberg added controls for age, sex, color, diagnosis, and rural-urban place of residence; the significant differences remained, both with regard to overall rate of first admission and also with respect to rates of schizophrenia. In a more recent paper Malzberg (1967) again replicated these findings.

Thinking that perhaps New York was atypical in that it tended to attract the more unstable type of person (Malzberg and Lee, 1956), other investigators attempted to cross-validate Malzberg's findings in other states. Locke, Kramer and Pasamanick (1960) did a successful replication in the state of Ohio. Lazarus, Locke and Thomas (1963) then extended the design by using statistics from three states: Ohio, California and New York. The migrant-non-migrant differential remained significant, although the magnitude of the difference varied by state, sex, color and diagnosis. Kantor (1969) has commented that these variations point to the necessity of research-

ing those factors which could possibly account for them.

Thus far, social class variables had not been controlled, although many investigators suspected that these kinds of differences may have been responsible for a substantial portion of the migrant-non-migrant differentials. However, when Lee (1963) replicated Malzberg's New York state study and implemented controls for education, occupation and marital status, the conclusions were not altered.

Significant positive associations have also been obtained when other measures of both the independent and dependent variables were used. Gordon and Gordon (1958a, 1958b, 1960) did a series of studies in which they examined the mental health correlates of life in a rapidly growing community. In their studies mobility of individuals was not measured directly. Rather, it was assumed that individuals could be characterized by the mobility rate (growth rate) of the community in which they were living. These investigators found that life in a rapidly growing community was associated with negative mental health consequences mainly for young married women around the age of child-bearing (1960) and for young male children (1958a). A superior part of the study concerned the measurement of the dependent variable. Mental health data was obtained from numerous sources, including state mental hospitals, private practitioner's offices and out-patient files. Suicide and divorce rates were also examined, as were indices of psychosomatic disorders. The results were consistent across the diverse measures. Unfortunately the mobility experience of well and not well individuals was not compared directly.

In contrast to the studies done by Gordon and Gordon, Tyroler (1967) found that Kennedy Space Center employees were better adjusted both physically

and emotionally than the general population. As in the Gordons' study, Tyroler did not measure mobility per se, but rather he concerned himself with the correlates of life in a "rapidly growing community." Although neither study used social class as a control, it is quite possible that differences along that dimension could have accounted for the contradictory results.

McAllister, Butler and Kaiser (1973) found that mobility had little effect on degree of felt alienation, unhappiness, suspected mental disturbances or poor physical health. They did find, though, that females who had recently moved were less mentally healthy. Unfortunately the investigators did not differentiate local from long distance moves. Jones (1973) found that emotions reflecting stress or anxiety were evident primarily two weeks before and two weeks after a move. In California, Landis and Stoetzer (1966) noted that the mobile people in their sample rarely perceived their moves as disruptive. Rather, most had demonstrated considerable independence and social savoir faire in response to their moves. The authors concluded that numerous, as yet unresearched, strengths exist in the mobile middle class family of America.

Other investigators have also not found positive correlations between internal mobility and maladaptive functioning. Though this may have been due to the use of different operational definitions of mobility, there were indications that variations among mediating variables may have accounted for some of these differences. Tieze, Lemkau and Cooper (1942), unlike the investigators mentioned thus far, conceptualized mobility as a continuous variable. They found no relationship between the number of inter-city moves an individual had experienced and any of the four types of personality dis-

orders which they studied. These included psychoses, psychoneuroses, psychopathic personalities, and adult behavior deviations. Nevertheless, Tieze et al did find an association between a measure of intra-city mobility and the presence of emotional disturbances. All four types of disorders were negatively related to the number of years an individual had been living in his household. Tieze et al interpreted this data as supporting the theory of negative selection since it was felt that the intra-urban moves had been motivated by flight from unpleasant, conflict ridden circumstances. Unfortunately, this variable was never measured directly. Furthermore, the investigators did not suggest why a similar selection process would not also be operating among inter-urban movers. Including reasons for moving, as was done in the present studies, may clarify this issue.

Chesteen and Bergeron (1970) found no relationship between frequency of moving and patient (both in-patient and out-patient) status, while Jaco (1960), working with a population in Texas, found no relationship between internal mobility and the probability of being diagnosed psychotic. Jaco's design, however, was somewhat unorthodox in that recent migrants and transients were excluded from the sample. This may have altered the proportion of negatively selected individuals. Though the migrant groups included both interstate migrants and foreign migrants, the latter group was easily identifiable because they were primarily Mexican American. Nevertheless, mental illness rates in this study were not higher among the migrant individuals.

Lystad (1957) found that the schizophrenics in his sample exhibited less geographic mobility (in terms of the number of years they had been living in the city) than a group of normal controls. Furthermore,

Hollingshead and Redlich (1958) found no relationship between patient status and migration into New Haven from elsewhere in the U.S. Freedman (1950), using data from the 1940 census found no consistent relationship between the mobility rates of an area (in Chicago) and various indices of psychological disorder. He did note, however, that the associations were higher when the independent measure was intra-city mobility. These findings led Freedman to hypothesize that it was not mobility per se that was associated with increased rates of psychological disorder, but rather the degree to which the population in question was mentally mobile, i.e., accustomed to, and not disrupted by moving.

Kleiner and Parker (1959) used yet another definition of mobility and their findings were quite complex. Migrants were defined as individuals who had spent their first 17 years in a city other than Philadelphia. Their sample consisted of American blacks and the dependent variable was the rate of admission to state mental hospitals. Contradictory results were obtained: the southern migrants were under-represented in the state mental hospitals while the northern ones were over-represented. A second study (Kleiner and Parker, 1965) was designed to find out which other variables were contributing to the findings. Contrary to expectation the southern migrants were not of a significantly different social class; nor were they different regarding status consistency. What did distinguish this group was a smaller discrepancy between their achievements and level of aspiration. Again, it was not mobility status per se which was responsible for the obtained correlations, but rather an associated psychological dimension.

In Norway, Astuup and Ødegaard (1960) and Ødegaard (1945) found that internal migrants had lower rates of mental illness in all parts of

Norway except Oslo. Ødegaard explained the discrepancy between these findings and those of his earlier study (Ødegaard, 1932) as being due to the operation of different selection processes. He felt that internal migrants, unlike the earlier ones, were taking a positive socio-economic step by moving. Thus their perceptions of the situation were more favorable. Moreover, Ødegaard felt that because these migrants were better skilled they were more adaptable. No direct test of these explanations was applied, however.

Other mediating variables have also been assessed. These variables have included personality traits, attitudes, and the circumstances surrounding moves. Fried (1963, 1965) studied both the effects of forced relocation and the variables altering the direction of these effects. His sample was composed of working class individuals of primarily ethnic stock. The initial reaction of most of the relocated individuals was one of intense grief. Fried likened this feeling to one of mourning. Nevertheless, by the end of two years most individuals were satisfied with their new environment.

Fried found that pre-mobility attitudes were very predictive of post-mobility adjustment. An individual's position on a dimension called "readiness for social change" ("preparedness") was significantly associated with post-move satisfaction. The two major components of this variable were a willingness to cut strong social ties in the old community, and a desire to experience a greater degree of social mobility. Low scores on the preparedness variable, were counteracted to a certain extent by positive experiences in the receiving community.

In England, Sainsbury (1966) found that certain variables correl-

ated significantly with mental disease among the inhabitants of a new town. The females who became patients had less favorable attitudes towards the town and also scored significantly higher on a scale measuring emotional isolation (i.e., they had fewer contacts with neighbors, a lesser number of friends, etc.).

Length of residence in a new community has also been implicated as an important mediating variable. In one of their earlier studies, Malzberg and Lee (1956) analyzed migration differentials for five year migrants (i.e., people who had moved into the state within the preceding five years). They found that their admission rates were very high; in comparison, the older migrants were more similar to the natives than to the recent migrants. Malzberg felt that this reflected a negative selection process, particularly since most of the admissions among the five-year migrants occurred within a year of their move into the state. On the other hand, it is equally plausible that the disturbance was caused by an acute environmental change.

Kantor (1969) has noted that Burchinal (1963), Omari (1956) and Tilley (1965) all found that community satisfaction and integration increased with length of residence in the new community. A similar conclusion was reached by Windham (1963). Other parameters which have been found to be associated with post-move adjustment have been previous mobility experience (Jones, 1973; Landis and Stoetzer, 1966) age (Jones, 1973; Omari, 1956) social class (Gutman, 1963; Omari, 1956; Tilley, 1965) urban experience (Rose and Warshay, 1957; Tilley, 1965) and prior knowledge of the new community (Jones, 1973). The availability of already-established kin and friendship ties at the community of destination has sometimes been seen as an asset, at other times not. Tilly (1965) noted that individuals with

such ties became assimilated less rapidly, while Omari (1956) found that movers with relatives in the vicinity had higher adjustment scores. Scharyweller and Seggar (1967) found that the size of effective kin groups in the area of destination was not related to social and psychological adjustment except for recent migrants. Furthermore, both Young and Young (1966) and Tilley and Brown (1967) noted that the disruptive effects of moves were lessened if one already had some friends in the new community. Jones (1973) found that the better educated person was less likely to react to a move with loneliness and/or depression. Regarding age, the younger mover (20-29) more frequently felt remote from other people as a result of his move. Jones further noted that of all the interpersonal contacts made by the newcomers, those with neighbors were rated as the most important. This was in contrast to the finding by Gutman (1963) that voluntary associations were the primarily integrating mechanisms for new arrivals. Gutman found that rapid integration into a new community varied with: social class (middle class assimilating faster than lower class, presumably because of their superior social skills), the class of homogeneity of the neighborhood where one was living, and the season (socialization being inhibited during the winter months). Surprisingly, the transients and the upwardly mobile individuals became integrated more speedily than did the permanent residents. Furthermore, Gutman (1963) wrote that moves were not difficult to adjust to for individuals who had internalized what he called typical American character traits. Examples of these were: the ability to initiate conversation with a stranger, tolerance for a range of behaviors in others, and the ability to derive emotional satisfaction from one's family. Those who found moves difficult to adapt to had many of the characteristics of the lower class individuals (e.g., strong con-

victions about child rearing, dependent on family, etc.) and so Gutman concluded that class differences were very much related to the ability to adapt to moves. In addition, Whyte (1956) and Omari (1956) noted that when moves were made because of a change of job, assimilation was often accelerated by virtue of the fact that company employees helped the newcomer become established in the community. In fact this mode of entrée was felt to be more efficient than that resulting from introductions by friends and kin.

Working with three different ethnic groups (Mexican Americans, Negroes, Anglo-Americans) Shannon and Krass (1964) found that the personal and economic integration of the migrants varied with a number of demographic and social factors (e.g., prior urban experience, occupation, education, participation in urban groups). Nevertheless, even those relationships varied in size and direction depending on the ethnic group being examined.

Very few studies have included personality measures as relevant mediating variables. Fried (1965) assessed the traits depressive orientation, mastery, sterotypy, and withdrawal using the Incomplete Sentence Test as the measuring instrument. None of the characteristics in question were significantly related to post relocation adjustment, although the validity of the personality scales derived from projective instruments is questionable. McKain (1973) studied personality correlates of adjustment to moving in a military population. He found that the military wives who were higher on Langner's anomie scale, and who identified less with the military (Pederson's scale) more frequently identified moves as having negative effects on themselves, their marriage, and their children. Furthermore, those women who identified very little with the military had three times as many psychiatric symptoms as those who did not. Certainly with respect to mobility as it

occurs in a middle class population, much remains to be researched regarding the moderating effects of personality variables, and some of the data presented in this paper bears on that question.

When significant correlations are obtained between mobility and personality variables it is possible that they reflect not the effects of mobility experience per se, but rather the operation of selection factors. That is, it may be that individuals who decide to migrate have different personality charcteristics from those who do not, independent of any effects the experience of migration has had on them. The experimental evidence relating to these selection factors, however, is equivocal. Robins and O'Neil (1958) found that former patients of a child guidance clinic had experienced, twenty years later, more moves than a control group. On the other, in a longitudinal study done by Mazer and Ahern (1969) the data obtained did not support the assumption that those who migrate are greater "risks" than those who do not. Though students who left the island Martha's Vineyard in order to attend university scored higher on many of the California Personality Inventory scales, those who migrated for other reasons had indistinguishable personality profiles when compared with those people who did not migrate. In contrast, other investigators (Martinson, 1955) have found that the youths who migrated from rural areas were usually the ones who were more intelligent and better skilled. Thus it would seem that the selection factor would vary depending on the reasons for the move, the characteristics of the sending community and the attributes of the area of destination.

Tooley (1970) has written that adaptation to moving varies with certain developmental parameters, the most important being age for the children and what stage the family cycle is at for the mother. Thus she postulated

that when children are trying to break away from family allegiances (e.g., beginning school or early adolescence) they are especially sensitive to the dependency elicited by their new environment. Mothers of young children may suffer more than at other ages, because they are kept at home more and hence have fewer opportunities to interact socially. These speculations are interesting but await further research as Tooley presented only case histories as supporting evidence.

In sum, one cannot yet say conclusively whether mobility has a positive or negative effect on adaptive functioning. Certainly this relationship is probably dependent on the operation of other mediating variables, a number of which have been discussed in the previous paragraphs. Though the role played by some mediating variables have been researched, the relevance of many personality characteristics have not yet been examined.

Mobility and the Adjustment of Children

Very few investigators have measured the association between immigration and adjustment among children; thus, the following review relates primarily to the correlates of internal mobility. The findings have often been contradictory. Apparently mobility in and of itself does not alter the academic and/or social adjustment of children; rather, mobility has positive or negative effects (or none at all) depending on the kind of population being studied.

The investigations have varied in both their measures of mobility and their measures of adjustment. Often academic standing has been included as an index of psychological functioning. A number of investigators found no significant associations between measures of mobility and measures of adjustment. Thus, Downie (1953) found no relationship between a child's mobility

experience and his I.Q., and no consistent association between his mobility experience and a measure of social acceptance. Similarly, Burchinal and Jacobson (1963) could not distinguish children who had been mobile from those who had not along a number of dependent measures. These included: personality traits, participation in school activities, relationships with school friends and teachers, I.Q., school achievement, absenteeism, and the emotional relationship between parent and child. Mankowitz (1969) controlled for social class, I.Q. and sex and found that mobility experience was independent of both achievement and personal problems. Similarly, Stafford (1969) noted that mobility was not related to measures of interpersonal orientation, social distance, alienation and student values. Tieze et al (1942) found no relationship between inter-city mobility and mental health problems among children and Falik (1966) found that children's mobility experience was independent of measures of both social and academic adjustment. Finally, Green and Daughtry (1961) could not obtain any significant associations between mobility and most of the 102 dependent variables which they examined.

Kantor (1965) was one of the few investigators in this area who did a longitudinal study. She found that residential mobility (intra-city) alone was not associated with changes in the symptomatology of children. However, when the move was associated with upward occupational mobility, there was either less of a decrease or an increase in the rated symptomatology of the children.

On the other hand, a number of investigators have found that psychological adjustment varies in significant ways according with children's geographic mobility experience. Levine, Wesolouski and Corbett (1966) found a significant negative relationship between the number of previous schools

a child had attended and school grades in both citizenship and attendance. Further analysis, however, showed that the relationship was strongest among the poorer, non-white children. Liddle (in Kantor, 1965) did a sociometric study and found that newcomers to a classroom were less popular, although with time their social acceptance increased. Kantor (1965) has made reference to a study wherein one third of highly mobile children were rated by their teachers as being social isolates. Smith and Demming (in Kantor, 1965) similarly found that late entrants were of lower social status in their classroom, although they did not score significantly differently on either the California Personality Inventory or on teachers' ratings.

Certainly, as Levine et al (1966) have noted, the factors associated with a move may be more important than the move per se, when one is considering the effects on the child. Kantor (1965) has commented on a number of these factors. They have included: social class of the family, intelligence of the child, and the associated occupational mobility of parents. Other factors have been revealed by Pederson and Sullivan (1964), Stubblefield (1955) and Tooley (1970). Pederson and Sullivan (1964) studied military children and found that their emotional disturbances were not related to mobility per se, but rather to their parents' attitudes about mobility (favorable or not) and towards the military way of life. Stubblefield (1955) has found that four different conditions associated with moving could either precipitate disturbances among children or exacerbate already existing difficulties. These included: (1) children being ignored or placed out of the home while parents are settling in, (2) children being ignored or actively rejected by their peers, (3) grief reactions due to separation from playmates (4) "shock" reactions because of being inadequately prepared for moves.

Tooley (1970) has suggested that mobility is especially disruptive for children during particular developmental stages. For example at periods when children are trying to become more autonomous (e.g., starting school or early adolescence) they may be especially vulnerable to the dependency needs elicited by their being in a novel environment.

On the other hand, Murphy (1961) has noted that children of intact families are especially resilient to social changes of any type. For example, during war time in Britain, the children who suffered emotional disturbances most often were those who had been separated from their mothers by evacuation (Ellis, 1948). Weinberg (1949) also reported that immigration in family groups led to less frequent disturbance than solitary migration.

In sum, it seems that mobility is associated with negative mental health consequences for children in certain situations only. These include situations of concomitant social mobility. Individual factors, such as the intelligence of the child and the social status of the family also appear to be important.

Relationship Between Geographic Mobility and Interpersonal Behaviors

Very few studies have included an analysis of the interpersonal behavior styles of mobile individuals. Nevertheless, the lay press are quite expansive in their descriptions of how mobility is affecting both friendship patterns and extended family relationships. For example, in a recently published book, Vance Packard (1972) cautioned that increasing geographic mobility is tearing away at the roots of North American society. Packard feels that as a result of mobility there is an increasing sense of alienation and anonymity among many individuals. Packard has also stated that the high rate of geographic mobility in America has contributed to the shallowness

and superficiality characterizing many personal relationships. In another popular best seller, Future Shock (Toffler, 1970), Toffler also warned that the present rate of change in our society may prove to be detrimental to human relationships as we know them.

The question has arisen as to whether mobile people adapt to repeated movement by maintaining less intense personal relationships (secondary as opposed to primary friendships). In many studies that was found not to be the case, although often the results varied with the time elapsing since the individual's last move. Thus, Lansing and Mueller (1967) found that "movers" belonged to just as many local organizations as did "non-movers", although it usually took about 2 years before a "mover" could say that he had a close friend in his community. By the end of five years, however, there was no difference in the friendship patterns of movers and non-movers.

Similarly, Gulick, Bowerman and Back (1962) found that newcomers, after a period of time, had satisfactory interpersonal relationships. There was no evidence that they had been deprived of "close, affectional social ties". The authors postulated that these results may have been due to the fact that urban living was not a new experience for these migrants. Furthermore, many were still able to maintain contacts with old friends and relatives as they had not moved over a great distance. The authors felt that adaptation was further facilitated because most of the migrants had accepted mobility as a mechanism of occupational advancement. In another study by McAllister et al (1973) it was found that women who moved were more socially active both before and after their moves. Furthermore, their moves did not alter their participation in formal organizations. The women in Jones' (1973) study did not see their moves as having adverse effects on their social re-

lationships--rather, they reported that their interpersonal skills had improved as a result of moving. Gans (1963) also reported that the migrants in the community which he studied were very active in all organizations.

On the other hand, Windham (1963), Zimmer (1955) and Hunt and Butler (1972) found that mobile men and women were under-represented in formal and informal community organizations, although this difference decreased with time in the new community.

Other investigators have directed their research not to the question of whether or not mobility disrupts primary group relationships, but rather to the mechanisms by which social groups could maintain cohesiveness despite moderately high population turn-over. Thus, Litwak (1960a) has found that bureaucrats become integrated into new communities more speedily than entrepreneurs, because their job experience has taught them how to cope with changing social environments. Similarly, Zimmer (1955) has found that integration is often more speedy for the young and the white collar workers. Fellin and Litwak (1963) have postulated that certain mechanisms could facilitate the integration of strangers into new social groups. These included (1) group norms encouraging positive attitudes towards strangers, (2) willingness on the part of newcomers to open up to strangers regarding personal issues and (3) the non-existence of kin, since their presence had the negative effect of maintaining primary group competition.

Though many of the aforementioned studies produced interesting results, they bear replication due to some inconsistency in results and also because of certain methodological flaws. For example, McAllister et al (1973) included both local and long distance movers in their local sample; Jones (1973) did not use tests of significance and standardized personality

inventories based on external validity data have rarely been used. Although a person's subjective evaluation of his inter-personal efficiency is an interesting piece of information, it should nonetheless be accompanied by data with a higher degree of validity.

Other Personality Variables

Only a few investigators have looked at other personality correlates of geographic mobility. Sticht and Fox (1966) observed that the college students who had experienced a greater amount of mobility obtained higher scores on a scale of dogmatism while Hunt and Butler (1972) found that mobility was associated with alienation but only in lower class migrants. Landis and Stroetzer (1966) found that the mobile individuals in their sample were very self sufficient both with respect to concrete tasks and also with respect to rebuilding their social life. Mann (1972) has postulated that since mobility is often a prerequisite for economic success, the capacity to deal with changing environments should become a highly adaptive quality in our society. The relevant qualities have not yet been investigated although one would expect them to relate to flexibility, autonomy and social skills. The present studies will deal partly with the relationship of those traits to mobility experience.

Methodological Considerations

The methodological problems inherent in mobility research have been succinctly described by Dorothy Thomas (1956) when she stated that:

> "....migrants, variously defined, do indeed differ from non-migrants, also variously defined, in respect to the incidence of mental disease; and the weight of the evidence favors an interpretation that migrants represent greater 'risks' than non-migrants. But many exceptions have been noted, and many ingenious attempts have been made to explain them away. Closer examination of both generalizations and exceptions shows so many inconsis-

> tencies in definitions, so few adequate bases of controls, so many intervening variables, so little comparability as to time and place, that the fundamental 'cause' of the discrepancies may well be merely the non-additive nature of the findings of the different studies (p. 41)."

In this segment, methodological problems associated with the measurement of: (i) the independent variable, mobility, (ii) the dependent variable, "mental illness" (iii) the personality variables, and (iv) the relevant mediating variables, will be examined in some detail.

The Measurement of Geographic Mobility

It must be kept in mind that quite different phenomena are being investigated when different measures of mobility are used. The migration status of an individual who is no longer living in the state where he was born (Lee, 1963; Locke et al, 1960; Malzberg, 1967) is quite different from that of someone who has migrated into a city within the preceding five years (Malzberg and Lee, 1956). The former individual, depending on his age, will have had a much longer time interval in which to become integrated into his new community. If one is trying to assess the relationship between the disruption of a physical and social environment with the development of behavioral disturbances, it is unlikely the relationship can convincingly be demonstrated when the time interval between the move and the measurement of the disturbance is so great. Partly for that reason, the present study will focus on the mobility which has occurred more recently in the life of the individual. If one is more interested in the selection process underlying mobility, then the time interval between the move and the measure of the dependent variable is less important, since the theoretical orientation of investigators who study selection processes leans more towards the consti-

tutional theory of mental illness (e.g. Astrup and Ødegaard, 1960; Ødegaard, 1932). If a positive correlation does in fact exist between geographic mobility and mental illness, both theories can explain that association equally well. However, if no relationship exists, both conceptualizations would be deemed invalid. What is of particular concern in the present studies, is whether geographic mobility per se can result in an increase in maladaptive functioning.

Mobility itself is a complex dimension, and its measurement should include its diverse components. When Kleiner and Parker (1965) define a migrant as anyone who has spent his first 17 years in a city other than Philadelphia, or when Malzberg (1967) defines a migrant as someone who is no longer living in the state where he was born, the resultant mobile group is probably not homogeneous with respect to mobility experience. Thus, people with a lot of mobility experience are being included with those who are but novices. It may be that moving becomes less disorganizing as one's mobility experience increases; or the disruptive effects may be cumulative, increasing with each successive move. These kind of questions may be more effectively answered if mobility is conceptualized as a continuous variable, as was done in the present study.

A number of investigators have utilized indirect measures of an individual's mobility (Faris and Dunham, 1960; Gordon and Gordon, 1960). They have assumed that a person's mobility experience was accurately reflected by the mobility rate of the community in which he was living. Suppositions of this kind, have often been erroneous (Mishler and Scotch, 1963). Though areas characterized by high rates of mobility may also be characterized by higher indices of disorders, it does not necessarily follow that those indi-

viduals who are disturbed are the ones who have experienced the high rates of mobility. Hence, in the present study, correlations will be obtained only between an individual's own mobility experience and the relevant dependent variables.

Only a few investigators (Kantor, 1965; Malzberg and Lee, 1956) have considered the time component of geographic mobility. This is surprising, since one would expect that the psychological strain would be greatest in contiguity with the move (e.g., Jonas, 1973). In the studies to be presented in this paper recency of mobility was included as an independent variable.

As has been mentioned previously, Kantor (1969) has postulated that the disruptive effects of a move will vary with the amount of stimulus change inherent in it. Thus, the cultural similarities of the sending and receiving communities should be considered. Changes in style of life, often accompanying economically motivated moves, should also be assessed. Accordingly, in the present studies culture conflict was measured by noting whether moves were made to different countries, and also by noting whether a change in spoken language had been necessitated by the move.

The motivating circumstances prompting moves have seldom been noted. One would expect that the effects of moves on individuals would vary with the kinds of reinforcements (both social and material) that are associated with the moves. Thus, in the present studies reasons for geographic moves were measured and treated as additional independent variables.

In sum, Back's (1965) statement that geographic mobility cannot be assessed in any meaningful way by residential change alone has guided much of the present investigator's operational definition of that variable.

The Measurement of Maladaptive Functioning

Most of the studies which have been reviewed were concerned with the relationship between geographic mobility and "mental health". It is important to note, however, that both the definition and measurement of that concept are fraught with difficulty. Scott (1958a) has reviewed various research definitions of the term and has noted that it has encompassed such diverse entities as schizophrenia, unhappiness, juvenile delinquency and passive acceptance of an intolerable environment. Bindra (1959) has written that the definition of mental illness should be in strictly behavioral terms and he has further stated that:

> "A person with a behavior disorder is one whose behavior is persistently and markedly different from that of the majority of his cultural group, in a way that is considered undesirable by the group or its appointed experts. ....the basic identifying feature of any behavior disorder lies in the frequencies of occurance of various individual and social activities relative to the frequencies of occurance of the same activities in a defined relevant group (p. 136)."

Many of the studies which have been reviewed thus far used mental hospital admission rates as an index of psychological functioning (mental illness). Conclusions based on studies of that kind, however, bear replication by alternate methodologies since hospitalization data are subject to bias from a number of different sources. Firstly, use of psychiatric treatment facilities is not independent of social class. For example, in New Haven it has been found that admission to the large state mental institutions is more common among lower class individuals (Hollingshead and Redlich, 1958), while in Midtown Manhattan the reverse has been found to be true (Srole et al, 1962). Secondly, community attitudes towards the use of psychiatric facilities will affect the rate of hospital admission (e.g. Fink, Shapiro, Goldensohn, Dailey, 1969; Srole et al, 1962). The tolerance of a community towards

deviant members, and the availability of alternate community and family resources will also affect the rates of hospital admission and increase the bias further. Thus, when Pasamanick (1961) found that the negroe population of Baltimore had very elevated rates of mental illness, he felt that this was a reflection not of their higher rates of illness but rather of the greater difficulties their families had in caring for them at home. Finally, hospital admission rates must vary with the availability or treatment facilities in different communities. Obviously, admission rates can not exceed the available number of beds.

When mental illness rates have been assessed by more than one kind of measure, hospitalization rates have been found to be insensitive to the disturbances of many individuals in the population. For example, when Eaton and Weil (1955), surveyed the mental health of a Hutterite community, they found that though admission rates were low there were many individuals with more mild disorders who were being maintained in the outside community. Furthermore, Srole et al (1962) found that in Midtown Manhattan only one quarter of those individuals judged to resemble psychiatric patients were in fact in treatment.

Hospitalization rates are further biased because only the most seriously impaired people compose the patient sample. Murphy (1965) has commented that there can be no doubt that those who are hospitalized are seriously disturbed in their adjustment to the outside world. Nevertheless, limiting one's disturbed sample to these kinds of disorders means that a large part of the population is either inadvertently being excluded from the disturbed sample, or is being erroneously included in the well sample. This error is even more serious when one is doing research in social psychiatry, for it has

been shown that increased environmental stress often has augmented the incidence of the lesser psychiatric disorders (psychoneuroeses) while the rates of psychoses have remained constant. For example, during both World War II and the Great Depression, the incidence of the psychoses remained constant, while the rates of the psychoneuroses increased (Goldhammer and Marshall, 1949). Certainly it would seem that the lesser mental disorders should be included in research whose aim it is to delimit those aspects of our culture (e.g. mobility) which contribute to the development of psychological disturbances. As Lee has stated:

> ". . . . with respect to mental health differentials, the relative incidence of neurosis and psychosis in a population group, classified according to migration experience, should afford a more direct test of the existence of mental health differentials than an analysis of the relative incidence of commitments to mental hospitals, providing, of course, that such surveys permit a reasonable estimate of the incidence of mental disease (in Thomas, 1956; p. 4)."

Hospitalization data are often felt to be good because they lend themselves to the calculation of incidence rates. One can never really be sure, however, that hospitalization has actually occurred in contiguity with the onset of a disorder.

A number of studies which related mental health to mobility included measures of rates of schizophrenia (Ødegaard, 1932; Malzberg, 1967; Lee, 1963). That kind of information is difficult to interpret since studies have shown that many of the American Psychiatric Association (A.P.A.) diagnostic categories are unreliable (Zigler and Phillips, 1961; Schmidt and Fonda, 1956) and subject to bias from a number of sources.

In sum, though research based on hospital admission data provides valuable etiological cues, it bears replication through the use of other mea-

suring instruments; in particular those which suffer from fewer of the sources of error reviewed above. One promising alternate methodology lies in the use of reliable, validated paper and pencil tests, such as the one developed by Langner (1962). Other additional measures of mental functioning might include behavioral assessments of individuals in their various life roles--work, family, leisure etc. This is the appraoch that has been used by Kanfer and Saslow (1965). The effectiveness of the family unit might be a third possibility worth investigating. The difficulties with the latter measurements however, lie in their resistance to reliable and valid scoring methodologies (Winter and Ferreira, 1969).

Control Variables

Many investigators have found that "mental health" is related to a number of socio-economic variables. Hence, when the association between mobility and mental health is being investigated, the concomitant action of these other factors should be controlled. Among those relevant variables are age, marital status, sex, rural-urban residence, education, and social class (Arthur, 1971; Dohrenwend and Dohrenwend, 1969; Lee, 1963).

Kantor (1969) has noted that geographic mobility is often accompanied by social mobility (i.e. movement from one social class to another; social class is usually reflected in one's education, occupation, income and/or area of residence). Thus, whenever possible that variable should be controlled.

Although standardization of control variables has been the traditional methodology employed, it would be interesting to compare associations obtained within varying ranges of the control variables. Such research would help answer the following kinds of questions: Is moving more stressful for people of (i) lower socioeconomic status?, (ii) varying marital status?, and (iii)

different ages? Attempts were made to answer those kinds of questions in the present studies.

Mediating Variables

In the present zeitgeist, the popular belief is that the stresses of migration often precipitate psychological problems (Packard, 1972). On the other hand, Kantor feels that although "migration...does involve changes in the environment, which imply adjustments on the part of the migrant. These adjustments may be reflected in improved or worsened mental health." (Kantor, 1969, p. 365). She further stated that the relationship between migration and mental illness is complex and

> "varies with social characteristics of the migrants, social psychological aspects of the situation surrounding the migration, and the characteristics of the sending and receiving communities (Kantor, 1969, p. 390)."

A few studies have been concerned with a delineation of those attributes which modify adaptive reactions to moving (Fellin and Litwak, 1963; Fried, 1965; McKain, 1973). An interesting, yet unexplored, mediating variable is expectancy. Will an individual's expectations about the outcome of his move affect his adaptation to it? Furthermore, can the concept of "locus of control" be profitably used in increasing our predictions about the outcomes of moves? According to attribution theory (Lefcourt, 1966) an individual who moves of his own volition should find the move less disruptive than one who has perceived the move as having been imposed upon him from without. Similarly, lesser stress reactions should be exhibited by individuals who have more positive cognitive appraisals about mobility (Lefcourt, 1966).

Individual differences in personality have rarely been considered as mediating variables. The present study will consider a number of these,

in particular those concerning interpersonal skills. It may be that successful adaptation to mobility occurs only in individuals with specific behavioral dispositions. Since personality research is currently being questioned by a number of prominent psychologists certain relevant controversial issues will be examined briefly in the following paragraphs.

Fundamental to personality research is the idea that there are regularities in man's behaviors. These consistencies are believed to be such that knowledge about their existence and strength will enable psychologists to accurately predict man's behaviors. These individual difference dimensions are abstract concepts inferred from behaviors, and have variously been called "traits", "habits", "needs", "motivations", etc. The consistencies are thought to be a result of both stimulus generalization and the consistencies in reinforcement contingencies which exist in many of societies' formal and informal institutions (Mischel, 1968; Secord and Backman, 1965). Other contributing factors are variations in constitution and variations in environmental experiences (Allport, 1966; Carson, 1969; Cattell, 1965).

Methodological and conceptual improvements in the measurement of personality have been developing recently at an accelerating rate. Personality inventories are now structured, objective, and constructed in such a way that they demonstrate considerable reliability, internal homogeneity, convergent, divergent, and construct validity, and some are even subjected to multitrait multimethod factor analysis (Campbell, 1960; Campbell and Fiske, 1959). Furthermore attempts are now made to have clear conceptualizations of trait concepts, and these definitions frequently involve behavioral referents. Use of highly abstract inferential trait categories (e.g., libidinal drive) is presently discouraged (Mischel, 1968). Nevertheless as Allport (1966) has

stated:

> "Since traits, like all intervening variables, are never directly observed but only inferred, we must expect difficulties and errors in the process of discovering their nature (Allport, 1966, p. 3)."

Mischel (1968) has questioned the utility of measuring individual differences in personality. Though he did not deny their existence, Mischel's thesis was that their effects on behavioral variance were minimal, especially when compared to the more powerful effects of variations in stimulus conditions. He cited as evidence for his position studies in which investigators found that personality dispositions (e.g., locus of control, delay of gratification, moral behavior) were not consistent when certain stimulus parameters were changed. Alker (1972) criticized Mischel on a number of different points. He noted that when Mischel referred to studies demonstrating inconsistency in personality across situations, the personality coefficients were undoubtedly attenuated by virtue of the fact that the samples were restricted in range along the personality dimensions. Furthermore, he felt that Mischel had neglected that personality characteristics could be demonstrated "in a variety of situations by different behaviors exemplifying the same trait (p. 8)." He further noted that functional nonequivalence of behaviors across situations did not necessarily negate their conceptual equivalence.

> "Convergent validity does not merit methodological primacy when convergent invalidity is demonstrated by the presence of negligible correlations between several measures that somebody thinks for no good reason at all are functionally equivalent (Alker, 1972, p. 9)."

Alker (1972) concluded that the interaction between situation and personality accounted for far more behavioral variance than either alone, Mischel (1973)

has recently also come around to this position and he has postulated a comprehensive theoretical approach to the measurement of all the relevant variables.

> "The proposed cognitive social learning person variables deal first with the individual's competencies to construct (generate) diverse behaviors under appropriate conditions. Next, one must consider the individual's encoding and categorization of events. Furthermore, a comprehensive analysis of the behaviors a person performs in particular situations requires attention to his expectancies about outcomes, the subjective values of such outcomes, and his self-regulatory systems and plans (Mischel, 1973, p. 265)."

Carson (1969) esposed a similar theoretical orientation in his book Interaction Concepts of Personality.

Thus, it seems that though personality consistencies most probably exist, their expression is modified by numerous other factors. Measurement of all the relevant variables would be impossible in an epidemological investigation, and so in the present studies only personality traits were considered. Nevertheless attempts were made to select an inventory which was constructed according to the latest developments in personality measurement. The traits were conceptualized as summary terms for certain classes of behaviors and not as causes of behaviors. Furthermore the research instrument which was selected was one wherein each scale was "derived from an explicitly formulated, theoretically based definition of a trait"(Jackson, 1971). As Mischel suggested, the trait concepts were only used as "empirical indicators of other responses with which they were found to be associated in other populations" (Mischel, 1968).

The Present Study

Rationale

The present investigation (involving several studies) is concerned with examining the distribution of psychological disorders in populations varying along the dimension of geographic mobility. Though other factors may also have been affecting the level of the dependent variable, it was hoped that they would be controlled by the use of random sampling methods, and by having the populations matched along a number of socio-economic dimensions.

Because frequent geographic mobility involves (1) loss of stable social supports, (2) adaptation to an accelerated rate of stimulus change, and (3) adjustment to different social expectations (social change), it was hypothesized that geographic mobility could disrupt adaptive functioning.

Mobility and Loss of Social Supports

Though psychologists as yet have a minimal understanding of those factors which contribute to the disruption of adaptive behaviors it is commonly felt that the maintenance of adaptive functioning depends on the existence of fairly stable social supports (Brody, 1969; Fried, 1964; Jaco, 1959). Geographic mobility inevitably disrupts many of these environmental supports and thus has the potential of impairing adaptive functioning (Brody, 1969; Jaco, 1959; McAllister *et al*, 1973).

> "Crises in societal patterns or in individual experience that involve important losses, separations or disruptions and are not compensated by new social resources and a new sense of belonging and commitment are particularly significant for mental health and illness...(Fried, 1964, p. 23)."

> "Adaptation in the psychological sense refers to the process of establishing and maintaining a relatively stable reciprocal relationship with the environment. For human beings this means the human, social or interpersonal environment (Brody, 1969, p. 6)."

One would expect that the more frequently a person has moved, the more he has experienced a loss of social supports, and thus the greater would be the probability that his behavioral functioning would be disrupted. On the other hand, efforts at re-establishing a comfortable social network would inevitably follow each move. People would probably vary in their competence to do that, and hence individuals' degree of impairment following a move would also vary. In an attempt to measure those kinds of internal mediating variables certain personality scales from the Personality Research Form (P.R.F.) (Jackson, 1967) were included in the present test battery. These scales assessed traits relating to the capacity individuals had for developing friendships with rapidity and ease. It was expected that individuals who scored high on these scales would exhibit fewer disruptive effects.

It was also expected in one study that individuals who were accompanied by other family members would experience less disruption as a consequence of moving. This expectation was derived from research showing that group membership decreased stressful effects of stimuli. For example, it has been noted that during the war children in London were less disturbed during the blitz than they were when they were separated from their families (Ellis, 1948). Furthermore, research with both animals and humans has shown that reactions to stressful stimuli decreased when organisms were in the presence of a familiar social stimulus (Kissel, 1965), and increased when the stress was experienced in social isolation (Cassell, 1970). Moreover, in a review article by Scott (1958b) it was suggested that social isolation increased

the incidence of psychological disorders. This conclusion was derived from studies of immigrants and in particular from studies where it was found that rates of disorders among immigrants varied with the size of the ethnic community in the area where the immigrants were living. Gruenberg (1950) similarly found that rates of mental disorder for an area were highly correlated with an index of the number of people living alone in that area. Social isolation has also been put forward as an explanation for the association between social mobility and mental illness (Hollingshead and Redlich, 1958). Geographic mobility can be perceived as a process involving a certain amount of social isolation--at least in temporal contiguity with a move, and this is another reason to hypothesize that mobility can have disruptive consequences.

Thus, in one of the present studies another mediating variable which was assessed was whether individuals made their moves alone, or whether they were accompanied by parents, spouses, or children. According to one theory (group membership) adaptation would be better for those individuals who moved within a family context. On the other hand, other previous research has shown that assimilation is slower for individuals with already established kin and friendship ties in their community of destination (Tilly, 1965). The question is thus, ultimately, an empirical one.

Mobility and Stimulus Change

A move inevitably involves a massive amount of stimulus change, and various investigators have postulated that too much stimulus change can be disruptive. For example, Sokolov (1963) has found that novel stimuli produce orienting reflexes. These physiological responses, though basically adaptive (they prepare an organism for fight/flight, etc.), can nevertheless be path-

ological when they occur too frequently.

> "There is absolutely no question that one can overshoot the stimuluation of the endocrine system and that this has physiological consequences that last throughout the whole lifetime of the organs (Dubos, 1966)."

Work with monkeys has often lead to fruitful hypotheses about human behaviors, and Welch (1964) has found that when monkeys are exposed to novel levels of sensory stimulation they react physiologically as though they had been exposed to an obviously aversive stimulus (i.e. they react with the physiological syndrome commonly called stress). Welch has thus concluded that any deviation from a level of environmental stimulation to which an organism has adapted could be conceptualized as stressful and potentially disruptive of adaptive behaviors.

Many other social scientists, though they have not as yet researched the question, have suggested that environmental change in and of itself can have negative consequences on psychological functioning (Holmes and Masuda, 1970; Toffler, 1970; Welch, 1964). For example, in his book Future Shock, Toffler stated:

> "It is the thesis of this book that there are discoverable limits to the amount of change that the human organism can absorb, and that by endlessly accelerating change without first determining these limits, we may submit masses of men to demands they simply cannot tolerate. We run the high risk of throwing them into that peculiar state called future shock.
>
> We may define future shock as the distress both physical and psychological, that arises from an overload of the human organism's physical adaptive systems and its decision-making process. Put more simply future shock is the human response to over-stimulation (p. 326)."

Since stimulus change has been construed as an aspect of mobility that makes it stressful (Hinkle, Christenson, Kane, Ostfeld, Thetford and

Wolff, 1958; Holmes and Masuda, 1970; Toffler, 1970; Welch, 1964) part of the measurement of mobility included an assessment of whether moves involved a change in country and also whether they involved a change in language. This was done because it was assumed that a change of country and in particular a change in language would be associated with a different kind of environmental context.

Though too much change is often perceived as disruptive, people differ in a relatively consistent way in their capacity to adapt to change and in their preference for changing life styles (Jackson, 1967). This personality characteristic will probably alter the psychological disruption inherent in moves and in order to measure that important aspect the PRF scale Change was included in the study.

For similar reasons male and female protocols were anlyzed separately. This was done partly because other investigators had found that mental illness differentials were higher among mobile females (Malzberg and Lee, 1956; Ødegaard, 1932), but also because it was expected that the females (wives) would experience greater stimulus change than their husbands. This was expected because many of the husbands who had been transferred would still be working for the same employer company, and hence would experience less environmental discontinuity than their wives.

Some writers have postulated that the stimulus change experienced as a consequence of geographic mobility is less extensive than was originally thought. Whyte (1956), for example, described how the changes experienced by corporate men were minimal, since the communities they inhabited were very similar (physically) all over the continent. Although showing a different conclusion this characteristic has also been referred to in Vance Packard's

recent book A Nation of Strangers:

> "I can put these people in approximately the same environment as far as school, types of neighbors, same income bracket, same family background, same education, anywhere across the country. They will not be changing their environment, they will be changing their address (Worker for national sales at Executive Homesearch, p. 31.)."

It is important to note that there is a similarity of social styles and culture across different middle class communities, and that by identifying with their employer corporations, many people have been able to combat the alienation they might otherwise have felt leading such mobile lives (Whyte, 1956). In contrast to an earlier era, one's identity and sense of community is no longer dependent upon kinship ties and geographic locale, but rather is related to common background, education and interests. Hence, because of technological advances in the communication networks (television, radio, movies, books), cultural similarity is now independent of geographic location. This, combined with the relatively easy access people have to old friends and family (via telephone, travel, and mail), makes it possible to question the amount of environmental change experienced by mobile individuals. Both sides of the issue exhibit rational arguments, and the problem thus becomes an empirical one: "the critical questions are statistical: how many people adapt easily or grow emotionally by moving, and how many suffer and how seriously (Gans, 1973, p. 26).

Mobility and Social Change

Though stimulus change and social change are closely related concepts, they differ in that stimulus change research deals with the immediate effects of environmental change on the functioning of an organism, while social change implies that novel behavioral adaptations are required as a

consequence of the stimulus change. Thus a residential move made by an adult can often temporarily disrupt adjustment, but that disruption is due simply to the change in environmental stimuli. No novel social behaviors are required, as in the case of moving to a different culture or city.

It is assumed in the present studies that geographic mobility, when it is inter-city or inter-country, involves a certain amount of social readjustments.

> "...as he shifts via migration from one socio-culture to another, behavioral modes useful in the old setting may prove maladaptive in the new. A shift in residence involves not only new places, but new faces and new norms. Movement over distance implies the crossing of social system boundaries, whether the systems are defined in terms of national entities, regional subcultures, or immediate friendship and kinship networks (Brody, 1969, p. 7)."

Situations of social change have been found to disrupt adaptive functioning, and this fact lent further justification to the thesis that geographic mobility could disrupt psychological functioning. A number of writers have commented on the social implications of rapid environmental change. Kagan (1971), for example, has referred to "the growing fear that the rapidity of (this) progress and some of the accompanying social and environmental changes are already causing disease, (p. 36)", and Levi has noted that:

> "Modern society functions on the principle that steady economic growth must be maintained ad infinitum. We seldom ask what mental and physical price we pay for this economic evolution. A great number of...studies ...suggest that various environmental influences in today's highly industrialized, urban societies are of pathogenic significance. In general, the hypotheses imply that man's phylogenetically old adaptation patterns, preparing the organism for flight or fight, have become inadequate, and even harmful, in response to the predominantly psychological or sociological stressors prevalent in modern society (Levi, 1971b, p. 3-4)."

Thus Syme, Hyman and Enterline (1964) found that occupational mo-

bility was associated with an increase in coronary heart disease. Coronary heart disease was also found to be associated with generational, career, residential and situational mobility. Syme attributed these relationships to the common factors of incongruity and change. Similar conclusions have been reached by Cassell and Tyroler (1961). Among a group of rural workers, they found that those who were first generation factory employees (i.e. children of farmers) had poorer health scores (CMI) than the second generation ones. Moreover Hinkle and Christenson (1961) noted that managers who were not college educated but had risen through the ranks showed more physiological signs of stress than recently hired college graduates. Finally, Gampel (1962) found that recently urbanized people of the Zulu tribe in Africa exhibited significantly higher rates of hypertension. Most probably the underlying unifying factor here was both the extent of the change in behavioral expectations and also the rate at which the adaptation had to be made.

This latter variable (rate at which social readjustments are required) has been studies extensively by a group of researchers in Washington (Rahe (mimeo); Hinkle and Wolf, 1958; Holmes and Masuda, 1970; Holmes and Rahe, 1967; Masuda and Holmes, 1967; Rahe, 1964; Rahe, McKean, Arthur, 1967; Rahe, Gunderson, Arthur, 1970). In a series of ingenious studies, the investigators quantified the amount of change experienced by individuals over a unit period of time, and related this to the probability that the person would develop a mental or physical disorder. The expectation, which was based on previous analyses of life history data, was that people who experienced the greatest amount of changes (both positive and negative) would exhibit the highest rates of disorders. Using a measuring technique derived from psychophysics, they were able to assign a numerical value to a series

Table 3

Social Readjustment Rating Scale*

Rank	Life Event	Life Change Units
1	Death of spouse	100
2	Divorce	73
3	Marital separation	65
4	Jail term	63
5	Death of close family member	63
6	Personal injury or illness	53
7	Marriage	50
8	Fired at work	47
9	Marital reconciliation	45
10	Retirement	45
11	Change in health of family member	44
12	Pregnancy	40
13	Sex difficulties	39
14	Gain of new family member	39
15	Business readjustment	39
16	Change in financial state	38
17	Death of close friend	37
18	Change to different line of work	36
19	Change in number of arguments with spouse	35
20	Mortgage over $10,000	31
21	Foreclosure of mortgage or loan	30
22	Change in reponsibilities at work	29
23	Son or daughter leaving home	29
24	Trouble with in-laws	29
25	Outstanding personal achievement	28
26	Wife begins or stops work	26
27	Begin or end school	26
28	Change in living conditions	25
29	Revision of personal habits	24
30	Trouble with boss	23
31	Change in work hours or conditions	20
32	Change in residence	20
33	Change in school	20
34	Change in recreation	19
35	Change in church activities	19
36	Change in social activities	18
37	Mortgage or loan less than $10,000	17
38	Change in sleeping habits	16
39	Change in number of family get-togethers	15
40	Change in eating habits	15
41	Vacation	13
42	Christmas	12
43	Minor violations of the law	11

* From "Social readjustment rating scale" by T.H. Holmes and R.H. Rahe, Journal of Psychosomatic Research, 1967.

of life change events (see Table 3). This measure reflected the amount of social readjustment which was necessitated by each event, and when it was summed for a particular period of time, it was found to be significantly correlated with the onset of both physical and mental disorders. In general, when the Life Change Units (L.C.U.) score was calculated for a period of one year, the probability of developing an ailment within the next six months was very high for people who had LCU scores of 300 or more. Individuals with scores of 150 to 300 developed 50% of all the illnesses reported, while those who had scores of 150 or less were relatively healthy.

It is interesting that the studies quoted in the previous paragraph conceptualized both positive and negative social changes as being potentially disruptive situations. Thus, marriages, promotions and upward social mobility were all seen as situations requiring the development of novel adaptive responses. Tyhurst (1957) has noted that various transition states, including immigration, marriage and birth of a child were often accompanied by signs of psychological distress (somatic, emotional or intellectual). Thus, it would seem that even if geographic mobility is part of an overall positive step in a person's life, it may nevertheless tax his adaptive resources greatly.

Should Mobility Disrupt Adaptive Behavior for the Short Run or the Long Run?

A number of theoretical issues are as yet unresolved. Although symptoms may appear in certain environmental contexts, what causes them to be maintained? Usually when one talks of psychological disorders it is implied that the maladaptive behavior patterns are more than just transient responses to stressful situations. Wilson (1963), for example, has noted

that maladaptive responses are repetitive, stereotyped, and highly resistant to changes in environmental contingencies. On the other hand, the Dohrenwends (1969) have concluded that "...persons who have suffered a stressful event that does not involve a permanent loss generally recover spontaneously from its effects (p. 113)." For example, war neuroses have often proved to be reversible. Similarly the effects of maternal deprivation and physical disasters have also been reversible. The Dohrenwends have hypothesized that the persistence of maladaptive responses is more a result of secondary gain than a continued response to a no longer existing stressful situation. Tyhurst (1957) has similarly hypothesized that the disturbances associated with transition states are not necessarily indicators of impending psychological disorders, but rather are often opportunities for psychological growth.

Though signs of strain are frequently inevitable concomitants of novel adaptive responses, it is unlikely that when they exceed a certain level of intensity emotional growth will be permitted. For example, though autonomic reactions will often supply that additional and necessary spurt of energy, too great a response will disrupt behavioral functioning. Hence this writer does not necessarily agree that symptoms which are responses to novel or stressful situations are less impairing than symptoms which are less closely linked with environmental contingencies. If moving produces an elevation of maladaptive symptoms this should not be seen as but a temporary reaction, since these kinds of behaviors are often self-perpetuating by definition (i.e. they are not adaptive in their situational effects). Nevertheless once again the basic question is an empirical one. The present investigation sought to determine whether a certain amount of mobility was associated with an elevation of psychological symptomatology, and also whether that elevation was

temporary or not. Cross sectional analyses of different frequencies of mobility and recency permitted comparisons of that sort.

Other Important Mediating Variables

The reasons for the inclusion of a number of potentially relevant mediating variables have already been discussed (i.e. measure of personality traits, sex, age). Other variables which were deemed important in this regard were as follows.

Mobility experience was included as a mediating variable since it was expected that either the disruptive effects of frequent moving would be cumulative, or the disruption would decrease as a function of previous mobility experience.

Lazarus (1966; 1967) has found that the disruptive properties of a stimulus will vary, depending on the individual's cognitions about that stimulus. Thus perceptions about mobility, and assessments about the meaning of moves will perhaps alter the disruptive effects of moving. Therefore parts of the present study aimed to determine whether cognitions about mobility were associated with differential adaptive responses to move.

Because moves involve adaptation to novelty, it was expected that persons who were more flexible, autonomous and self-sufficient would adjust more readily. Hence the P.R.F. scales Cognitive Structure and Autonomy were also included in the test battery.

A number of external mediating factors have not been assessed. These include such things as: characteristics of the community one moves into, its friendliness, whether one already has friends there, whether there were social institutions whose function it was to ease the subject's transition into the new community, etc. It is believed that these mediating vari-

ables are also important, however time, absence of technique and facilities did not permit the measurement of everything, and it was further felt that these variables would be harder to assess validly in a retrospective fashion.

Because it had been expected that mobile individuals would adapt more readily if they had a certain personality configuration, it was anticipated that as a result of successful adaptation to mobility individuals would be more independent, socially skilled, extroverted and flexible.

From a social point of view the studies to be presented are very important ones. Since geographic mobility affects a large part of the populace it is necessary to learn how mobility is related to adaptive behavior and also to delineate those circumstances which are associated with positive responses to moves. The investigations are thus in accord with a statement made by Caplan and Nelson (1973) that:

> "There is considerable support, encouragement and pressure today for behavioral scientists to direct their attention away from the preoccupations of the vigorously irrelevant past and to engage in work with more obvious social utility. Those of us who have long felt that the social sciences have not met their social responsiblity welcome this upsurge of interest in the problems of society... people tend to conform to public definitions and expectations, even if there are doubts regarding their accuracy, ...one searches in vain for serious treatment...of social system variables with which psychologists ordinarily concern themselves (p. 199)."

Study Ia

Introduction

This investigation was a preliminary study designed to measure the relationship between geographic mobility, adaptive behavior and personality in a corporate population. One set of hypotheses dealt with the relationship between geographic mobility and adaptive behaviors. A second series of questions assessed subjective perceptions about adverse effects of moves.

A number of hypotheses were put forward which concerned the role of internal mediating variables. These variables were measured using Jackson's Personality Research Form (1967). It was expected that people with a preponderance of certain personality traits would find moves less stressful and hence adapt more easily to them. Among the personality scales included in this regard were ones relating to social skills and interpersonal behaviors. It had been assumed that moves would be stressful due to the inherent loss of social supports. Therefore, it was hypothesized that individuals who had the capacity to develop new social supports with rapidity and ease would experience less disruption and therefore display fewer maladaptive behaviors. In this regard, the P.R.F. scales Affiliation, Exhibition, and Play were included in the questionnaire. Other hypothesized internal mediating variables included the capacity to be self sufficient and independent, the ability to be flexible, and the capability to adapt to change and novel environments. These traits were measured by the P.R.F. scales Autonomy, Cognitive Structure and Change respectively.

It was hypothesized that the personality configurations of mobile

individuals would be different from those of non-mobile ones. One anticipated difference was with respect to the achievement motivation of the subjects. Because mobile individuals had accepted transfers, it was felt that their professional ambition would be higher. Furthermore, since it was expected that adjustment to moving would be facilitated by certain behavioral styles, it was therefore assumed that the mobile individuals would show more of these traits. Specifically, the hypothesis was that mobile individuals would be more independent, more socially skilled, more extroverted and more flexible than their less mobile counterparts.

Subjects

The subjects were obtained from a large Canadian corporation. Only managers were approached, as other studies had found that this portion of the corporate manpower structure was the most mobile (Landis & Mueller, 1967; Whyte, 1956). The managers and their wives were contacted by mail. A letter describing the purpose of the research and asking for their cooperation was sent (Appendix A). Subjects were requested to complete a one-hour questionnaire and they were assured that all information would be kept confidential.

In all, 210 managers were approached. Of these, 169 men and their wives agreed to participate (i.e., 80%). Another 10 couples who had not returned their consent forms (i.e. 20 people) were contacted by telephone. Their participation enabled us to compare the protocols of volunteers with those of people who needed an additional stimulus to get them to participate. Using a procedure called discriminant analysis, it was found that these two samples did not differ significantly on any of the relevant personality variables (males: $F = .584$, $DF = 12, 138$, $p > .05$; females: $F = .075$, $DF = 10, 129$, $p > .05$). Although the sample of non-responders was not that large,

the fact that the original response rate was 80 per cent, coupled with the fact that the non-responders did not differ significantly on a discriminant function analysis, indicated that the obtained sample was most probably unbiased.

Of the 179 couples who had agreed to participate, 150 males and 140 females completed and returned the questionnaires to us. Motivation among the subjects appeared to be quite high. The subjects were aware that the research dealt with some of the behavioral effects of geographic mobility. In view of the fact that they all worked for a company in which transfers were frequent, the subject matter of the research was of personal interest to them. Since we could not offer the subjects money for their time, we told them that they would receive a report of our findings when the study was completed. Many people enclosed personal letters giving additional information, and others after moving sent us a change of address note so that they would be able to receive the results of the research.

Most of the sample were Canadian born (78%) and well paid ($16,000-$20,000) per year). The males were primarily college graduates (60%) while most of the females were high school graduates (85%). The details of these frequency distributions are presented in Appendix C.

All of the subjects were currently married. Individuals who had been married more than once (N = 2) were dropped from the sample. This was done in order to study the effects of mobility as an isolated variable uninfluenced by such uncontrolled factors as marital changes. The question was primarily how mobility, occurring in a typical intact family, was related to adjustment and personality.

Measures

Control Variables

Mental health ratings have been found to be related to a number of demographic variables (Srole et al, 1962; Dohrenwend & Dohrenwend, 1969; Lee, 1963). In order to prevent bias from those kinds of factors, variables such as age, education, and social class of origin were measured and controlled for. The measurement of age and education has been described in Table 2 of Appendix C. Social class of origin (i.e. of the social class of subjects' fathers) was calculated according to a formula used by Myers and Bean (1958). Subjects noted both their father's education and his primary occupation while they were growing up. This occupation was then given scores of 1 to 7 according to the following schema.

> "(1) executives and proprietors of large concerns and and major professionals
> (2) managers and proprietors of medium sized businesses and lesser professionals
> (3) administrative personnel of large concerns, owners of small independent business, and semiprofessionals
> (4) owners of little businesses, clerical and sales workers, and technicians
> (5) skilled workers
> (6) semiskilled workers, and
> (7) unskilled workers. (Myers and Bean, 1958, p. 235)."

Education was given scores of 1 to 7 according to a similar scheme.

> "(1) graduate professional training...
> (2) standard college or university graduation...
> (3) partial college training...
> (4) high school graduation...
> (5) partial high school (individuals who had completed tenth or eleventh grades, but had not completed high school)
> (6) junior high school (individuals who had completed the seventh grade through the ninth grade...)
> (7) less than seven years of school. (Myers and Bean, 1958, p. 236)."

Occupational scores were multiplied by weights of 7 and educational scores were multiplied by weights of 4. These weighted scores were then added to-

gether and represented the Social Class of Origin Score. Current social class was calculated in a similar way, except that since all male subjects were managers in a fair sized company they were all given occupational scores of 2.

Geographic Mobility

Geographic mobility was conceptualized as a continous variable. Its measurement was derived from items 9 to 12 of the questionnaire (Appendix B) and encompassed the following parameters:

i) the number of cities lived in before marriage
ii) the number of cities lived in after marriage
iii) the number of countries lived in before marriage
iv) the number of countries lived in after marriage
v) the total number of cities lived in
vi) the total number of countries lived in
vii) the number of inter-city moves made during the previous 10 years
viii) the number of inter-city moves made during the previous five years
ix) the number of years since an individual's most recent inter-city move.

Most of this information served as descriptive data. The measures which were most frequently selected as the indices of geographic mobility were numbers (ii) and (vii) above. These indices were selected because the interest was in the effects of mobility which had occurred fairly recently in the life of an individual. A ten year time span enabled investigation of both the correlates of recent mobility and frequent mobility.

Reasons for Mobility

The reasons for each move were ascertained in question number 13 (Appendix B). Motivational incentives for moving were categorized into economic, (transfer, new job) political, social and personal. Included among the alternatives were categories which could be conceptualized as varying along a locus of control dimension (Lefcourt, 1966). For example, in choices 2 and 4 of question 13, individuals were able to indicate whether or not they felt that their moves had been imposed upon them by their employer companies (external locus of control). In addition, subjects were given the option of writing in any reason which they felt had not been included among the choices offered them.

Social Mobility

Attempts were made to measure concomitant social mobility. Subjects were asked to rate each of their moves according to whether or not the moves were associated with an increase, a decrease, or a maintenance of their standard of living (Appendix B, question 14).

Subjective Perception of Adverse Effects Associated With Moves

Question 15 dealt with individual's subjective perceptions of the adverse consequences of their moves. Adverse effects encompassed their relationships with spouses' and children, their social life, and the academic and social adjustment of the children.

Measures of Adjustment

Two indices of adjustment were the use of tranquilizers and the frequency of alcohol consumption (questions 22 and 24). The measure given the greatest weight was "A Twenty-Two Item Screening Scale Indicating Im-

pairment" (Langner, 1962; Appendix D). This scale was developed by Thomas Langner during the Midtown Manhattan Study (Srole, et al, 1962) and has been used since by numerous social scientists (e.g. Dohrenwend & Dohrenwend, 1969). It was designed in order "to compare population sub-groups with a view to deriving etiological cues" (Langner, 1962). Although the scale does not furnish specific diagnostic labels, it does "provide a rough indication of where people lie on a continuum of impairment in life functioning due to very common types of psychiatric symptoms." (Langner, 1962, p. 269). It has been shown that each item on this scale differentiates "well" from "not well" individuals at the .01 confidence level or better. Other studies speak convincingly for the validity of the scale and they are presented in Langner's 1962 paper.

Personality Measures

The personality scales incorporated into the questionnaire were selected from Jackson's Personality Research Form (PRF), (Jackson, 1967). The definitions and trait adjectives of the PRF scales used are presented in Appendix E. Reliability data are presented in Appendix F. It is evident that the scales exhibit considerable stability over time and substantial internal homogeneity. Other superior qualities of this test include its controls for social desirability and response set, and also its high convergent and discriminant validity (Appendix G).

Attitude Towards Mobility

Question 16 assessed attitudes about mobility. Subjects were asked whether they preferred leading mobile or non-mobile life styles. They indicated their answer by putting a mark on a straight line which was weighted

at each end by two bipolar adjectives.

Selection Process

Question 18 was included to indirectly measure a selection process. Subjects were asked whether they had ever refused an intercity job transfer offered by their companies. Subjects could answer yes, no, or indicate that they had never been asked to move.

In sum, in this preliminary study, the measures were primarily ones that had been standardized and that had demonstrated substantial reliability and validity. The measures included an index of overall adjustment, as well as a series of personality scales. Detailed information about the dates of moves and the reasons underlying them was also gathered.

Analysis of the Data

All data was punched out on computer cards. Analyses were primarily correlational and the programmes used were packages from the Biomedical Computer Programmes (BMDX84 - Asymetrical Correlation with Missing Data - Revised May 10, 1968; Dixon, 1970) and the Statistical Package for the Social Sciences (Nie, Bent and Hull, 1970). Periodically missing data occurred--this was usually dealt with in one of two ways. Either the mean scores for the entire sample were inserted, or the blanks were left as blanks. In the latter instances the sample size was then slightly reduced.

A Note on Correlational Data

The Present studies are correlational in nature, hence they do not permit a valid conclusion about causality. Though many attempts were made to collect longitudinal data, public co-operation was such that this was not possible. Nevertheless the data do provide useful information. Although

correlations are not in themselves reflections of causal processes, they do provide the necessary groundwork on which to base future experimental research. In that way they serve as an invaluable source of information.

Results

Description of the Sample in Terms of Frequency of Moves, Reasons for Moves, and Concomitant Social Mobility

The mobility status of an individual was determined by the number of cities he had lived in during the previous ten years (1960-1970). The distribution of the sample along this variable (City '60) is presented in Table 4.

Table 4

Number of Inter-City Moves Made by Subjects Between 1960 and 1970

Males			Females		
Number of Moves	Number of Subjects	Per Cent of Sample	Number of Moves	Number of Subjects	Per Cent of Sample
0	97	64.7	0	89	63.6
1	17	11.3	1	17	12.1
2	25	16.7	2	22	15.7
3	4	2.7	3	5	3.6
4	5	3.3	4	5	3.6
5	2	1.3	5	1	.7

Also indicative of the amount of mobility the subjects had experienced was the variable City '65. It reflected the number of times an individual had made an inter-city move during the previous 5 years (1965-1970). This frequency distribution along this variable is presented in Table 5.

Table 5

Number of Inter-City Moves Made by Subjects Between 1965 and 1970.

Males			Females		
Number of Moves	Number of Subjects	Per Cent of Sample	Number of Moves	Number of Subjects	Per Cent of Sample
0	109	72.7	0	101	72.1
1	26	17.3	1	23	16.4
2	9	6.0	2	10	7.1
3	6	4.0	3	6	4.3

Twenty-four individuals had moved in the preceding year, and an additional twenty-two had moved within the preceding two years. Thus, there was an adequate sampling of both individuals who had moved, and also of individuals who had moved frequently.

The vast majority of the moves were for economic reasons; that is, they occurred because the subject had been transferred, or because he was seeking better job opportunities elsewhere. Only four subjects admitted to being transferred against their will. None of the moves which had occurred within the past 10 years had been for non-economic reasons.

The Association Between Mobility and the Control Variables

Before assessing the extent of the relationship between geographic mobility and the dependent variables, it was necessary to verify that there was no association between geographic mobility and the control variables. There was no significant correlation between the measure of geographic mobility and the amount of social mobility the subjects had experienced. That

is, both mobile and non-mobile subjects had experienced similar degrees of social mobility when their social status was compared to that of their fathers (social class of orientation).

Furthermore, there was no apparent association between inter-urban mobility and concomitant downward social mobility. That is, the measure of geographic mobility was independent of the item which indicated that moves were associated with a decline in the material way of life of the subjects (Item 14 of the questionnaire--Appendix B).

In addition, there were no significant associations between the measure of geographic mobility and the following control variables: age, education, and salary.

Mobility and Adaptive Behavior

Standardization data for the Langner Scale compared favorably to that obtained with the present subjects. In the present sample (males and females) the range of scores was from zero to nine. In the Midtown sample (Srole et al, 1962), the range extended from zero to eighteen; however, the categories 10-18 included only 18 individuals. The mean and standard deviation for the present sample was 2.9 and 2.0 respectively. The comparable figures for the Midtown sample were 2.8 and 2.6. The present sample was also similar to the Midtwon one in terms of nativity. In both samples, foreign born people were in a minority, 25% in the present study as compared to 30% in the Midtown study. The only difference which existed between the present sample and the Midtown sample was in social class distribution. The present sample was more restricted, and included primarily the upper half of the Midtown continuum. Nevertheless, taking all these comparisons into consideration, the Langner score seemed to be an appropriate one for use in the present study.

No significant associations were found between mobility and any of the measures of adjustment. (i.e., Langner scale, frequency of alcohol use and frequency of tranquilizer use, see Table 6).

Table 6

Significance of the Correlation Coefficients Between (a) the Number of Inter-City Moves Made by Subjects Between 1960 and 1970 and (b) Dependent Variables Relating to Psychological Adjustment.

	Males			Females		
Dependent Variable	Correlation Coefficient	DF	Significance Level	Correlation Coefficient	DF	Significance Level
Langner Scale	-.037	148	N.S.	-.105	138	N.S.
Frequency of Tranquilizer Use	.123	148	N.S.	-.022	138	N.S.
Frequency of Alcohol Consumption	.032	148	N.S.	.077	138	N.S.

When mobility was conceptualized as the number of years elapsing since an individual's most recent inter-urban move, the results did not change. That is, adjustment was not related to recency of moving. Nevertheless, the subjective perception of subjects was that their moves were associated with adverse effects. The relevant correlation coefficients are presented in Table 7. It is interesting to note that among the males most of the adverse effects were associated with inter-city mobility, and not with intra-city mobility.

Table 7

Correlations Between Amount of Mobility Experienced and Perceptions That Moves Had Adverse Effects in Various Areas of Life Functioning.

Independent Variables: Total number of inter-city/intra-city moves made since marriage

Dependent Variable: Question 15 of Questionnaire, i.e:

> "15. Which move or moves had an adverse effect on your (fill in the blanks with the letters of the appropriate moves, writing a move in the form A to B, B to C, etc.)
>
> i. relationship with your spouse_____
> ii. relationship with your children_____
> iii. childrens' school work_____
> iv. childrens' social life_____
> v. your own social life_____
> vi. work efficiency_____"

Males

Correlation Between Inter-city Mobility and:		Correlation Coefficient	DF	Significance Level
	i.	.2810	148	.001
	ii.	.1695	148	.05
	iii.	.4522	148	.001
	iv.	.4213	148	.001
	v.	.4281	148	.001
	vi.	.3033	148	.001
Correlation Between Intra-city Mobility and:				
	i.	.6035	148	.001
	ii.	.0672	148	N.S.
	iii.	.1296	148	N.S.
	iv.	.1422	148	N.S.
	v.	-.0092	148	N.S.
	vi.	-.0833	148	N.S.

Table 7 (Continued)

Correlation Between Inter-city Mobility and Adverse Effects After Partialing out the Correlation Between Both of these Variables with Intra city mobility:	Correlation Coefficient	DF	Significance Level
i.	.2848	147	.001
ii.	.1644	147	.059
iii.	.4460	147	.001
iv.	.4143	147	.001
v.	.4308	147	.001
vi.	.3133	147	.001

Females

Correlation Between Inter-city Mobility and:	Correlation Coefficient	DF	Significance
i.	.1368	138	N.S.
ii.	.0479	138	N.S.
iii.	.4154	138	.001
iv.	.3903	138	.001
v.	.2211	138	.009
vi.	.0573	138	N.S.
Correlation Between Intra-city Mobility and:			
i.	.2361	138	.005
ii.	.0841	138	N.S.
iii.	.1676	138	.048
iv.	.3033	138	.001
v.	.1747	138	.039
vi.	.2446	138	.004

Table 7 (Continued)

Correlation Between inter-city Mobility and Adverse Effects After Partialing out the correlation Between Both of these Variables with Intra city mobility:	Correlation Coefficient	DF	Significance Level
i.	.1393	137	N.S.
ii.	.0476	137	N.S.
iii.	.4203	137	.001
iv.	.4077	137	.001
v.	.2235	137	.008
vi.	.0577	137	N.S.

Mobility and Personality

Mobility experience was not associated with differential exhibition of any of the personality traits which were measured (Table 8).

Table 8

Correlations Between Mobility Experience and Personality Measures

Independent Variable: Number of Inter-City Moves made between 1960 and 1970 (City '60)

	Males			Females		
Dependent Variables (P.R.F. Scales)	r	DF	Significance Level	r	DF	Significance Level
Achievement	.022	148	N.S.	.004	138	N.S.
Affiliation	-.034	148	N.S.	.135	138	N.S.
Autonomy	.006	148	N.S.	-.015	138	N.S.
Change	-.030	148	N.S.	.048	138	N.S.
Cognitive Structure	-.037	148	N.S.	-.043	138	N.S.
Exhibition	.021	148	N.S.	.065	138	N.S.
Play	.068	148	N.S.	.173	138	N.S.

Another set of analyses concerned the assumption that certain personality traits would be more adaptive for mobile as opposed to non-mobile individuals. In order to test the validity of this assumption, the following computations were done. The entire sample was divided into two groups. The first group consisted of individuals who had not made any inter-city moves during the past 10 years (City '60 = 0). The second group contained subjects who had made one or more moves during this time (City '60 ≠ 0). The investigator then tested whether there was any association between adjustment, as reflected in the Langner score, and each of the personality variables Affiliation, Autonomy, Change and Cognitive Structure. Had any of these association been significant for the mobile group, and had mobility also been related to adjustment, the next step would have been the creation of a regression equation which would have maximized the relationship between mobility, adjustment and the relevant mediating variables. However, as has already been demonstrated, mobility was not associated with adjustment. Furthermore, none of the aforementioned personality traits were differentially associated with adjustment in mobile, as opposed to non-mobile groups. The PRF scale Affiliation was significantly correlated with adjustment in both groups. None of the remaining correlations approached significance.

There was a significant association between mobility experience and preference for a mobile way of life. This relationship is presented in Table 9.

Table 9

Correlations Between Mobility Experience and Attitudes Towards Mobility

Independent Variable: Number of Inter-City Moves made between 1960 and 1970

Dependent Variable: Question 16 of Questionnaire

"16. If you had the choice, would you prefer a very mobile or a very non-mobile life?

very mobile——————————————————————————very non-mobile"

	Males			Females		
Correlation Between Mobility and Question 16	Correlation Coefficient	D.F.	Significance Level	Correlation Coefficient	D.F.	Significance Level
	.202	149	$p < .01$	.182	138	$p < .05$

Discussion

No significant associations were obtained between mobility and adjustment. Neither were there any significant correlations between mobility and certain personality traits. Furthermore, none of the hypothesized internal mediating variables acted in the predicted direction.

As to the validity of these results we can say that few methodological flaws were evident. The sample size was large (N = 270) and included a substantial number of mobile individuals. Furthermore, the sample was representative of that part of the North American population which exhibits the greatest amount of internal mobility (i.e. the subjects were middle class, well educated, well paid, and highly skilled).

The rate of mobility demonstrated by the subjects was similar to the one observed by Lansing and Mueller (1967) in their national (U.S.A.) study. In both samples mobile subjects tended to move once every five years. Details of both distributions are presented in Table 10.

Table 10

Mobility Rates in Study Ia Compared to Mobility Rates Obtained by Lansing and Mueller (1967)

Number of Inter-city Moves made Between 1950 and 1965 (15 years)	Per Cent of Sample
	Lansing and Mueller (1967, p. 30)
0	71
1	13
2	8
3	4
4	2
5	1
6+	1

Table 10 (Continued).

Mobility Rates in Study Ia Compared to Mobility Rates Obtained by Lansing and Mueller (1967)

Study Ia

Number of Inter-city Moves made Between 1960 and 1970 (10 years)	Per Cent of Sample
0	64
1	11
2	17
3	3
4	3
5	1
6+	0

The limitations of the sample were as follows. Though moderate rates of mobility were well represented, there were not too many subjects who had experienced high rates of mobility. Furthermore, there were few subjects who had experienced recent inter-country mobility and in particular inter-country mobility which involved a change in language. In addition, the average age of the subjects was somewhat higher (40 years) than would be expected according to census studies. Lansing and Mueller (1967) found that the highest rates of mobility occurred among individuals between 18 and 35 years of age. Nevertheless, they also found that the 35-44 age group manifested considerable mobility. Thus, though the present sample was slightly older than those individuals who move most often, the age range was still fairly representative of those people who have high rates of mobility.

Further evidence for the validity of the findings was derived from an analysis of the control variables. Previous investigations have shown that both social class and marital status are related to adaptive functioning (Dohrenwend and Dohrenwend, 1969). In the present study, no associations existed between mobility and any of these possibly contaminating variables. Age, education and social class of orientation were not related to mobility status. Furthermore, individuals who were divorced, widowed or separated were not included in the sample.

The favorable reliability and validity data associated with the Langner scale have already been presented. The results of this investigation did not change the experimenter's evaluation of that scale. It was thus concluded that overall adaptive behavior did not change as a function of mobility experience. Furthermore the non-significant association between mobility and mental health was not an artifact of having only healthy individuals in the sample, since over 35% of the sample was classified as "not well" when a score of four or more (as Langner suggested) was used to differentiate well from not well persons.

Additional analyses, using different measures of mobility did not change the results. For example, when mobility was conceptualized as the number of years elapsing since an individual's most recent inter-urban move, no significant associations were found between this measure of mobility and adjustment. Furthermore, when non-mobile subjects were excluded and correlations were obtained between mobility and adjustment, no evidence was found for the thesis that high rates of mobility were more deleterious than low rates.

With so many non-significant results one might ask whether the

measures were indeed validly reflecting the variables in question. It appears that they were, since other correlations between the dependent variables were often significant. Thus, higher Langner scores were associated with more frequent use of tranquilizers ($r = .385$; $DF = 149$; $p < .001$), more frequent psychosomatic complaints ($r = .389$; $DF = 149$; $p < .001$), lower social class scores ($r = .350$; $DF = 149$; $p < .001$), and downward social mobility ($r = .260$; $DF = 149$; $p < .001$). In addition, low Langner scores were associated with higher scores on the PRF scale Affiliation ($r = .255$; $DF = 149$; $p < .001$). The personality scales were also related significantly to other variables. For example, males who said they would prefer leading a more mobile way of life scored higher on the scales Autonomy ($r = .244$; $DF = 149$; $p < .001$), and Change ($r = .503$; $DF = 149$; $p < .001$) and lower on the scale Cognitive Structure ($r = -.199$; $DF = 149$; $p < .01$).

In this study no association was obtained between geographic mobility and maladaptive functioning. In that respect the results were similar to those obtained by Jaco (1960), Freedman, (1950), Hollingshead and Redlich (1958) and Srole et al (1962), but dissimilar to those obtained by Malzberg and Lee (1956), Lazarus, Locke, and Thomas (1963) and Lee (1963). It is difficult to state whether one study was more valid than another, since different methodological approaches usually implied that slightly different questions were being asked of the data.

In general, the variations in research results can be attributed to the following: different measures of the dependent variable, different social class composition of the samples, varying information about the circumstances surrounding the moves (e.g., voluntary vs. involuntary), and differing controls for social mobility and selection processes.

The present study dealt with the correlates of corporate mobility in a middle class, middle aged population. No individual admitted to being moved against his will, and this cognitive attitude may have mitigated some of the stress inherent in moves. Furthermore attempts were made to implement controls for social mobility. The mobile subjects did not differ from non-mobile ones in the extent of social mobility they had experienced, and concomittant downward social mobility was independent of the geographic mobility dimension.

The results of this study were similar to those obtained by Tyroler (1967). Although Tyroler was not concerned with geographic mobility per se, he was interested in the hypothesis that life in a rapidly growing community would be deleterious for adaptative functioning. His sample was large and the measures he used included the Cornell Medical Index (CMI), a series of biometric determinants (weight, height, blood pressure, etc.), and measures of work absenteeism. Tyroler noted the following:

> "Confidence in the judgment that this population is not suffereing deleterious health consequences is considerable, and the evidence is strong that their health is superior.
> These results were not anticipated by us prior to the study. We anticipated deleterious health consequences to rapid population growth and mobility; to absent extended family supports, and to multiple repeated deadline-meeting stresses characteristic of the space industries activities. It would appear that these activities and changes were either not perceived by employees as stressful or the stresses were not manifested in dysfunction measured by our indices, or they were compensated by other concurrent, situation advantages. p 257, (italics added)."

Although some investigators have obtained positive results while standardizing for social class (Lazarus et al, 1963, Gordon and Gordon, 1958a), they also used psychiatric admission data and so it is quite possible that

the samples had a lower class bias. Had these investigators restricted their sample to middle calss individuals, their results may have been similar to those obtained in Study Ia. It is conceivable that moving may be more deleterious for lower class individuals since their responses to stress are often less adaptive than those of middle class people. For example, as mentioned previously, Langner and Michael (1963) have noted that lower class individuals have a greater tendency to use reality distorting defences, while middle class people often utilize neurotic defenses which may in the long run be quite adaptive (e.g., compulsive working).

The effects of selection processes are very difficult to ascertain in cross-sectional studies. Nevertheless, in the present study, there was evidence that selection processes of some kind were operative. Subjects were asked whether they had ever refused when their employers offered them a job in another city. Analyses of these responses showed that very few of the non-mobile people had ever been asked to move (16 out of 72). This implies several things. It seems that when the subjects moved, it was primarily at the instigation of their employer company, and although very few admitted that they had been coerced into moving, it was rare that an individual refused when he was offered a transfer. Since it was the company which selected who would move when, some selection process(es) undoubtedly were operative. Moreover, individuals who are transferred are usually those who are being groomed for a more important company position (Whyte, 1956) and one might imagine that the person's stability and coping skills are considered when such choices are made. In this study female protocols were analyzed separately in an attempt to control for possible contamination by this selection factor, although it was recognized that wives too are given some consideration

by the employers.

Although no long term effects on adaptive functioning were obtained, the mobile individuals did subjectively feel that their moves had adverse effects in a number of different areas. These included their social life and their children's academic and social adjustment. However, since no long term negative effects were observed on the validated Langner Scale, it may be that these adverse effects were only short term.

In this study, external mediating variables were not assessed. This is notto minimize the potential importance of the circumstance surrounding migrations, and the characteristics of the place of destination. Time did not permit an assessment of all the relevant mediating variables, and the ones which were selected for study were those which could be most reliably and validly measured.

Among the Internal Mediating Variables only the PRF Scale Affiliation was significantly associated with adjustment. This association, however, was evidenced in both mobile and non-mobile individuals. None of the internal mediating variables were differentially associated with adjustment in mobile as opposed to non-mobile populations. Assuming that the traits in question are realistic entities, and that they have been validly assessed, it does not seem that the demands of adapting to a mobile life style are lessened or made more difficult by the existence of certain behavioral dispositions in an individual. It is important to note that the non-significance of the correlation coefficients was not an artifact of sampling from a restricted range of the relevant values. As an inspection of Table 11 shows, the means and standard deviations of the PRF scales in the sample were very comparable to those obtained on the standardization samples.

Table 11

Means and Standard Deviations of PRF Scales in Study Ia Compared to The Means and Standard Deviations of the Same Scales in Jackson's (1967) Original Standardization Samples.

	Males - Study Ia			Males - Jackson's Sample		
PRF Scale	Mean	s	N = 151	Mean	s	N = 1029
Achievement	15.48	2.98		12.58	3.73	
Affiliation	12.51	4.61		14.98	3.28	
Autonomy	8.23	2.67		8.62	3.12	
Change	10.34	3.13		11.74	3.20	
Cognitive Structure	11.92	3.34		10.90	3.69	
Exhibition	8.70	4.29		10.83	3.87	
Play	7.83	2.92		12.13	3.42	

	Females - Study Ia			Females - Jackson's Sample		
PRF Scale	Mean	s	N = 140	Mean	s	N = 1002
Achievement	12.13	3.55		12.29	3.41	
Affiliation	15.01	2.85		16.15	3.18	
Autonomy	6.37	2.93		7.08	3.43	
Change	9.58	3.16		12.31	3.18	
Cognitive Structure	12.29	3.45		10.65	3.71	
Exhibition	6.76	4.12		9.74	3.92	
Play	8.62	2.86		12.00	3.36	

None of the personality scales correlated significantly with mobility experience. It does not seem that mobility experience alters the behavioral dispositions in question. Mobile people are not more or less friendly, more or less self-sufficient or more or less success oriented.

In sum, Study Ia showed that frequency of inter-city mobility was independent of scores on a scale measuring adjustment. Furthermore, mobility experience was unrelated to the presence of individual differences in a number of behavioral dimensions. There was a low but significant association between mobility experience and favorable attitudes towards a mobile life style. It does not seem that mobility per se is stressful enough to have negative effects on adaptive functioning. Nevertheless, due to some of the limitations of the present sample, the analyses were cross-validated in a larger more heterogeneous sample. Those results will be presented under Study II.

Study Ib

Introduction

Study Ib, also a preliminary study, was concerned with the physical health of individuals who had experienced different degrees of geographic mobility. All of the male subjects in Study Ia had given permission for their medical files to be examined for research purposes. These medical records were kept by the company doctor and included information about: number of days absent, reasons for these absences, descriptions and classification of complaints according to general medical practice and dates of all visits to the company clinic.

The questions which the study was designed to answer were as follows:

1. Is an increased prevalence of mobility associated with an increased prevalence of signs and symptoms of physical illness?
2. Is there a difference in the physical health of individuals who have moved of their own accord compared to those who were transferred by their employer company?
3. Is the prevalence of signs and symptoms of physical illness related to the rate of mobility experienced?
4. Is the incidence of signs and symptoms of physical illness increased in temporal continguity to the move? That is, are they greater during the year of the move compared to an average year.

Subjects

The forty subjects consisted of a random sample of the men in Study Ia. Twenty-four had moved at least once from another city and were classifed as "movers". Sixteen had lived all their lives in Montreal, and were classi-

fied as controls. The movers were slightly older than controls (44.6 vs. 40.3) and had slightly longer employment records (18.6 vs. 16.7), but these differences were not significant ($t = 1.70$; $DF = 38$; $p > .05$; and $t = .925$; $DF = 38$; $p > .05$).

The movers were sub-classified along two other dimensions as follows:

(i) The first categorization concerned the distinction between moving of one's own accord and moving because of the employer company's request. Ten movers had been transferred by their company at least once (into Montreal) and eleven had either immigrated or moved into Montreal from another Canadian city on their own. Two subjects who were judged to belong to both categories were excluded from computations concerning these groups.

(ii) The second division was concerned with rate of mobility. Nine movers had moved an average of 1.66 times and were classified as "low mobile"; 15 subjects had moved 4 or more times and were called "high mobile".

The categories (i) and (ii) overlapped to a certain extent; only 30% of the transfers were classified as high mobile, whereas movers of their own accord had 80% high mobiles.

Measures

Medical records as kept by the company doctor were used. It is worth noting that the medical facility in question was serviced by a general practitioner who held a full time job with the company. Thus, his services were utilized extensively by the employees. The medical records contained information about the number of days absent, the reasons for these absences, the dates of all visits to the medical facility and a description and classification of the complaints according to general medical practice.

The relevant medical information was gathered by a physician. The

procedure was blind since that doctor was not aware of the mobility status of any of the subjects.

Information regarding the dates of subjects' moves and their ages was obtained from the questionnaire used in Study Ia (items 1 and 12, Appendix B).

Analysis of the Data

All complaints, medical visits, and days absent were computed per subject and per group. The following comparisons were made:

(i) between groups: Movers vs. Controls

(ii) within the group of movers: Voluntary vs. Transfers and High Mobile vs. Low Mobile

All the variables were considered lumped and per year of employment. The variable medical visits was computed not including visits for smallpox vaccinations and pre-placement medical check-ups. The variable days absent excluded absences for operations.

Thus, in this study, adjustment was assessed by use of a medical index of health. This data supplemented that obtained in Study Ia. As well, different aspects of mobility were related to the measure of adaptive functioning.

Results

Although very few significant differences were found, these were all in a reversed direction to the original hypotheses. On the variable days absent, controls scored significantly higher than movers ($t = 20.34$, $DF = 38$, $p < .001$). Similarly, there was a tendency for controls to exhibit a greater number of total complaints. Within movers, no significant differences were found between transfers and people who had moved of their own accord (Table 13). Neither were there any differences between high mobile and low mobile movers, on any of the variables investigated (Table 14).

Table 12

Movers vs. Controls

Variable	Group	Mean	t	Level of Significance
Frequency of medical visits per year	movers controls	1.88 2.88	1.65	$p < .11$ DF = 39
Number of days absent per year	movers controls	1.03 3.39	20.34	$p < .001$ DF = 39
Total number of complaints per year of employment	movers controls	1.59 2.39	1.52	$p < .15$ DF = 39
Frequency of days absent during year of move vs. first year of employment for controls	movers controls	1.33 3.19	1.70	$p < .10$ DF = 39
Frequency of medical visits during first year vs. average year of employment	movers	1.33 vs. 1.88	0.33	N.S.
	controls	3.19 vs. 2.88	0.72	N.S.

Table 13

Transfer vs. Own Accord

Variable	Group	Mean	t	Significance Level
Frequency of medical visits per year	Transfers Own Accord	1.93 2.03	0.14	N.S. DF = 19
Total number of complaints per year of employment	Transfers Own Accord	1.75 1.50	0.14	N.S. DF = 19
Number of days absent per year	Transfers Own Accord	0.79 1.22	0.17	N.S. DF = 19

Table 14

High Mobile vs. Low Mobile

Variable	Group	Mean	t	Significance Level
Frequency of medical visits per year	High Mobile Low Mobile	2.00 1.93	0.07	N.S. DF = 23
Total number of complaints per year of employment	High Mobile Low Mobile	0.71 0.58	0.36	N.S. DF = 23
Number of days absent per year	High Mobile Low Mobile	1.20 0.75	.44	N.S. DF = 23

Discussion

In this study, the sample size was somewhat smaller than that obtained in Study Ia. This was due to the fact that only physicians were given permission to go through the medical records. The cost involved did not allow for an inspection of all the relevant files.

One analysis in particular was related to the question of whether or not medical complaints would increase in contiguity with an inter-city move. In that analysis the frequency of days absent during the year of a move was compared with the number of days absent during an average year of employment among the controls. No significant differences were found.

Moreover, wherever trends were observed, they were in favor of the mobile population. Thus, there was a tendency (at the .1 level) for movers to have fewer medical visits and also to have fewer complaints per year of employment.

None of the medical indices differentiated individuals with high rates of mobility from those with low rates of mobility. Neither did they distinguish between people who had moved of their own accord as opposed to those who had been transferred.

The results were contrary to expectation, but were consistent with the findings obtained in Study Ia. That is, no deleterious effects were found to be associated with inter-city mobility.

It may have been that individuals who were transferred were selected partly because they displayed personal stability and good physical health, but the evidence for those kind of selection factors is not really very strong, since the mobile subjects were not noticably superior to the controls on most of the dependent variables. Since no subject admitted to being trans-

ferred against his will and since most moves usually involved promotions the cognitive attitudes of the subjects may have been such that the moves were not perceived as disruptive events. It may be that even the adaptation of the physiological system follows society's dictum regarding what "ought" to distress us (Appley and Trumbull, 1967). Moving may be considered a measure of success by many in our culture and so it "ought" not disrupt us.

Though the results of both Study Ia and Ib were negative with respect to the original hypotheses, it was felt that cross-validation of these results was necessary, in particular because of the homogeneity of the present sample. Unmarried individuals had not been included, and the lower age ranges (young adult) were not well represented. Furthermore few subjects had experienced very high rates of mobility and fewer still had moved to foreign countries. For those reasons the major hypotheses were reinvestigated using a broader, more heterogeneous sample.

Study II

Introduction

This study represented a cross validation and extension of the two previous investigations. The rate of mobility exhibited by the subjects in Study Ia, although very characteristic of North American mobility rates, was relatively moderate. It is conceivable that the results would have been different in a sample containing more individuals with very high rates of mobility. Furthermore, Study Ia contained few individuals who had made inter-country moves. In Study II a greater proportion of the sample had made such moves and a significant number had made moves involving a change in language. In this study several different kinds of mobility were examined since the sample included people who had moved because of economic incentives (transfer, new job), educational incentives and personal incentives (e.g. husbands had been transferred).

The individuals in Study Ia were relatively homogeneous with respect to social class. Hence, in obtaining a sample for Study II, attempts were made to broaden the range of social class variables sampled (age, education, marital status, etc.). This was done in the expectation that correlates of mobility might differ within each social category.

Many of the personality variables which proved not to be relevant in Study Ia, were omitted from this study. Only the PRF scales Affiliation, Autonomy, and Change were included. A number of items were unique to Study II. Among these were questions pertaining to attitudes about geographic mobility, and expectations thereof. Also incorporated was an item in which subjects rated the stressfulness of their most recent inter-city move.

The questions investigated in this study were as follows:

(i) Is geographic mobility, as reflected in the frequency of inter-city and inter-country moves, associated with a differential prevalence of maladaptive behaviors?

(ii) Is the time factor of a move (recency) related to the prevalence of psychological disorders?

(iii) Are moves rated as more stressful by

a) individuals who score lower on the PRF scales Affiliation, Autonomy, and Change

b) individuals who move with a spouse as opposed to those who move alone

c) individuals who move in order to go to university as opposed to those who move because of either employment opportunities or because their spouses have been transferred

d) individuals who have less education

e) individuals who are older or younger

(iv) If moves are indeed associated with adverse effects, do any of the above (a to e) mediating variables modify this relationship?

Subjects

In order to increase the range of socioeconomic variables sampled, subjects were obtained from three different sources. These included groups of Montreal businessmen and their wives (B), graduate students of a large university (G), and evening students enrolled in an undergraduate psychology course (S).

Groups B and G were approached by a procedure similar to the one used in Study Ia. Leters were sent to a random sample of 1000 graduate students. Four hundred and fifty of them returned consent forms indicating that

they were willing to complete the questionnaire. Of these, 332 returned a completed questionnaire. The businessmen and their wives had previously been approached by an intermediary who had solicited their support. They then received a copy of the survey accompanied by a covering letter. The evening class completed the inquiry during one of their early sessions.

Though it was not possible to get a sample of non-responders to check for sampling bias, other lines of evidence indicate that the sampling was adequate. Among the evening students the return rate was 100%. When the results of that sample were compared to the results for the two other samples, no differences were observed. Thus it would not appear that the non-responders were different regarding the effects of mobility on their adjustment.

The average age of the subjects was 32. There were approximately equal numbers of males and females, and also of single and married individuals. Individuals who were separated or divorced were excluded from the sample. The educational level was quite high; only 35% of the subjects did not have college degrees. In terms of nativity there was a relatively broad distribution; over 30% of the subjects were born elsewhere than North America. The details of these distributions are presented in Appendix I.

Measures

Geographic Mobility

The measurement of geographic mobility was derived from item 194 of the questionnaire (see Appendix H). Mobility was operationally defined as the number of inter-city moves an individual had made in the preceding ten years. In addition attention was paid to the number of inter-country moves that involved a change in language. Recency was expressed in terms of

the number of months that had elapsed since an individual's most recent move.

Reasons for each inter-city move were recorded. These generally fell into three categories. Individuals moved either to (i) go to university, (ii) accompany their spouse or (iii) to accept a new job. A lesser percentage of moves occurred because an individual had been transferred. In most calculations this category was combined with (iii) above, and was called economic. Frequently individuals moved to cities where they had lived previously. These were called return moves and their number was also noted. Only a minority of moves involved immigration, political oppression or travel.

Adjustment

Two questions were designed to measure differential adaptation to a move. One involved a rating of the stressfulness of the subject's most recent inter-city move (question 192, Appendix H); the other involved an assessment of how difficult it had been for the individual to establish new friendships after his move (question 193, Appendix H).

General psychological adjustment was measured by two complimentary scales. The Langner Scale, which has already been described in detail (see Appendix D), and Spielberger's Trait Anxiety Scale (Appendix H, items 68-87). The latter scale, published only recently (Spielberger, Gorsuch, Lushene, 1970) improved upon certain deficits inherent in the Langner scale. The Langner scale does not control for social desirability and only pathological responses are scored. Spielberger's Trait Anxiety (T-Anxiety) scale has empirical correlates very similar to those of the Langner scale, but in addition controls for response set and is less laden with obviously pathological items.

The Trait Anxiety Scale (Spielberger, Gorsuch, Lushene, 1970) developed to measure relatively stable differences in anxiety proneness, is

characterized by high reliability coefficients (.73 to .86) and good validity data. Psychiatric patients score significantly higher on this scale ($\bar{X}$ = 46.2, s = 12.41) than do non-psychiatric patients ($\bar{X}$ = 37.6, s = 9.6). Furthermore, Trait-Anxiety scores are significantly correlated with a number of measures, all of which reflect problems of adjustment. Among these are the IPAT Anxiety Scale, the Manifest Anxiety Scale, the Cornell Medical Index, the Minnesota Multiphasic Personality Inventory, and the Mooney Problem check list. Moreover, studies done at a counselling center showed that clients who had emotional problems obtained significantly higher Trait-Anxiety scores than clients without emotional problems.

Personality

The personality variables that were measured included the PRF scales Affiliation, Autonomy and Change. These items comprising these scales are included in questions 110-190 of Appendix H. Definitions of these scales and reliability and validity data have been discussed in Appendices E, F, and G. Also included were some questions which were designed to measure attitudes towards mobility (items 18 to 23 of Appendix H).

Community Integration and Satisfaction

A number of questions (items 9 to 17 of Appendix H) were designed to assess community integration and satisfaction. They included an assessment of the number of friends a subject had in the community where he was living, as well as a rating of how much he enjoyed life in his present town of residence.

Miscellaneous Mediating Variables

Two questions were designed to measure other mediating variables

which were hypothesized to be predictive of adjustment to moves (questions 24 and 25 of Appendix H). They concerned the ability of the individuals to make new friends; and the amount of emotional support they received from their spouses in times of stress.

Analysis of the Data

All analyses were done by computer, using programmes from the Statistical Package for the Social Sciences (Nie, et al, 1970). The scores on mobility measures were correlated with the various measures of adjustment and personality. Had the associations been significant, the next step would have involved the development of a regression equation which would have maximized the relationship between mobility, adjustment and the relevant mediating variables (attitudes, personality traits, type of move, marital status, education, age, etc.)

In addition the question relating to the stressfulness of individual's most recent moves was correlated with the hypothesized mediating variables. A regression equation was then developed to maximize prediction onto that variable.

Results

Mobility and Adjustment

The sample contained an adequate number of people who had experienced high rates of inter-city and inter-country mobility. A substantial number of subjects had also made inter-country moves which involved a change in language. The details of these frequency distributions are presented in Table 15.

Table 15

Frequency Distribution of Mobility Variables

Variable	Number of Moves	f	Variable	Number of Moves	f	Variable	Number of Moves	f
*City '62-'72	0	245	*Country '62-'72	0	377	*Language '62-'72	0	475
	1	100		1	101		1	60
	2	93		2	51		2	23
	3	53		3	25		3	10
	4	35		4	14		4	7
	5	29		5	8		5	1
	6	12		6	1		6	2
	7	5		7	1			
	8	3						
	9	3						

* City '62-'72 = number of inter-city moves made between 1962 and 1972

Country '62-'72 = number of inter-country moves made between 1962 and 1972

Language '62-'72 = number of inter-country moves between 1962 and 1972 which involved a change in language.

On the two measures of adjustment there was a considerable variation in scores, and a number of individuals obtained totals which were indicative of psychological impariment. A detailed frequency distribution of the Langner scale is presented in Table 16. The means and standard deviations for both of the adjustment scales are presented in Table 17. It is apparent that the study is not biased by having sampled from an exceptionally well adjusted population.

Table 16

Frequency Distribution of the Langner Scale

Langner Scale	f	%	
0	71	12.3	
1	111	19.2	
2	115	19.9	
3	78	13.5	
4	65	11.2	
5	45	7.8	
6	34	5.9	
7	19	3.3	
8	20	3.5	
9	9	1.6	35%
10	3	0.5	
11	1	0.2	
12	3	0.5	
13	2	0.3	
14	1	0.2	
15	1	0.2	

Table 17

Means, Standard Deviations and Ranges of the Langner Scale and the Spielberger and Trait Anxiety Scale

	Langner	Trait Anxiety
$\bar{X}$	3.06	37.85
S	2.56	9.0
range	15 (0 to 15)	59 (15-71)

There was a low but significant association between the measure of mobility and some of the control variables. This data is presented in Table 18.

Table 18

Correlations Between Mobility (City '62-'72) and Certain Control Variables

Control Variable	Correlation Coefficient	D.F.	Significance Level
Age	.15	576	.001
Education	.3	576	.001
Sex	.05	576	N.S.
Marital Status	.08	576	.05

Because of these associations, all further analyses utilized partial correlation techniques in order to control simultaneously for age, education and marital status.

The coefficients were computed separately for males and females. None of the correlations between mobility and adjustment proved to be significant. These results are summarized in Tables 19 and 20.

Table 19

Significance of the Associations Between Mobility and Adjustment, Males (Controlling for Education, Age and Marital Status)

Measure of Mobility	Measure of Adjustment	Correlation Coefficient	D.F.	Significance Level
City '62-'72	Langner Scale	.046	289	N.S.
City '62-'72	Trait Anxiety	-.040	289	N.S.
Country '62-'72	Langner Scale	.013	289	N.S.
Country '62-'72	Trait Anxiety	-.031	289	N.S.
Language '62-'72	Langner Scale	.010	289	N.S.
Language '62-'72	Trait Anxiety	-.009	289	N.S.

Table 20

Significance of the Associations Between Mobility and Adjustment, Females (Controlling for Education, Age, and Marital Status)

Measure of Mobility	Measure of Adjustment	Correlation Coefficient	D.F.	Significance Level
City '62-'72	Langner Scale	.003	249	N.S.
City '62-'72	Trait Anxiety	-.058	249	N.S.
Country '62-'72	Langner Scale	.028	249	N.S.
Country '62-'72	Trait Anxiety	.007	249	N.S.

Table 20 (Continued)

Measure of Mobility	Measure of Adjustment	Correlation Coefficient	D.F.	Significance Level
Language '62-'72	Langner Scale	.112	N.S.	249
Language '62-'72	Trait Anxiety	.049	N.S.	249

Although total mobility scores were not associated with psychological disturbances, it is conceivable that a move made for economic reasons could be more difficult to adapt to than one undertaken because of educational incentives. The validity of this hypothesis was tested in the following way. Initially, the frequency distributions of the three types of mobility were inspected. This enabled the investigator to verify that the different kinds of mobility were adequately represented in the sample. These distributions are presented in Table 21.

Table 21

Frequency Distribution of Select Mobility Variables

Variable	Category	f	Variable	Category	f	Variable	Category	f
Number of moves made for Economic Reasons (job transfer, new job) Between 1962 and 1972 (ECO6272)	0	463	Number of moves made because of Educational incentives between 1962 and 1972 (UNIV6272)	0	384	Number of moves made by a wife Between 1962 and 1972 because her husband had decided to move (HUSB6272)	0	520
	1	95		1	91		1	25
	2	34		2	57		2	17
	3	20		3	25		3	7
	4	6		4	15		4	4
	5	1		5	4		5	5
	7	1		6	1			
	9	1		9	1			

Analyses were done separately for males and females in the following manner. Two groups were selected. One contained individuals who had not made any interurban moves during the preceding ten years. The second contained subjects who had made one or more moves for economic reasons. The procedure was then repeated two more times; once with respect to university moves, and once for moves made because of a spouse's decision. The results did not change. In none of the analyses was mobility significantly associated with adjustment.

In order to rule out the possibility that the correlation coefficient was masking a curvilinear relationship, the means and standard deviations of the adjustment variables were determined for each level of the mobility variable. No curvilinear relationship was evident. These results are presented in the following tables.

Table 22

Adjustment Variable				Mobility Variable	
Trait Anxiety		Langner Scale		City '62-'72	N
$\bar{X}$	s	$\bar{X}$	s		
38.65	9.73	3.24	2.79	0	245
37.55	8.90	2.72	2.40	1	100
36.98	8.52	2.89	2.46	2	93
37.24	7.88	3.09	2.39	3	53
37.89	8.09	3.20	2.19	4	35
36.31	8.01	3.21	2.41	5	29
32.83	5.39	1.83	1.40	6	12
44.00	9.03	4.40	2.19	7	5
37.33	7.76	2.67	3.05	8	3
45.00	18.73	5.00	3.00	9	3

Table 22 (Continued)

Adjustment Variable				Mobility Variable	
Trait Anxiety		Langner Scale		Country '62-'72	N
$\bar{X}$	S	$\bar{X}$	S		
37.65	9.37	3.06	2.65	0	377
38.82	8.46	3.15	2.57	1	101
37.94	8.58	2.82	1.76	2	51
38.00	8.83	3.64	2.93	3	25
38.28	8.32	2.14	1.79	4	14
33.50	5.15	2.75	2.05	5	8
27.00		2.00		6	1
47.00		8.00		7	1
				Language '62-'72	
37.60	9.04	3.01	2.57	0	405
39.38	9.32	3.00	2.53	1	60
38.96	9.19	4.26	2.22	2	23
39.00	9.15	2.90	3.07	3	10
36.14	7.98	2.14	1.35	4	7
42.00		7.00		5	1
37.00		5.00	4.24	6	2

Another way of conceptualizing mobility is in terms of the recency of one's last inter-urban move. The frequency distribution of the Time variable is presented in Table 23 below.

Table 23

Frequency Distribution of the Variable Time

Independent Variable: For how long have you been living in the city/town you are presently living in?	f		%	
1. 1-2 months	14		2.4	
2. 3-5 months	7	94	1.2	16.2
3. 6 months to a year	73		12.6	
4. 1-2 years	90		15.6	
5. 3 years or more	394		68.2	

Ninety-four subjects (16.2% of the sample) had been living in Montreal for a year or less. This means that the sample contained an adequate number of recent movers.

The next set of analyses were directed towards an assessment of the relationship between adjustment and the Time variable. Once again neither of the adjustment variables were significantly associated with this measure of mobility. (Table 24)

Table 24

Significance of the Association Between Time and Adjustment (Controlling for Age, Education and Marital Status)

	Males			Females		
Dependent Variable	Correlation Coefficient	D.F.	Significance Level	Correlation Coefficient	D.F.	Significance Level
Langner Scale	-.030	289	N.S.	.04	249	N.S.
Trait Anxiety	.02	289	N.S.	.02	249	N.S.

Because one tail of the time variable distribution contained only a few subjects the analysis was repeated by collapsing the first three categories. No change occurred in the significance levels.

The next series of analyses concerned the question wherein the subjects rated the stressfulness of their most recent inter-city move (item 192, Appendix H). Individuals who had not moved within the preceding five years were excluded from the analysis. The majority of the subjects did not perceive this move as being too stressful. Only 15% found it more than moderately stressful, while 36% found it not at all stressful. The frequency distribution of the responses to this question is presented in Table 25.

Table 25

Frequency Distribution of Responses to the Question Dealing with the Stressfulness of Individuals most Recent Inter-City Moves.

Dependent Variable:

When you made your last inter-city move, how stressful did you find the experience?

	1	2	3	4	5
	not at all stressful		moderately stressful		very stressful
f	135	82	100	28	27
%	36.3	22.0	26.9	7.5	7.3

Scores on the above variable were correlated with the hypothesized internal and external mediating factors. Included among the internal mediating

variables were:

(1) the PRF scales Affiliation, Autonomy and Change

(2) the adjustment scores (Trait Anxiety and Langner Scale)

(3) questions assessing attitudes towards mobility (items 19 and 20 of Appendix H)

(4) the social class variables age, education, and sex

(5) previous mobility experience

External mediating variables dealt with particular parameters of the most recent move. These encompassed:

(1) the stimulus change inherent in the move (i.e., whether the move involved a change in country and/or a change in language)

(2) whether the individual made the move alone or was accompanied by a spouse and

(3) whether the move was for economic, education or marital reasons.

The results of this analysis are presented in Table 26.

Table 26

Significance of the Correlations Between Select Internal and External Mediating Variables and Subjects' Ratings of the Stressfulness of their Most Recent Inter-Urban Moves.

	Males (D.F. = 126)		Females (D.F. = 114)	
Internal Mediating Variable	Correlation Coefficient	Significance Level	Correlation Coefficient	Significance Level
Affiliation	.06	N.S.	.00	N.S.
Autonomy	.27	.002	-.23	.012
Change	-.23	.009	-.31	.001
Langner Scale	.15	.09	.16	.08

Table 26 (Continued)

Internal Mediating Variable	Males (D.F. = 126) Correlation Coefficient	Males (D.F. = 126) Significance Level	Females (D.F. = 114) Correlation Coefficient	Females (D.F. = 114) Significance Level
Trait Anxiety	.23	.01	.23	.01
"If it were not necessary for you to move...do you think you would move anyway?"	.15	.08	.18	.05
"Are you the type of person who enjoys the experience of moving to new cities?"	.24	.007	.24	.009
Age	.16	.07	.00	N.S.
Previous mobility Experience	-.08	N.S.	-.00	N.S.
External Mediating Variables				
Number of Children	.25	.005	.02	N.S.
"Did the move involve a change in country?"	.07	N.S.	.12	N.S.
"Did the move involve a change in language?"	-.12	N.S.	-.12	N.S.
"Did you make the move alone?"	-.12	N.S.	-.16	.08
"Did you make the move accompanied by your spouse?"	.14	.10	.19	.03
"Was the move for economic reasons?"	-.10	N.S.	-.11	N.S.
"Was the move for educational reasons?"	.06	N.S.	-.08	N.S.
"Was the move because of your husband's decision?"			.24	.008

In order to obtain a maximum correlation coefficient between the rating of the stressfulness of subjects' most recent inter-urban moves (STRESS MOVE) and the significant mediating variables, a multiple regression analysis was performed. The results of this analysis are presented in Table 27.

Table 27

Regression on "Stress Move" - Males (N = 128)

Multiple R	.38	F = 7.06	D.F. = 3, 122	$p \leq .001$

Significant independent variables and their F values

	F	D.F.	p
Autonomy	4.545	1,122	.025
Trait Anxiety	6.672	1,122	.01
Number of Children	4.823	1,122	.05

Regression on "Stress Move" - Females (N = 116)

Multiple R	.40	F = 7.714	D.F. = 3,111	$p < .001$

Significant Independent Variables and their F Values

	F	D.F.	p
Change	7.755	1,111	.01
Trait Anxiety	6.432	1,111	.01
Autonomy	2.346	1,111	.1

Does adaptation to a mobile life style result in the development of behavioral dispositions which are different from those exhibited by non-mobile individuals? This query was dealt with by the following procedure. Males and females subjects were divided into 2 groups. The first group con-

sisted of individuals who had not made any inter-urban moves within the preceding ten years (City 6272 = 0). The second group was comprised of all those subjects who had made one or more inter-urban moves over a similar period of time (City 6272 ≠ 0). Within each of these two groups, adjustment (Trait Anxiety) was correlated with the following variables:

(1) the personality variables Affiliation, Autonomy and Change

(2) the attitude variables assessed in the questions:

"19. Are you the type of person who enjoys the experience of moving to new cities?

(1) yes (2) no " (ENJOY MOVING)

20. If it were not necessary for you to move in order to get ahead in your career, do you think you would move to another city anyway?

(1) yes (2) no " (PROBABLY MOVE)

(3) The community integration variables assessed in the questions:

"16. Do you enjoy life in the city/town where you are presently living?

1	2	3	4	5
not at all		moderately		very much

(ENJOY TOWN)

17. Altogether how many people are there in the town where you live whom you consider to be close friends--not counting relatives?

1. none

2. 1

3. 2

4. 3 - 4

5. 5 or more

(NUMBER OF FRIENDS)

4. The personal variables

"24. How easily do you make new friends?

1	2	3	4	5
with great difficulty		moderately easily		very easily

(MAKE FRIENDS)

25. Do you get a lot of emotional support from your husband in times of stress?

1	2	3	4	5
none		a moderate amount		very much

(EMOTIONAL SUPPORT)

5. The social class variable marital status.

The results of that analysis are presented in Table 28.

Table 28

Significance of the Correlations Between Trait Anxiety and Select Personality and Attitude Variables in Two Groups Differing in Mobility Experience. (Controlling for Education and Age)

Males

Group A City '62-'72 = 0 (non-mobile) Group B City '62-'72 ≠ 0 (mobile)

Dependent Variable	Correlation Coefficient	D.F.	Significance Level	Correlation Coefficient	D.F.	Significance Level
Affiliation	-.23	125	.01	-.21	167	.01
Autonomy	.04	125	N.S.	-.11	167	N.S.
Change	.10	125	N.S.	-.29	167	.001

Table 28 (Continued)

Group A: City '62-'72 = 0 (non-mobile) Group B: City '62-'72 ≠ 0 (mobile)

Dependent Variable	Correlation Coefficient	D.F.	Significance Level	Correlation Coefficient	D.F.	Significance Level
Make Friends	.27	25	.001	-.29	67	.001
Number of Friends	-.06	125	N.S.	-.12	167	N.S.
Enjoy Town	-.25	125	.01	-.25	67	.01
Probably Move	-.06	125	N.S.	.03	167	N.S.
Enjoy Moving	-.00	125	N.S.	.27	167	.001
Emotional Support	-.24	75	.01	-.23	90	.03
Marital Status	.16	125	.07	.13	167	.07

Females

Group A: City '62-'72 = 0(non-mobile) Group B: City '62-'72 ≠ 0 (mobile)

Dependent Variable	Correlation Coefficient	D.F.	Significance Level	Correlation Coefficient	D.F.	Significance Level
Affiliation	-.32	112	.001	-.09	158	N.S.
Autonomy	.16	112	.07	-.05	158	N.S.
Change	.01	112	N.S.	-.00	158	N.S.
Make Friends	-.39	112	.001	-.24	158	.001
Number of Friends	.01	112	N.S.	-.15	158	.05
Enjoy Town	-.13	112	N.S.	-.25	158	.03
Emotional Support	-.25	63	.05	-.10	73	N.S.
Probably Move	-.03	112	N.S.	.01	158	N.S.
Enjoy Moving	.06	112	N.S.	.04	158	N.S.
Marital Status	.08	112	N.S.	.04	158	N.S.

It had been expected that the personality traits Affiliation, Autonomy and Change would be especially relevant for adaptation to a mobile life style. Also anticipated was that social relationships and marital closeness would be more important for a person who was changing his habitat frequently. In addition, it was felt that attitudes toward a mobile life style would be more predictive of adjustment in the mobile group. Generally, these predictions were not borne out by the data.

When correlations were computed for mobile and non-mobile men, only two coefficients differentiated the groups. These were the associations between Trait Anxiety and Change and Trait Anxiety and Enjoy Moving.

Among the females, no correlations differentiated the mobile from the non-mobile. In both groups adjustment was significantly associated with interpersonal skills.

Correlations were obtained between mobility and the personality variables, while controlling simultaneously for the variables Education, Age and Marital Status. Only one correlation was significant--Mobile males obtained significantly higher scores on the P.R.F. scale Change ($r = .17$, D.F. = 281, $p < .005$). Scores on the scales Affiliation and Autonomy were independent of mobility scores. Nevertheless, people with more mobility experience did have more favorable attitudes towards geographic mobility. People who had moved more often said that they would probably move even if moving was not a career necessity (item 20, Appendix H; Males: $r = -.17$, D.F. = 281, $p < .003$; females: $r = -.16$, D.F. = 237, $p < .01$), and they also stated more than non-mobile people that they enjoyed moving (item 21, Appendix H; males: $r = -.25$, D.F. = 281, $p < .001$; females: $r = -.24$, D.F. = 237, $p < .001$). Mobile men tended to score lower on the item which assessed their enjoyment of life in

the town where they were presently living (item 16, Appendix H; $r = -.13$, $p < .03$), indicating less community attachment on their part. Mobility was not related to the number of friends a person had in the town where he was currently living (item 17, Appendix K; males: $r = -.01$, D.F. = 281, $p > .05$; females: $r = .02$, D.F. = 237, $p > .05$.).

Discussion

Study II represented more than just a replication of Study Ia. Rather, it was an attempt to cross-validate and extend the conclusions of Study Ia using a different and more heterogeneous sample. The subjects in this study were younger; there was a substantial representation of foreign born people, and single as well as married individuals were included. There was a greater variation in financial status, and a considerable number of individuals had experienced high rates of mobility.

The results of Study II parallel those obtained in Studies Ia and Ib. Psychological adjustment as reflected in both the Langner Scale and the Spielberger Trait Anxiety scale was not related to the amount of geographic mobility an individual had experienced. Neither was it related to the recency of one's last inter-city move. Adjustment to mobility did not vary with the reasons for moving, and most of the hypothesized internal mediating variables were not differentially associated with adjustment in mobile as opposed to non-mobile individuals.

The sample size was very large (N=600), and represented that part of the populace which exhibits the highest rates of mobility. The measuring instruments were reliable and valid, and controls were implemented for age, education and marital status. It did not seem that subjects responded randomly, since the means and standard deviations of all the scales were very similar to those obtained in the original standardization samples. This was true for the P.R.F. Scales, the Langner Scale and the Trait Anxiety Scale. It thus does not seem that the study suffered from any gross sources of error. Moreover, it would appear that the findings are sound, especially since they have been cross-validated.

Analyses of responses to the question wherein the stressfulness of individuals most recent moves were rated provided some interesting findings. First of all, only a small proportion of individuals found their most recent inter-city move more than moderately stressful (15%). There were however, a number of variables which correlated significantly with this rating, and many of them acted in the expected direction. For example, as was found in Study Ia, in the analysis of the correlates of the "adverse effects" questions, more stress was experienced by individuals who were generally less well adjusted. Furthermore individuals who were less autonomous (i.e. lower on the P.R.F. scale Autonomy), and who adapted to change less readily (i.e. lower on the P.R.F. scale Change) found their most recent move more stressful. As would be predicted by Lazarus' theory of cognitive appraisal (Lazarus, 1967) moves were rated as less stressful by individuals who had more positive attitudes towards mobility (i.e. they tended to answer yes to the questions "probably move" and "enjoy moving"). There was no relationship between previous mobility experience and this variable. With respect to age, there was a tendency among the males for more stress to be experienced by the older individuals ($p < .07$).

Regarding the external mediating variables, the following information was obtained. The stress rating was not related to the amount of environmental change experienced (i.e. inter-city vs. inter-country vs. inter-language move). Among the females, the move was rated as more stressful if they had moved while they were unmarried; in the males this finding was only a trend ($p < .1$). Among the men, the stress rating was higher if they had children, while this was not so for the females. Among the men there was no relationship between the stress rating and the reason for the move (Economic vs. University). Among

the females, however, the move was rated as more stressful if it had been instigated primarily by their husbands. This is interesting since it implies that moves are perceived as more stressful when they have been imposed from without (i.e. external locus of control).

Although the significant correlates of the question STRESS/MOVE were often in the expected direction, the coefficients themselves were quite low--the maximum one being .27. Multiple correlation techniques raised the (multiple) coefficient to .4, but this still meant that only 16% of the criterion variance was being accounted for. Moreover, this analysis showed that most of the relevant variance could be predicted by a combination of only three variables: Autonomy, Trait Anxiety and Number of children among the males and Change among the females. Unexpectedly, the P.R.F. scale Affiliation was unrelated to scores on this variable. Originally it had been anticipated that individuals who had more friendly, outgoing personalities would experience less stress because they would be able to re-establish a network of positive reinforcers more quickly. Although scores on this scale were related to the ease with which people made new friends after their moves, they were independent of the rating of the stressfulness of the move.

As in Study Ia, none of the personality or attitude variables were differentially associated with adjustment in mobile as opposed to non-mobile groups. Among the males, adjustment was positively associated with the following:

i) scores on the P.R.F. scale Affiliation

ii) the rating on the scale measuring the capacity to make friends with ease

iii) satisfaction with life in the town where one was living

iv) satisfaction with one's spouse and

v) being married (trend only)

Only two correlation coefficients differentiated the two groups. One was the correlation between Trait Anxiety and Change where low scores on the scale Change were significantly associated with higher Trait Anxiety scores only in the mobile group. The second was the correlation between the variable "enjoy moving" and Trait Anxiety, where non-enjoyment of moving was significantly associated with higher Trait Anxiety scores only in the mobile group. Both these differences were in the expected direction, and implied that certain dispositions and attitudes were more adaptive for mobile individuals. In sum, however, the patterns of correlations showed more similarities than differences, and hence it does not seem that adaptation to mobility is differentially related to most of the mediating variables that were analyzed.

The picture was similar among the female subjects. In both the mobile and non-mobile groups adjustment was associated with socializing skills.

Few of the personality scales were associated with mobility. Mobile men obtained higher scores on the P.R.F. scale Change, while there was a trend ($p = .1$) among the females for the more mobile ones to obtain higher scores on the P.R.F. scale Autonomy. On the attitude scales, mobile men were less satisfied with life in the town where they were living. Generally, however, among both males and females, there was a tendency for the mobile individuals to have more favorable attitudes towards mobility, and vice versa. Once again, however, it should be noted that even when the correlations are significant, they are numerically quite low, and hence not very much of the relevant variance is being accounted for.

The only correlation which indicated that moves could have negative effects was the one which showed that individuals who had moved more recently

had fewer friends in the town where they were living. Since frequency of mobility was not associated with the number of friends an individual had, this effect must have been short lived.

Study III

Introduction

This study was done concurrent with Study II. The original plan had been to obtain longitudinal data, but unfortunately the public relations involved were so complex that by the time things had been arranged the subjects had already moved. The correlational data from that study are being presented nevertheless because the sample contained a fair number of people who had been transferred by their employers fairly recently.

Subjects

Subjects were obtained using a procedure similar to the one used in Studies Ia and II. Various local companies supplied names of employees who were likely to move in the near future. These prospective movers were sent letters which described the purpose of the study and also two copies of the questionnaire--one for themselves and one for their wives. In this way 58 subjects were obtained.

The sample contained 34 males and 24 females. Ninety per cent of the subjects were married and none were separated or divorced. Thirty-eight per cent of the subjects were college graduates and another twenty per cent had had some college education. The average age was 36. Eighty per cent of the sample had been born in North America, 70 per cent in Canada and 10 per cent in the United States. The details of these frequency distributions are presented in Appendix J.

Measures

The measures were similar to those used in Study II. The mobility variable of primary interest was the time which had elapsed since an individuals most recent inter-urban move. Adjustment was measured using both the

Langner Scale and Spielberger's Trait-Anxiety Scale. Education, age, sex and marital status were also measured, as was place of birth.

Results

Regarding recency of moves, 62 per cent of the sample had made an inter-urban move within the preceeding year (see Table 29).

Table 29

Number of Subjects Who Had Made Recent Inter-urban Moves.

Question: For how long have you been living in the town you are presently living in?

Answer:	f	%
(1) 1-2 months	16	27.6
(2) 3-5 months	6	10.3
(3) 6 months to a year	14	24.1
(4) 1-2 years	12	20.7
(5) 3 years or more	10	17.2

The frequency distribution on the Langner Scale indicated that there was an adequate representation of individuals who were less effectual in their psychological functioning. Twenty-seven per cent of the sample obtained Langner scores of 4 or more, and could thus be considered "not well". Similarly, there was a sufficient range on the Trait Anxiety scores, with the sample mean being 36.07 and the standard deviation being 6.17.

Correlations were obtained between the two adjustment scores and the time which had elapsed since the subjects' most recent inter-urban moves.

The variables sex, age, education and marital status were controlled for using partial correlation techniques. Both the Langner Scale ($r = .19$, D.F. = 51, $p > .05$) and the Trait Anxiety Scale ($r = .10$, D.F. = 51, $p > .05$) were independent of recency of mobility.

Discussion

The subjects in this study were all corporate men and their wives. All recent moves had been because of company transfers. Once again the results obtained in Study Ia and II have been cross validated. Much of what was stated in the previous discussion applies to these results. The broader implications of all the studies will be expounded upon in more detail in the General Discussion.

Study IV

Introduction

This study was done at the same time as Studies II and III. It differs from those two studies in that the average age of the subjects was much lower. Indeed, this group of subjects could easily be called adolescents. A different kind of mobility was being tapped here in that many of the subjects' recent moves had been prompted by educational, rather than economic incentives, and some had made moves which were beyond their control.

Subjects

Subjects were all university students enrolled in an abnormal psychology course. Though participation was voluntary, the entire class completed the questionnaire and this indicated that the subjects took the study seriously. The sample consisted of 230 individuals, 76 were male and 152 were female. Only 10 were married. Most of the subjects were between 20 and 21 years of age and only 10 per cent of them had been born outside of North America.

Measures

Demographic variables such as age, sex and marital status were included in the questionnaire and controlled for when necessary. In addition, subjects were also asked whether they were living with their parents and whether they used marijuana. Adjustment was measured by Spielberger's Trait Anxiety Scale. The P.R.F. scale affiliation was also included in the questionnaire.

Results

There were an adequate number of subjects who had both moved frequently and moved recently. The details of these distributions are presented in Table 30.

Table 30

Distributions Along Two Mobility Variables--Recency and Frequency.

Independent variable measuring recency:

For how many years have you been living in Montreal?

	f	%
(1) 1 year or less	34	15.3
(2) 2 years	8	3.6
(3) 3 years	16	7.2
(4) 4 years	7	3.2
(5) 5 years or more	157	70.7

Independent variable measuring frequency:

How many different cities/towns have you lived in?

	f	%
(1) 1	105	47.7
(2) 2	36	16.4
(3) 3	30	13.6
(4) 4	23	10.5
(5) 5 or more	26	11.8

Age was controlled for using partial correlation techniques and then mobility was correlated with adjustment. Adjustment was independent both of recency of mobility ($r = .06$, D.F. = 196, $p > .05$) and of frequency of mobility ($r = .00$, D.F. = 196, $p > .05$).

The P.R.F. scale Affiliation was also not correlated with mobility ($r = -.07$, D.F. = 196, $p > .05$ and $r = .03$, D.F. = 196, $p > .05$). Individuals who had moved recently, however, had fewer friends. This was so even when age was partialed out, and when living away from one's parents was controlled for ($r = -.14$, D.F. = 206, $p < .05$).

Although drug use (both alcohol and marijuana) was associated with mobility, the significance of that association altered when the variable "are you presently living with your parents? (a) yes (b) no" was controlled for. Thus, people who had been living in Montreal for a shorter period of time smoked marijuana more frequently ($r = .12$, D.F. = 205, $p < .09$; controlling for age) and drank alcohol more frequently ($r = -.19$, D.F. = 205, $p < .007$; controlling for age). But recent movers also lived away from their parents more often ($r = -.62$, D.F. = 205, $p < .001$) and when that confounding factor was controlled for the correlations in question became non-significant ($r = .04$ and $r = .01$ respectively).

Similarly those subjects who had made more inter-urban moves smoked marijuana more frequently ($r = .13$, D.F. = 205, $p < .06$) and drank alcohol more frequently ($r = .23$, D.F. = 205, $p < .001$). They also lived away from their parents more often ($r = .36$, D.F. = 205, $p < .001$). When that variable was controlled for the correlations became ($r = .20$, D.F. = 204, $p < .01$; $r = .15$, D.F. = 204, $p < .05$). Thus even when living away from parents was controlled for, individuals who moved more frequently also used these drugs more frequently.

Discussion

On the validated scales of adjustment no long term negative effects of mobility experience were evident. Thus, that finding seems to apply to both a broad range of ages and a broad range of reasons for moving. Although frequent mobility was associated with greater alcohol and marijuana use, that does not seem to reflect worsened adjustment, but rather a different moral attitude or lesser inhibitions on certain kinds of behaviors. The broader implications of all the studies will be presented in the general discussion.

General Discussion

Mobility and Psychological Adjustment

No association was found between mobility and psychological adjustment. Since the samples were large and the measuring instruments reliable and valid, it is to be assumed that the conclusion is justified, especially since controls were implemented for age, marital status and education.

In some ways it is difficult to realistically compare the results of the present investigations with those of previous studies. Very few other investigators have utilized measures of psychological functioning which were unrelated to hospital admission data, although when they did (Srole et al, 1962; Weinberg, 1949) the results were similar to those obtained here. The results of the present study do not necessarily contradict those obtained with hospital admission data, since the latter kinds of studies did not address themselves to exactly the same kinds of research questions. The present studies were concerned with the correlates of specific kinds of mobility experience in a specific kind of population. In many of the hospitalization studies the social class of the individuals was unknown and reasons for mobility were rarely considered.

In the present studies all subjects were middle class and most moved in order to further their professional careers (i.e. for promotions or to pursue educational goals). Most had well developed socializing skills and stable marital relationships. These kinds of people, as stated previously, are very representative of those North Americans who move most frequently, and one can conclude that for them geographic mobility is not more disruptive than other experiences which most people in our culture undergo.

Though a number of researchers have found that mobile individuals were over-represented in state mental institutions, their studies have been difficult to make generalizations from. These investigators never described the mobile individuals in terms of their reasons for moving or in terms of their social class makeup. Thus it was unknown whether these mobile individuals could be considered a random sample of all mobile people in a particular geographic area. If state mental institutions have a lower class bias, as some have found (Hollingshead and Redlich, 1958), then perhaps the hospitalization data indicates that among lower class individuals there is a correlation between geographic mobility and mental illness. Lee (1963) used hospitalization data and also standardized for social class. Though his results were still positive, they might have been different had the analyses been done separately for each social class.

Thus, it would seem that the data obtained in the present studies does not necessarily contradict other findings. Rather, it indicates that for a population similar to the one studied here, mobility does not have deleterious long term effects on adaptive functioning.

The findings obtained were consistent across all analyses. Both measures of the dependent variable in question yielded identical results. Comparisons with persons who had very high rates of mobility, and also with persons who had moved very recently did not alter the conclusions. Furthermore, these results were consistent in both male and female groups, single and married individuals, and couples with and without children. Other measures of adjustment also bore non-significant relationships to mobility experience. These measures included tranquilizer use, and alcohol consumption.

Though it was felt that the measures of psychological functioning

which were used were superior to the ones used in the hospitalization studies, one could ask whether different measures would have altered the results. Unfortunately the choices of available psychological insturments were not that extensive. Both measures that were used had been validated against commonly used criteria of psychological functioning. Had specific diagnostic categories been used perhaps they would have yielded different findings. It may have been that clinical symptoms were increased in temporal contiguity with a move, while overall functioning was not noticeably impaired. Future research might direct itself to questions of that sort. Other measurements which might profitably be utilized would include an adaptation of Kanfer and Saslow's (1965) behavioral analysis. Perhaps overall adjustment is not affected by mobility experience, while specific behavioral patterns are. For example, family interaction styles, and peer interactions may be modified as a consequence of repeated mobility. Though hypotheses based on the present studies would lead one to believe that these behaviors are not significantly altered by mobility, improved techniques of behavioral assessment might find those hypotheses invalid.

A definite conclusion arrived at through the present investigation is that for the type of population studied geographic mobility does not alter the adaptive functioning of the individual.

Factors Which May Have Been Mitigating the Disruptive Effects of Mobility

Social Supports

It had been hypothesized that mobility would have been disruptive for adaptive functioning by virtue of its effects on stable social supports. Perhaps, however, the disruption due to this factor was not that great. Mod-

ern communication facilities are such that contact with family and old friends can be maintained if this is so desired. In fact, Lansing and Mueller (1967) have found that although mobility did not increase as a function of a person's travelling experiences, the opposite did occur. That is, mobile individuals travelled more often than non-mobile ones, and much of this travel served to maintain contacts with family and old friends. It may be that mobile people maintain that kind of communication at a decelerating rate until such a time as they have re-established a strong social network for themselves. In any case, in the present studies it was evident that repeated mobility experience did not seem to result in a loss of social supports, since mobile individuals had as many friends as non-mobile people (unless they had moved very recently), and they did not differ in their overall interpersonal orientations. For example, their scores on the PRF scales did not indicate that their friendships were less intense, or less extensive. Furthermore, though the Affiliation scores of mobile people were not significantly higher than those of their non-mobile cohorts, all subjects had scores which indicated relative facility in social relationships. Perhaps that is a middle class characteristic which makes adaptation to moves easier for middle class individuals (Fried, 1964). It has been said for example that middle class females, as opposed to lower class ones, are:

> "not only higher in socializing skills but have moved enough times to be old hands at the techniques of integrating themselves into strange neighborhoods (Packard, 1972, p. 153)."

The social disruption of moves may have also been mitigated by the fact that many people who become mobile as adults have already experienced mobility while in their formative years. Many individuals in our society experience mobility at a relatively young age--often upon entering university.

Since these people are frequently the ones who later make geographic moves for economic reasons (i.e. college graduates) it may be that moving during adulthood is less stressful for them because these people have already acquired the necessary adaptive social skills (i.e. at university). Making one's first geographic move during middle age might be a much more traumatic experience. This could be profitably investigated in future studies.

Because a fairly large percentage of middle class people are geographically mobile, and because companies are usually located in but a few different cities, it may well be that upon entering a new city the mobile individuals already had a number of acquaintances there. Furthermore, at an institutional level, both industries and universities do attempt to make the social transitions easier for their employees and students. Both these kinds of situations would have mitigated against mobility involving a substantial loss of social supports.

Although not validated in the present studies, another attenuating factor may have been that mobile families become closer emotionally, in order to compensate for repeated loss of other social supports.

Social Change

The social change experienced as a results of repeated mobility may not have been as great as had originally been anticipated. Though some subjects changed countries and even cultural contexts it may have been that the development of new behavioral patterns was not necessary. Life styles for middle class people are very similar in our western civilization and in particular in North America, and hence alterations in behavioral social expectations as a result of mobility may have been minimal.

Review articles which have been written concerning the effects of

social change on mental health have pointed to the complexity of the problem and the inconsistencies in the correlations. Though, (as stated before) various investigators have found an increase in maladaptive functioning to be associated with situations of social change, that relationship has not always been obtained. Murphy (1961) observed that the only situations of social change which were consistently associated with negative mental health consequences were circumstances involving the acculturation of non-western civilizations; and even here the effects may have been due not to the social change itself but rather to the fact that the western civilizations had higher rates of disorders.

When Fried (1964) reviewed the literature on social change and disturbances in psychological functioning, he noted that though disruptions in adaptive functioning frequently occurred, mental health changes were not necessarily long lasting. His general conclusion was that:

> "...for the greatest number, dislocation does lead to intense personal suffering despite moderately successful adaptation to the total situation of relocation, but the outcomes of the crises are always manifold and just as there is an increase in strain and difficulty so also is there an increase in opportunities for adapting at a more satisfying level of functioning."
>
> "...the most general conclusion we can draw regarding the effects of social change on mental health and illness is that, despite the disturbance of adaptation entailed there is a wide range of alternative methods of coping with change experiences (pp. 23-24)."

When the results of the present investigations are evaluated in the light of work done by Homes and Rahe (1967), it becomes apparent that the social readjustments necessitated by mobility are quantitatively not that great. When one quantifies this change using the Life Change Units Scale one notices that the total score does not approach that level which the re-

searchers found was correlated with less adequate physical and mental functioning. (The maximum attainable count being 160 (see Table 31). Thus, though geographic mobility entails a certain amount of altered social expectations those alterations may not be that great.

Other Possible Mitigating Factors

The fact that the findings of this investigation differed from those investigations using hospital admission data may also have been due to the fact that voluntary use of psychiatric facilities has been increasing, especially in middle class populations. For example, though Gordon and Gordon (1958a) found that rates of psychiatric disorder were higher in rapidly growing communities, they also noted that these complaints were very responsive to short-term psychotherapeutic interventions. As a result, long-term negative effects were rarely observed.

The findings may have reflected the fact that the mobile individauls in the present studies generally had positive attitudes towards a mobile life style. In the experiments done by Lazarus (1966), favorable cognitions about a stimulus could alter its tendency to evoke stress responses. It would appear that the subjects in the present investigations did not perceive moving as stressfully as had originally been expected. Because North Americans often equate success with happiness, and because economic success often entails geographic mobility ("If you are ambitious moving is part of the package" Packard, 1972, p. 146), there may be a willingness among these people to accept mobility as a way of life.

Few subjects admitted to being coerced into moving, hence the perceived locus of control was primarily internal. This factor may also have accounted for the observed results. Research studies have shown that "locus

Table 31

Social Readjustment Rating Scale*

Rank	Life Event	Life Change Units
1	Death of spouse	100
2	Divorce	73
3	Marital separation	65
4	Jail term	63
5	Death of close family member	63
6	Personal injury of illness	53
7	Marriage	50
8	Fired at work	47
9	Marital reconciliation	45
10	Retirement	45
11	Change in health of family member	44
12	Pregnancy	40
13	Sex difficulties	39
14	Gain of new family member	39
15	Business readjustment	39
16	Change in financial state	38
17	Death of close friend	37
18	Change to different line of work	36
19	Change in number of arguments with spouse	35
20	Mortgage over $10,000	31
21	Foreclosure of mortgage or loan	30
22	Change in responsibilities at work	29
23	Son or daughter leaving home	29
24	Trouble with in-laws	29
25	Outstanding personal achievement	28
26	Wife begins or stops work	26
27	Begin or end school	26
28	Change in living conditions	25
29	Revision of personal habits	24
30	Trouble with boss	23
31	Change in work hours or conditions	20
32	Change in residence	20
33	Change in school	20
34	Change in recreation	19
35	Change in church activities	19
36	Change in social activities	18
37	Mortgage or loan less than $10,000	17
38	Change in sleeping habits	16
39	Change in number of family get-togethers	15
40	Change in eating habits	15
41	Vacation	13
42	Christmas	12
43	Minor violations of the law	11

* From "Social readjustment rating scale" by T.H. Holmes and R.H. Rahe, Journal of Psychosomatic Research, 1967.

of control" perception is related to adaptive behaviors. If events are perceived as being under an individual's control, they are coped with in an active manner (e.g. new friends are sought out etc.). This kind of coping usually results in adjustments which are superior to those emanating from the more passive behavioral styles of people who perceive events as having been imposed upon them from without (external locus of control) (Lefcourt, 1966).

Another unexamined mitigating factor may have been the efforts on the part of the employer companies to make the relevant transitions as unstressful as possible. Studies have shown that moving arrangements are frequently made with the help of employers. Furthermore employees are given time off to visit their new place of residence, and sometimes are also helped financially.

Geographic Mobility and Social Psychiatry

As a result of the studies presented in this paper, some assumptions of social psychiatry can be re-evaluated. One of the basic premises of social psychiatry is that mental illness is a function of environmental contingencies. It does not seem that geographic mobility can be validly included among these contingencies. On the other hand, numerous other investigators have been unable to show that particular environmental experiences have long-term effects on adaptive behaviors. For example, war time neuroses (shell shock etc.) usually remit in times of peace unless they are inadvertantly reinforced. Early maternal deprivation has not be conclusively linked to impaired behavioral functioning. Moreover, it has been shown in various deprivation studies that the probablity of recovery from disruptive-environmental experiences increases as one goes up the phylogenetic scale (Dohren-

wend and Dohrenwend, 1969).

Individual responses to aversive experiences have been very difficult to predict. Even concentration camp victims showed extreme variability in their responses to the trauma they endured. To complicate matters even further, a study done by Renaud and Estees (1961), showed that a sample of above average men "had had as many pathogenic experiences as had individuals who were psychiatric patients."

What seems to be important is not merely the experiences an individual has undergone but also the adaptability of his behaviors and his resiliency in the face of stress. The validity of this statement has been demonstrated in the Midtown Manhattan Study (Langner et al, 1963; Srole et al, 1962). In that investigation it was found that the social classes, although differentiated by amounts of exhibited pathology, were not significantly different in terms of the overall numbers of stressors they had experienced. It seemed that the lower classes manifested more impaired behaviors, not because they had experienced more stress, but because their coping styles were much less effective (i.e. more maladaptive). More upper class individuals had a greater tendency to defend neurotically, and in so doing coped effectively with many challenges (e.g. threw themselves into their work). In contrast, the lower class individuals had defences which were much more reality distorting (psychotic) and hence rarely led to positive reinforcements.

It is interesting to note that in the Midtown Study the Mental Health Rating was linearly related to the total number of stressors an individual had experienced. Of the 142 stressors included, only 11 proved to be significantly associated with the Mental Health Rating. Any single "live" stressor, however, was only correlated with the Mental Health Rating at a

very low level. These findings have a number of important implications for social psychiatry. First of all they confirm the notion that mental health is a complex dimension, related significantly to many variables, but not that highly with any one of them. Furthermore, the study showed how few commonly accepted aversive experiences do indeed have disruptive effects. No synergistic effects were observed, and this brought to question the importance of the single traumatic event. Thus, in the context of the Midtown Manhattan Study, it is understandable how geographic mobility per se did not significantly alter adaptive functioning.

The results of the present studies can also be more fully understood in the context of the research done by the Dohrenwends (1969). They found that maladaptive symptoms (such as those measured in the Langner scale) were usually transient responses to transient stressors. Furthermore, unless reinforced by secondary gain, these symptoms disappeared in contiguity with the disappearance of the stressor. This conclusion was based both on their own research and on a review of studies wherein aversive experiences could not be conclusively linked to long-term negative effects. Perhaps the inherent stressfulness of a move is only of relatively short duration, and that is why no negative effects were observed. Future studies might profitably concentrate only on the two months before and after a move, when the "presence" of the move is most intensely felt.

Mobility and Personality

None of the analyses involving the personality variables showed statistically significant results. The movers did not develop different behavioral styles as a result of their mobility. Nor did movers with more of particular personality traits adapt more easily than others. These results

can be interpreted in a number of different ways. Taken at face value, they imply that the behavioral/coping demands ensuing from a mobile life style are not significantly different from those of a non-mobile life style. The actual social and economic environment may be very similar for both types of people (as have been previously discussed with respect to the social change aspects of mobility). Though moving may involve a temporary increase in tension and demands, the actual behaviors demanded of the movers may not be so different from the ones demanded of non-movers.

In the light of the present investigations, the criticisms, put forth by Walter Mischel in his book Personality and Assessment (1968), may be more valid than had been originally anticipated. Mischel's thesis is that though there is a small amount of consistency in individual differences across situations, generally this consistency is too small to be of any value in predicting human behavior. He has called for a re-evaluation of the whole area of personality testing, saying that on the whole behavioral consistencies across situations have not been shown. If Mischel is correct, then his thesis may explain the lack of positive results in this area.

The studies point to several conclusions. First of all, the original hypothesis that a single stressor like mobility or repeated mobility could alter long term adaptive functioning was not validated. This finding was consistent across all four samples and was true both for recent mobility and frequent mobility. It was not an artifact of sampling from a relatively healthy population since all samples contained an adequate number of "not well" individuals. It did not seem that the questionnaire results consisted of random responses, since the distributions for all the variables made sense when compared to the standardization data presented in the various test manuals.

All samples contained individuals who were very exemplary of those North Americans who move most often. The results should not be generalized to lower class samples, nor can they be considered equally valid for kinds of mobility which were not specifically examined (e.g. fleeing political oppression).

In both Studies II and IV, recent movers had fewer close friends in the cities where they were living. That state of affairs would appear to have been short term however since in all studies frequent movers did not have fewer friends. In Study Ia movers subjectively felt that their moves had adverse effects in a number of different areas. These effects may also have been only short term, since on the validated scales of adjustment no adverse effects were found.

A number of variables were found to be related to adjustment, but none were differentially related to the adjustment of mobile individuals. Thus, unlike the original expectations, social skills, autonomy and flexibility were not more strongly associated with adjustment in mobile groups.

Mobile individuals did have more positive attitudes towards mobility as a life style, but they did not differ along any of the personality dimensions which were measured. Thus the environmental demands for various kinds of social behavior may not have been that different among the two groups.

Although most of the results were contrary to the original expectations, they are nevertheless very useful from a social psychological point of view. Frequently the economic progress of a country necessitates geographic mobility . Many people would be better off financially, if they were willing to move into areas where more and better jobs were available.

However the encouragement of these kinds of movements has been slow due to the fear of harmful psychological effects. The present studies tend to indicate that this would not be the case.

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Appendix A

Letter Sent to Subjects in Study Ia.

McGILL UNIVERSITY
MONTREAL

The Psychology Department of McGill University is presently doing a series of studies on the effects of geographic mobility. People like yourselves often must make moves to different cities. In the process your children must change schools and your contacts with family and old friends are lessened. Although much has been written in the popular press about the effects of mobility, there has been very little scientific research done in this area.

Our study is designed to answer a number of socially relevant questions with respect to the effects of mobility. However, your co-operation is necessary to make the study a success.

What we would like you to do is to fill out the enclosed questionnaire. It takes about 1 hour to complete. We would like you to fill it out whether you have or have not moved in the past. In this way we will be able to compare mobile people with non-mobile people.

We are enclosing one questionnaire for husbands and one for wives. They are identical but should be completed independently by each of you. There is also a short (5 minute) questionnaire for each of your children, aged 8 or over.

The study is completely anonymous. No identifying information will be on the questionnaire. Furthermore, we are not interested in the response of any one individual--rather we are interested in the average response of certain groups of people.

Thank you very much for your time and co-operation. When the study is completed (April 1973) we will send you a report of our findings.

The study is concerned with how people are affected by society and is thus very important. We hope you can find the time to help us in our research.

Sincerely yours,

M.Caron
Project Co-ordinator
Department of Psychology

R.O. Pihl
Associate Professor
Director of Clinical Training
Department of Psychology

Appendix B

MOBILITY QUESTIONNAIRE

This questionnaire is to be filled out by Mr. X.

In the following table, the husband in your family will be referred to as Mr. X, the wife will be called Mrs. X, and children will be referred to by letter (A, B, C, etc.)

1. Please fill in the missing information in the following table.

	Date of Birth	Place of Birth	Age	Education
Mr. X				
Mrs. X				
Child A				
Child B				
Child C				
Child D				
Child E				

In the following questions circle the number in front of the statement that correctly answers the question.

2. Are you presently married? 1. yes 2. no

3. If you are, for how many years have you been married?

1. less than 5 years
2. between 6 and 10 years
3. between 11 and 15 years
4. between 16 and 20 years
5. over 20 years

4. Have you been married before?
   1. no
   2. yes, once
   3. yes, more than once

5. In what range does your salary fall?
   1. under $5,000 per year
   2. $6,000 to $10,000
   3. $11,000 to $15,000
   4. $16,000 to $20,000
   5. over $20,000

6. My father was a _____(occupation).

7. While I was growing up, he (father) was earning a salary of approximately:
   1. under $3,000
   2. $3,000 to $6,000
   3. $6,000 to $10,000
   4. $10,000 to $15,000
   5. over $15,000

8. His education was:
   1. 0 to grade 7
   2. some high school
   3. high school graduate
   4. some college
   5. college graduate

9. Up until the time of your marriage, how many addresses did you have?
   1. 1
   2. 2 to 4
   3. 5 to 7
   4. 7 to 9
   5. more than 9

10. Up until the time of your marriage, how many times did you move to a new city?
   1. never
   2. once
   3. twice
   4. 3-4 times
   5. more than 4 times

11. Up until the time of your marriage, how many times did you move to a new country?
   1. 1
   2. 2
   3. 3
   4. 4
   5. more than 4

12. In the following table please list all your addresses since your present marriage.

Address	Street	City	Country	Lived there from 19 to 19
A				
B				
C				
D				
E				
F				
G				
H				
I				
J				

In the next few questions, the letters A, B, C, etc. refer to the addresses you entered in the table of question 12.

13. Fill in the following blanks with the appropriate number or numbers from the choices listed below.

We moved from A to B because _____

" " " B to C because _____

" " " C to D because _____

" " " D to E because _____

" " " E to F because _____

" " " F to G because _____

(continued on next page)

We moved from G to H because,_____

" " " H to I because_____

" " " I to J because_____

(1) Mr. X was requested by his company to accept a parallel job elsewhere.
(2) Mr. X's company insisted on his accepting a parallel job elsewhere.
(3) Mr. X was requested by his company to accept a promotion elsewhere.
(4) Mr. X's company insisted that he accept a promotion elsewhere.
(5) There were better job opportunities elsewhere (any company).
(6) We wanted to be closer to friends and/or relatives.
(7) We wanted to live in a nicer home and/or area.
(8) We wanted to live in a larger home.
(9) We moved because of political reasons.
(10) Other reason (please specify).

14. For each new address (B, C, etc.), did this address correspond to:

(1) An improvement in your material way of life?
(2) No change in your material way of life?
(3) A decline in your material way of life?

(Fill in the following blanks with the appropriate number from the choices above.)

A corresponded to_____ F corresponded to_____

B corresponded to_____ G corresponded to_____

C corresponded to_____ H corresponded to_____

D corresponded to_____ I corresponded to_____

E corresponded to_____ J corresponded to_____

15. Which move or moves had an adverse effect on your: (Fill in the blanks with the letter(s) of the appropriate moves, writing a move in the form A to B, B to C, etc.)

(i) relationship with your spouse_____

_____

(ii) relationship with your children_____

_____

(iii) childrens' school work _____

_____

(iv) childrens' social life _____

_____

(continued on next page)

(v) your own social life _____

_____

(vi) work efficiency _____

_____

In the following questions put a mark on the straight line at the point on the line that corresponds most to how you feel. It is best to mark the first answer that comes to your mind.

EXAMPLE:

How muct do you like to travel?

very little very much

_____/_____

If you like to travel quite a bit, you might make a mark such as the one above.

16. If you had the choice, would you prefer a very mobile or a very non-mobile life?

Very non-mobile Very mobile

_____

17. Mr. X, do you enjoy your work?

No, not at all Yes, very much

_____

18. Did you ever refuse when your company asked you to move to a new City/town?

(1) Yes
(2) No
(3) I was never asked

19. If you did refuse, what was the reason?

(1) I felt it would be bad for my children.
(2) I felt it would be bad for my wife.
(3) I felt it would be bad for me.
(4) 1 and 2.
(5) 1, 2, and 3.
(6) other reason (please specify)_____

_____

20. When you and your family move to a new place in the <u>same city</u>, which of the following adjustments is most and least difficult for you and your family?

(1) Rebuilding a comfortable social life.
(2) Childrens' academic adjustment to the new school.

(continued on next page)

(3) Childrens' social adjustment to the new school.
(4) Maintaining contact with extended kin and old friends.
(5) I haven't made this type of move.
(6) Other (Please specify)

Fill in the following blanks with the appropriate number from the choices above.

(i) Most difficult_____

(ii) Least difficult_____

21. When you move to a new place in a <u>different city</u>, which adjustments are most and least difficult for you and your family? (same choices as above)

(i) Most difficult_____

(ii) Least difficult_____

22. How frequently do you have an alcoholic beverage?

(1) once a month or less
(2) once or twice a week
(3) one or two drinks a day
(4) three drinks a day
(5) more than three drinks a day

23. On the average, how many hours a day is the whole (nuclear) family together?

(1) ½ hour or less
(2) 1 hour
(3) 2 hours
(4) 3-4 hours
(5) my children no longer live at home

24. How frequently do you take tranquilizers?

(1) rarely or never
(2) once a month or less
(3) once or twice a week
(4) three to four times a week
(5) daily

25. Do your parents live in the same city as you?

(1) yes
(2) no
(3) they are deceased

26. How often do you see them?

(1) once a week
(2) every two weeks
(3) once a month
(4) every 2 months
(5) twice a year or less

27. How often would you like to see them? (same choices as in question 26)

Answer:_____

In my opinion basically I am:

28. dependent _____ independent

29. rigid _____ flexible

30. introverted _____ extroverted

31. insecure _____ secure

32. unambitious _____ ambitious

33. not very hardworking _____ very hardworking

IN THE FOLLOWING SECTION, CIRCLE THE NUMBER BESIDE THE ANSWER THAT MOST CLOSELY DESCRIBES YOU.

34. I feel weak all over much of the time.
1. Yes
2. No
3. DK (don't know)

35. I have had periods of days, weeks or months when I couldn't take care of things because I couldn't get going.
1. Yes
2. No
3. DK

36. In general, would you say that most of the time you are in high (very good) spirits, low spirits or very low spirits.
1. High
2. Good
3. Low
4. Very Low
5. DK

37.	Every so often I suddenly feel hot all over.	1. Yes 2. No 3. DK
38.	Have you ever been bothered by your heart beating hard? Would you say: often, sometimes or never?	1. Often 2. Sometimes 3. Never 4. DK
39.	Would you say your appetite is poor, fair, good or too good?	1. Poor 2. Fair 3. Good 4. Too Good 5. DK
40.	I have periods of such great restlessness that I cannot sit long in a chair.	1. Yes 2. No 3. DK
41.	Are you the worrying type?	1. Yes 2. No 3. DK
42.	Have you ever been bothered by shortness of breath when you were <u>not</u> exercising or working hard? Would you say often, sometimes, or never?	1. Often 2. Sometimes 3. Never 4. DK
43.	Are your ever bothered by nervousness (irritable, fidgety, tense?) Would you say often, sometimes or never?	1. Often 2. Sometimes 3. Never 4. DK
44.	Have you ever had any fainting spells? Would you say never, a few times, or more than a few times?	1. Never 2. A few times 3. More than a few times 4. DK
45.	Do you ever have any trouble in getting to sleep or staying asleep? Would you say often, sometimes, or never?	1. Often 2. Sometimes 3. Never 4. DK
46.	I am bothered by acid stomach several times a week.	1. Yes 2. No 3. DK
47.	My memory seems to be all right.	1. Yes 2. No 3. DK

48.	Have you ever been bothered by "cold sweats"? Would you say often, sometimes, or never?	1. Often 2. Sometimes 3. Never 4. DK
49.	Do your hands ever tremble enough to bother you? Would you say often, sometimes, or never?	1. Often 2. Sometimes 3. Never 4. DK
50.	There seems to be a fullness in my head or nose much of the time.	1. Yes 2. No 3. DK
51.	I have personal worries that get me down physically.	1. Yes 2. No 3. DK
52.	Do you feel somewhat apart even among friends?	1. Yes 2. No 3. DK
53.	Nothing ever turns out for me the way I want it to.	1. Yes 2. No 3. DK
54.	Are you ever troubled with headaches or pains in the head? Would you say often, sometimes or never?	1. Often 2. Sometimes 3. Never 4. DK
55.	You sometimes can't help wondering if anything is worthwhile anymore.	1. Yes 2. No 3. DK

On the following pages you will find a series of statements which a person might use to describe himself. Read each statement and decide whether or not it describes you.

If you agree with a statement or decide that it does describe you, answer TRUE. If you disagree with a statement or feel that it is not descriptive of you, answer FALSE.

<u>Answer every statement</u> either true or false, even if you are not completely sure of your answer.

56.	I enjoy doing things which challenge me.	T(True) F(False)
57.	I pay little attention to the interests of people I know.	T F

58.	If public opinion is against me, I usually decide that I am wrong.	T	F
59.	I get annoyed with people who never want to go anywhere different.	T	F
60.	I live from day to day without trying to fit my activities into a pattern.	T	F
61.	Others think I am lively and witty.	T	F
62.	I feel that adults who still like to play have never really grown up.	T	F
63.	Self-improvement means nothing to me unless it leads to immediate success.	T	F
64.	I believe that a person who is incapable of enjoying the people around him misses much in life.	T	F
65.	I would like to wander freely from country to country.	T	F
66.	Changes in routine disturb me.	T	F
67.	When I talk to a doctor, I want him to give me a detailed explanation of any illness I have.	T	F
68.	I am too shy to tell jokes.	T	F
69.	I love to tell, and listen to jokes and funny stories.	T	F
70.	I get disgusted with myself when I have not learned something properly.	T	F
71.	Trying to please people is a waste of time.	T	F
72.	Adventures where I am on my own are a little frightening to me.	T	F
73.	I like to have new things to eat from week to week.	T	F
74.	It doesn't bother me to put aside what I have been doing without finishing it.	T	F
75.	I like to have people talk about things I have done.	T	F
76.	I consider most entertainment to be a waste of time.	T	F

77.	I work because I have to, and for that reason only.	T	F
78.	Loyalty to my friends is quite important to me.	T	F
79.	When I was a child, I wanted to be independent.	T	F
80.	My likes and dislikes are the same from year to year.	T	F
81.	I don't enjoy confused conversations where people are unsure of what they mean to say.	T	F
82.	I would not like the fame that goes with being a great athlete.	T	F
83.	I enjoy parties, shows, games--anything for fun.	T	F
84.	I will keep working on a problem after others have given up.	T	F
85.	Most of my relationships with people are business-like rather than friendly,	T	F
86.	I don't want to be away from my family too much.	T	F
87.	I would be willing to give up some financial security to be able to change from one job to another if something interesting came along.	T	F
88.	I tend to start right in on a new task without spending much time thinking about the best way to proceed.	T	F
89.	I don't mind being conspicuous.	T	F
90.	When I have a choice between work and enjoying myself, I usually work.	T	F
91.	I try to work just hard enough to get by.	T	F
92.	I am considered friendly.	T	F
93.	My greatest desire is to be independent and free.	T	F
94.	I have a specific routine of recreational activities.	T	F
95.	Before I ask a question, I figure out exactly what I know already and what it is I need to find out.	T	F
96.	I feel uncomfortable when people are paying attention to me.	T	F

97.	Once in a while I enjoy acting as if I were tipsy.	T	F
98.	I often set goals that are very difficult to reach.	T	F
99.	After I get to know most people, I decide that they would make poor friends.	T	F
100.	I usually try to share my problems with someone who can help me.	T	F
101.	I am always looking for new routes to take on a trip.	T	F
102.	When I need one thing at the store I get it without thinking what else I may need soon.	T	F
103.	I like to be in the spotlight.	T	F
104.	I only celebrate very special events.	T	F
105.	I would rather do an easy job than one involving obstacles which must be overcome.	T	F
106.	I enjoy being neighborly.	T	F
107.	I would like to have a job in which I didn't have to answer to anyone.	T	F
108.	It would take me a long time to adapt to living in a foreign country.	T	F
109.	It upsets me to go into a situation without knowing what I can expect from it.	T	F
110.	I was one of the quietest children in my group.	T	F
111.	Most of my spare moments are spent relaxing and amusing myself.	T	F
112.	My goal is to do at least a little bit more than anyone else had done before.	T	F
113.	Usually I would rather go somewhere alone than to a party.	T	F
114.	I often do things just because social custom dictates.	T	F
115.	Most people have a hard time predicting how I will respond to something they say to me.	T	F

116.	I like to be with people who are unpredictable.	T	F
117.	I would enjoy being a popular singer with a large fan club.	T	F
118.	Practical jokes aren't at all funny to me.	T	F
119.	I really don't enjoy hard work.	T	F
120.	I try to be in the company of friends as much as possible.	T	F
121.	If I have a problem, I like to work it out alone.	T	F
122.	I would be satisfied to stay at the same job indefinitely.	T	F
123.	I won't answer a person's question until I am very clear as to what he is asking.	T	F
124.	At a party, I usually sit back and watch the others.	T	F
125.	I like to go "out on the town" as often as I can.	T	F
126.	I prefer to be paid on the basis of how much work I have done rather than on how many hours I have worked.	T	F
127.	I have relatively few friends.	T	F
128.	Family obligations make me feel important.	T	F
129.	The main joy in my life is going new places and seeing new sights.	T	F
130.	I don't keep a very accurate account of my financial resources.	T	F
131.	If I were to be in a play I would want to play the leading role.	T	F
132.	I prefer to read worthwhile books rather than spend my spare time playing.	T	F
133.	I have rarely done extra studying in connection with my work.	T	F
134.	To love and be loved is of greatest importance to me.	T	F
135.	I delight in feeling unattached.	T	F

136.	When I find a good way to do something, I avoid experimenting with new ways.	T	F
137.	I don't like situations that are uncertain.	T	F
138.	When I was young I seldom competed with the other children for attention.	T	F
139.	I spend a good deal of my time just having fun.	T	F
140.	People have always said that I am a hard worker.	T	F
141.	I seldom go out of my way to do something just to make others happy.	T	F
142.	I respect rules because they guide me.	T	F
143.	I would like the type of work which would keep me constantly on the move.	T	F
144.	I very seldom make detailed plans.	T	F
145.	I often monopolize a conversation.	T	F
146.	Most of my friends are serious-minded people.	T	F
147.	When people are not going to see what I do, I often do less than my very best.	T	F
148.	Most people think I am warm-hearted and sociable.	T	F
149.	I find that I can think better without having to bother with advice from others.	T	F
150.	I would be content to live in the same town for the rest of my life.	T	F
151.	I would never make something without having a good idea of what the finished product should look like.	T	F
152.	I think that trying to be the center of attention is a sign of bad taste.	T	F
153.	I like to watch television comedies.	T	F
154.	I don't mind working while other people are having fun.	T	F
155.	When I see someone I know from a distance, I don't go out of my way to say "Hello".	T	F

156.	I find that for most jobs the combined effort of several people will accomplish more than one person working alone.	T	F
157.	I like to work on several projects at the same time so I can change from one to another.	T	F
158.	When I take a vacation I like to go without detailed plans or time schedules.	T	F
159.	I try to get others to notice the way I dress.	T	F
160.	People consider me a serious, reserved person.	T	F
161.	It doesn't really matter to me whether I become one of the best in my field.	T	F
162.	I truly enjoy myself at social functions.	T	F
163.	I would not mind living in a very lonely place.	T	F
164.	I see no reason to change the color of my room once I have painted it.	T	F
165.	My work is carefully planned and organized before it is begun.	T	F
166.	I never attempt to be the life of the party.	T	F
167.	If I didn't have to earn a living, I would spend most of my time just having fun.	T	F
168.	Sometimes people say I neglect other important aspects of my life because I work so hard.	T	F
169.	I want to remain unhampered by obligations to friends.	T	F
170.	To have a sense of belonging is very important to me.	T	F
171.	I like to change the pictures on my walls frequently.	T	F
172.	I like the adventure of going into a new situation without knowing what might happen.	T	F
173.	When I was in school, I often talked back to the teacher to make the other children laugh.	T	F
174.	I usually have some reason for the things I do rather than just doing them for my own amusement.	T	F

175.	I am sure people think that I don't have a great deal of drive.	T	F
176.	I spend a lot of time visiting friends.	T	F
177.	Having a home has a tendency to tie a person down more than I would like.	T	F
178.	When I was in school, I preferred to work on one subject until I had finished the assignment.	T	F
179.	Each day I check the weather report so that I will know what to wear.	T	F
180.	I don't like to do anything unusual that will call attention to myself.	T	F
181.	I delight in playing silly little tricks on people.	T	F
182.	I enjoy work more than play.	T	F
183.	I am quite independent of the people I know.	T	F
184.	I can do my best work when I have the encouragement of others.	T	F
185.	I would rather make new and different friends than spend my time with old friends.	T	F
186.	Once in a while I like to take a chance on something that isn't sure--such as gambling.	T	F
187.	I perform in public whenever I have the opportunity.	T	F
188.	I would prefer a quiet evening with friends to a loud party.	T	F
189.	It is unrealistic for me to insist on becoming the best in my field of work all of the time.	T	F
190.	I go out of my way to meet people.	T	F
191.	My idea of an ideal marriage is one where the two people remain as independent as if they were single.	T	F
192.	I like to go to stores with which I am quite familiar.	T	F

193. I have no use for theories which are only good guesses and are not closely tied to facts. T F

194. The idea of acting in front of a large group doesn't appeal to me. T F

195. Things that would annoy most people seem humorous to me. T F

In the following questions, answer (1), (2), or (3) according to the following schema: (1) Yes
(2) No
(3) DK

196. Do you suffer from hay fever/asthma attacks? 1. 2. 3.

197. Are you bothered by eye strain? 1. 2. 3.

198. Would you say you are a physically fit person? 1. 2. 3.

199. Do you often feel a lump in your throat? 1. 2. 3.

200. Does sometimes even a deep breath not satisfy your need for air? 1. 2. 3.

201. Do you think your chances of having a heart attack are high? 1. 2. 3.

202. Are you often troubled by backaches? 1. 2. 3.

203. Do you have any major skin problems? 1. 2. 3.

204. Do you find menstruation a difficult time? 1. 2. 3.

205. Do you find that spells of dizziness occur frequently? 1. 2. 3.

206. Do you feel that you overeat? 1. 2. 3.

207. Do you have colds or the flu very often? 1. 2. 3.

Appendix C

Demographic Characteristics of Subjects in Study Ia

Table 1

Place of Birth of Subjects

	Males		Females	
	f	%	f	%
1. Canada	115	76.7	109	77.9
2. U.S.A.	18	12.0	21	15.0
3. Britain	2	1.3	1	.7
4. Other	15	10.0	9	6.4

Table 2

Education of Subjects

	Males		Females	
	f	%	f	%
1. Graduate Degree	13	8.7	2	1.4
2. College Degree	80	53.3	20	14.3
3. Partial College	34	22.7	31	22.1
4. High School Graduate	17	11.3	66	47.1
5. Partial High School	5	3.3	18	12.9
6. Junior High School			1	.7
7. Grade 7 or less	1	0.7	1	.7

$\bar{X} = 2.5$
i.e., College grad--partial college

$\bar{X} = 3.6$
i.e., partial college--high school grad

Appendix C (Continued)

Table 3

Salary of Subjects - Males Only

	f	%
1. less than $5,000.	0	
2. $6,000 - 10,000	9	6.0
3. $11,000 - 15,000	40	26.7
4. $16,000 - 20,000	53	35.3
5. more than $20,000	47	31.3

$\bar{X}$ = 3.9 (i.e., $16,000)

Table 4

Average Age of Subjects

Males	43
Females	40

Appendix D - Langner Scale

Responses which are scored are the pathognomic ones and they are marked with an asterisk. The right hand column indicates the percentage of people giving each response in the original standardization sample.

1.	I feel weak all over much of the time.	*1. YES	9.1
		2. NO	90.5
		3. DK (don't know)	.4
2.	I have had periods of days, weeks or months when I couldn't take care of things because I couldn't get going.	*1. YES	16.4
		2. NO	82.7
		3. DK	.9
3.	In general, would you say that most of the time you are in high (very good) spirits, good spirits, low spirits, or very low spirits.	1. HIGH	9.6
		2. GOOD	81.1
		*3. LOW	6.0
		*4. VERY LOW	.7
		5. DK	2.6
4.	Every so often I suddenly feel hot all over.	*1. YES	16.3
		2. NO	82.8
		3. DK	.9
5.	Have you ever been bothered by your heart beating hard? Would you say: often, sometimes or never?	*1. OFTEN	3.7
		2. SOMETIMES	28.0
		3, NEVER	67.9
		4. DK	.4
6.	Would you say your appetite is poor, fair, good or too good?	*1. POOR	4.7
		2. FAIR	15.8
		3. GOOD	58.2
		4. TOO GOOD	21.0
		5. DK	.3
7.	I have periods of such great restlessness that I cannot sit long in a chair.	*1. YES	18.6
		2. NO	81.0
		3. DK	.4
8.	Are you the worrying type?	*1. YES	47.1
		2. NO	52.0
		3. DK	.9
9.	Have you ever been bothered by shortness of breath when you were <u>not</u> exercising or working hard? Would you say often, sometimes, or never?	*1. OFTEN	4.0
		2. SOMETIMES	15.4
		3. NEVER	80.3
		4. DK	.3

Appendix D (Continued)

10.	Are you ever bothered by nervousness (irritable, fidgety, tense)? Would you say often, sometimes or never?	*1. OFTEN	18.1
		2. SOMETIMES	55.8
		3. NEVER	25.8
		4. DK	.3
11.	Have you ever had any fainting spells? Would you say never, a few times, or more than a few times?	1. NEVER	82.0
		2. A FEW TIMES	16.3
		*3. MORE THAN A FEW TIMES	1.5
		4. DK	.2
12.	Do you ever have any trouble in getting to sleep or staying asleep? Would you say often, sometimes, or never?	*1. OFTEN	14.9
		2. SOMETIMES	30.3
		3. NEVER	54.6
		4. DK	.2
13.	I am bothered by acid stomach several times a week.	*1. YES	10.1
		2. NO	89.4
		3. DK	.5
14.	My memory seems to be all right.	1. YES	93.2
		*2. NO	6.1
		3. DK	.7
15.	Have you ever been bothered by "cold sweats"? Would you say often, sometimes, or never?	*1. OFTEN	2.2
		2. SOMETIMES	14.9
		3. NEVER	81.6
		4. DK	1.3
16.	Do your hands ever tremble enough to bother you? Would you say often, sometimes, or never?	*1. OFTEN	1.8
		2. SOMETIMES	11.2
		3. NEVER	86.6
		4. DK	.4
17.	There seems to be a fullness in my head or nose much of the time.	*1. YES	14.3
		2. NO	85.2
		3. DK	.5
18.	I have personal worries that get me down physically.	*1. YES	20.2
		2. NO	78.7
		3. DK	1.1
19.	Do you feel somewhat apart even among friends?	*1. YES	18.3
		2. NO	80.0
		3. DK	1.7
20.	Nothing ever turns out for me the way I want it to.	*1. YES	11.3
		2. NO	86.7
		3. DK	2.0

Appendix D (Continued)

21.	Are you ever troubled with headaches or pains in the head? Would you say often, sometimes, or never?	*1. OFTEN	10.9
		2. SOMETIMES	55.2
		3. NEVER	33.7
		4. DK	.2
22.	You sometimes can't help wondering if anything is worthwhile anymore.	*1. YES	26.7
		2. NO	71.4
		3. DK	1.9

Appendix E

Definitions and Trait Adjectives of the P.R.F. Scales used in Study Ia. (from Jackson, 1967)

Table 1

Personality Research Form Scales

Scale	Description of High Scorer	Defining Trait Adjectives
Achievement	Aspires to accomplish difficult tasks; maintains high standards and is willing to work toward distant goals; responds positively to competition; willing to put forth effort to attain excellence	striving, accomplishing, capable, purposeful, attaining, industrious, achieving, aspiring, enterprising, self-improving, productive, driving, ambitious, resourceful, competitive.
Affiliation	Enjoys being with friends and people in general; accepts people readily; makes efforts to win friendships and maintain associations with people	neighborly, loyal, warm amicable, good-natured, friendly, companionable, genial, affable, cooperative, gregarious, hospitable, sociable, affiliative, good-willed.
Autonomy	Tries to break away from restraints confinement, or restrictions of any kind; enjoys being unattached, free, not tied to people, places or obligation; may be rebellious when faced with restraints.	unmanageable, free, self-reliant independent, autonomous, rebellious, unconstrained, individualistic, ungovernable, self-determined, non-conforming, uncompliant, undominated, resistant lone-wolf.
Change	Likes new and different experiences; dislikes routine and avoids it; may readily change opinions or values in different circumstances; adapts readily to changes in environment.	inconsistent, fickle, flexible, unpredictable, wavering, mutable, adaptable, changeable, irregular, variable, capricious, innovative, flighty, vacillating, inconstant.
Cognitive Structure	Does not like ambiguity or uncertainty in information; wants all questions answered completely; desires to make decisions based upon definite knowledge, rather than upon guesses or probabilities.	precise, exacting, definite, seeks certainty, meticulous, perfectionistic, clarifying, explicit, accurate, rigorous, literal, avoids ambiguity, defining, rigid, needs structure

Appendix E (Continued)

Exhibition	Wants to be the center of attention; engages in behavior which wins the notice of other; may enjoy being dramatic or witty	colorful, entertaining, unusual, spellbinding, exhibitionistic, conspicuous, noticeable, expressive, ostentatious, immodest, demonstrative, flashy, dramatic, pretentious, showy.
Play	Does many things "just for fun"; spends a good deal of time participating in games, sports, social activities, and other amusements; enjoys jokes and funny stories; maintains a light-hearted, easy-going attitude toward life.	playful, jovial, jolly, pleasure-seeking, merry, laughter-loving, joking, frivolous, prankish, sportive, mirthful, fun-loving, gleeful, carefree, blithe.
Desirability	Describes self in terms judges as desirable; consciously or unconsciously, accurately or inaccurately, presents favorable picture of self in responses to personality statements.	

Appendix F

Reliability Data for P.R.F. Scales used in Study Ia (From Jackson, 1967)

Reliability of Select P.R.F. Scales

Scale	$\bar{X}$	S	N = 135 test/retest	N = 192 odd/even
Achievement	12.5	3.6	.80	.77
Affiliation	15.2	3.4	.79	.81
Autonomy	8.2	3.1	.77	.78
Change	12.2	3.1	.69	.51
Cognitive Structure	10.5	3.4	.73	.75
Exhibition	10.4	4.2	.88	.81
Play	11.6	3.4	.81	.72

Appendix G

Validity Coefficients for Selected P.R.F. Scales (from Jackson, 1967)

	California Sample				Pennsylvania Sample	
	Behavior Ratings		Trait Rating Form		Behavior Ratings	Self Rating Form
	N=40	N=51	N=40	N=51	N=202	N=202
Achievement	.53	.52	.55	.42	.46	.65
Affiliation	.44	.43	.80	.75	.40	.56
Autonomy	.55	.54	.66	.60	.26	.44
Exhibition	.73	.71	.45	.51	.45	.43
Play	.48	.55	.52	.53	.42	.52
Change	.38	.28	.28	.29	.22	.24
Cognitive Structure	.32	.35	.39	.35	.18	.30

Appendix H

MOBILITY QUESTIONNAIRE

INSTRUCTIONS: Each question in the following questionnaire is followed by a series of choices numbered 1 to 5.

e.g., My age is: (1) 19-25
(2) 26-30
(3) 31-35
(4) 36-40
(5) 41 or over

If you are 32, your answer to this question would be (3).

Sometimes a question is followed by a straight line which has the numbers 1-5 written below it.

e.g., Do you like travelling?

1	2	3	4	5
Not at all		Moderately		Very much

Answer by indicating the number which corresponds to where you fit on the line. Thus, if you like travelling a fair amount, but not very much, your answer will be (4).

Not all the questions are followed by five choices. Some only have two.

All the questions are to be answered on the enclosed IBM cards, using the special pencil that is in the envelope. Ignore the area on the IBM card marked <u>student number</u>. Answer each question by blackening in the number which corresponds to your answer.

e.g., 1. My age is: (1) 19-25
(2) 26-30
(3) 31-35
(4) 36-40
(5) 41 or over

If you are 32, you would fill in choice (3) of question 1 on your IBM card.

e.g. 3. ① ② ● ④ ⑤

1. How many times have you moved to a new city/town?

   (1) never
   (2) once
   (3) twice
   (4) three times
   (5) four or more times

2. How many times have you moved to a new country?

   (1) never
   (2) once
   (3) twice
   (4) three times
   (5) four or more times

3. For how long have you been living in the town you are presently living in?

   (1) 1-2 months
   (2) 3-5 months
   (3) 6 months to a year
   (4) 1-2 years
   (5) 3 years or more

4. My education is:

   (1) grade 1-7
   (2) some high school
   (3) high school graduate
   (4) partial college
   (5) college graduate

5. My age is:
   (1) 20-25
   (2) 26-29
   (3) 30-34
   (4) 35-40
   (5) over 40

6. Sex:
   (1) male
   (2) female

7. Marital status:

   (1) married
   (2) single
   (3) divorced
   (4) separated

8. Place of birth:
   (1) Canada
   (2) U.S.A.
   (3) Britain
   (4) Europe
   (5) other

The following questions pertain to the community you presently live in.

Do you presently live near:

9. Good schools..... 1. Yes 2. No

10. Good churches/synagogues..... 1. Yes 2. No

11. Good shopping areas..... 1. Yes 2. No

12. Good public transportation..... 1. Yes 2. No

13. Good recreational facilities (movies, restaurants, etc.)..... 1. Yes 2. No

Do you have a:

14. Family doctor..... 1. Yes 2. No

15. Family dentist..... 1. Yes 2. No

16. Do you enjoy life in the city/town where you are presently living?

1	2	3	4	5
Not at all		Moderately		Very much

17. Altogether how many people are there in the town where you live whom you consider to be close friends--not counting relatives.

(1) none
(2) 1
(3) 2
(4) 3-4
(5) 5 or more

18. Very often it is necessary for a person to move to a new city in order to get ahead in his career. Do you feel this is fair?

(1) Yes (2) No

19. Are you the type of person who enjoys the experience of moving to new cities?

(1) Yes (2) No

20. If it were not necessary for you to move in order to get ahead in your career, do you think you would move to another city anyway?

(1) Yes (2) No

If some time this year you and your family were to move:

21. Do you think the move would adversely affect the emotional adjustment of your spouse?

(1) Yes (2) No

22. Do you think the move would adversely affect the emotional adjustment of your children?

(1) Yes (2) No

23. Do you think that moving to a new city is a good experience for children to go through?

(1) Yes. (2) No

24. How easily do you make new friends?

1	2	3	4	5
With great difficulty		Moderately easy		Very easily

25. Do you get a lot of emotional support from your spouse in times of stress?

1	2	3	4	5
None		A moderate amount		Very much

26. How often do you have an alcoholic beverage?

(1) once a month or less
(2) once or twice a week
(3) one drink a day
(4) 2 or 3 drinks a day
(5) 4 or more drinks a day

27. Have you recently (past 2 months) sought counselling or been to see a psychiatrist/social worker/etc. because of a personal problem?

(1) Yes (2) No

28. Have any of your children?

(1) Yes (2) No

The following are a list of areas that children sometimes have problems in.

Read each item and decide whether any of your children are currently having problems in that area.

If they are: answer (1)
If they are not: answer (2)

29.	Eating.....	(1) Yes	(2) No
30.	Sleeping.....	(1) Yes	(2) No
31.	Digesting.....	(1) Yes	(2) No
32.	Getting alone with children.....	(1) Yes	(2) No
33.	Getting along with adults.....	(1) Yes	(2) No
34.	Unusual fears.....	(1) Yes	(2) No
35.	Nervousness.....	(1) Yes	(2) No
36.	Thumb sucking.....	(1) Yes	(2) No
37.	Over activity.....	(1) Yes	(2) No
38.	Sex.....	(1) Yes	(2) No
39.	Daydreaming.....	(1) Yes	(2) No
40.	Temper tantrums.....	(1) Yes	(2) No
41.	Crying.....	(1) Yes	(2) No
42.	Lying.....	(1) Yes	(2) No
43.	Stealing.....	(1) Yes	(2) No
44.	Destruction.....	(1) Yes	(2) No
45.	Rejection of school.....	(1) Yes	(2) No
46.	Eneuresis (bedwetting).....	(1) Yes	(2) No
47.	Speech.....	(1) Yes	(2) No

A number of statements which people have used to describe themselves are given below. Read each statement and answer to indicate how you feel right now, that is, at this moment. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

Answer (1), (2), (3) or (4) according to the following scheme:

(1) Not at all

(2) Somewhat

(3) Moderately so

(4) Very much so

48.	I feel calm.....	(1)	(2)	(3)	(4)
49.	I feel secure.....	(1)	(2)	(3)	(4)
50.	I am tense.....	(1)	(2)	(3)	(4)
51.	I am regretful.....	(1)	(2)	(3)	(4)
52.	I feel at ease.....	(1)	(2)	(3)	(4)
53.	I feel upset.....	(1)	(2)	(3)	(4)
54.	I am presently worrying over possible misfortunes.....	(1)	(2)	(3)	(4)
55.	I feel rested.....	(1)	(2)	(3)	(4)
56.	I feel anxious.....	(1)	(2)	(3)	(4)
57.	I feel comfortable.....	(1)	(2)	(3)	(4)
58.	I feel self-confident.....	(1)	(2)	(3)	(4)
59.	I feel nervous.....	(1)	(2)	(3)	(4)
60.	I am jittery.....	(1)	(2)	(3)	(4)
61.	I feel "high strung".....	(1)	(2)	(3)	(4)
62.	I am relaxed.....	(1)	(2)	(3)	(4)
63.	I feel content.....	(1)	(2)	(3)	(4)
64.	I am worried.....	(1)	(2)	(3)	(4)
65.	I feel over-excited and rattled.....	(1)	(2)	(3)	(4)
66.	I feel joyful.....	(1)	(2)	(3)	(4)
67.	I feel pleasant.....	(1)	(2)	(3)	(4)

The following are some more statements which people have used to describe themselves. Reach each statement and answer to indicate how you generally feel. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe how you generally feel.

Answer (1), (2), (3), or (4) according to the following scheme:

(1) Almost never

(2) Sometimes

(3) Often

(4) Almost always

68.	I feel pleasant.....	(1)	(2)	(3)	(4)
69.	I tire quickly.....	(1)	(2)	(3)	(4)
70.	I feel like crying.....	(1)	(2)	(3)	(4)
71.	I wish I could be as happy as others seem to be.	(1)	(2)	(3)	(4)
72.	I am losing out on things because I can't make up my mind soon enough.....	(1)	(2)	(3)	(4)
73.	I feel rested.....	(1)	(2)	(3)	(4)
74.	I am "calm, cool, and collected".....	(1)	(2)	(3)	(4)
75.	I feel that difficulties are piling up so that I cannot overcome them.....	(1)	(2)	(3)	(4)
76.	I worry too much over something that really doesn't matter.....	(1)	(2)	(3)	(4)
77.	I am happy.....	(1)	(2)	(3)	(4)
78.	I am inclined to take things hard.....	(1)	(2)	(3)	(4)
79.	I lack self-confidence.....	(1)	(2)	(3)	(4)
80.	I feel secure.....	(1)	(2)	(3)	(4)
81.	I try to avoid facing a crisis or difficulty..	(1)	(2)	(3)	(4)
82.	I feel blue.....	(1)	(2)	(3)	(4)
83.	I am content.....	(1)	(2)	(3)	(4)
84.	Some unimportant thought runs through my mind and bothers me.....	(1)	(2)	(3)	(4)
85.	I take disappointments so keenly that I can't put them out of my mind.....	(1)	(2)	(3)	(4)
86.	I am a steady person.....	(1)	(2)	(3)	(4)
87.	I become tense and upset when I think about my present concerns.....	(1)	(2)	(3)	(4)

In the following questions, black out the number that corresponds to the answer that most closely describes you.

88. I feel weak all over much of the time.
1. Yes
2. No
3. DK (don't know)

89. I have had periods of days, weeks or months when I couldn't take care of things because I couldn't get going.
1. Yes
2. No
3. DK

90. In general, would you say that most of the time you are in high (very good) spirits, good spirits, low spirits, or very low spirits?
1. High
2. Good
3. Low
4. Very low
5. DK

91. Every so often I suddenly feel hot all over.
1. Yes
2. No
3. DK

92. Have you ever been bothered by your heart beating hard? Would you say: often, sometimes, or never?
1. Often
2. Sometimes
3. Never
4. DK

93. Would you say your appetite is poor, fair, good or too good?
1. Poor
2. Fair
3. Good
4. Too good
5. DK

94. I have periods of such great restlessness that I cannot sit long in a chair.
1. Yes
2. No
3. DK

95. Are you the worrying type?
1. Yes
2. No
3. DK

96. Have you ever been bothered by shortness of breath when you were <u>not</u> exercising or working hard? Would you say often, sometimes, or never?
1. Often
2. Sometimes
3. Never
4. DK

97. Are you ever bothered by nervousness (irritable, fidgety, tense)? Would you say often, sometimes, or never?
1. Often
2. Sometimes
3. Never

98.	Have you ever had any faiting spells? Would you say never, a few times, or more than a few times?	1. Never 2. A few times 3. More than a few times
99.	Do you ever have any trouble in getting to sleep or staying asleep? Would you say often, sometimes, or never?	1. Often 2. Sometimes 3. Never 4. DK
100.	I am bothered by acid stomach several times a week.	1. Yes 2. No 3. DK
101.	My memory seems to be all right.	1. Yes 2. No 3. DK
102.	Have you ever been bothered by "cold sweats?" Would you say often, sometimes, or never?	1. Often 2. Sometimes 3. Never 4. DK
103.	Do your hands ever tremble enough to bother you? Would you say often, sometimes, or never?	1. Often 2. Sometimes 3. Never 4. DK
104.	There seems to be a fullness in my head or nose much of the time.	1. Yes 2. No 3. DK
105.	I have personal worries that get me down physically.	1. Yes 2. No 3. DK
106.	Do you feel somewhat apart even among friends?	1. Yes 2. No 3. DK
107.	Nothing ever turns out for me the way I want it to.	1. Yes 2. No 3. DK
108.	Are you ever troubled with headaches or pains in the head? Would you say often, sometimes or never?	1. Often 2. Sometimes 3. Never 4. DK
109.	You sometimes can't help wondering if anything is worthwhile anymore.	1. Yes 2. No 3. DK

On the following pages you will find a series of statements which a person might use to describe himself. Read each statement and decide whether or not it describes you.

If you agree with a statement or decide that it does describe you, answer (1) TRUE. If you disagree with a statement or feel that it is not descriptive of you, answer (2) FALSE.

Answer every statement either true or false, even if you are not completely sure of your answer.

		TRUE	FALSE
110.	I enjoy doing things which challenge me.	(1) T	(2) F
111.	I pay little attention to the interests of people I know.	(1) T	(2) F
112.	If public opinion is against me, I usually decide that I am wrong.	(1) T	(2) F
113.	I get annoyed with people who never want to go anywhere different.	(1) T	(2) F
114.	I believe that a person who is incapable of enjoying the people around him misses much in life.	(1) T	(2) F
115.	I would like to wander freely from country to country.	(1) T	(2) F
116.	Changes in routine disturb me.	(1) T	(2) F
117.	Trying to please people is a waste of time.	(1) T	(2) F
118.	Adventures when I am on my own are a little frightening to me.	(1) T	(2) F
119.	I like to have new things to eat from week to week.	(1) T	(2) F
120.	Loyalty to friends is quite important to me.	(1) T	(2) F
121.	When I was a child, I wanted to be independent.	(1) T	(2) F
122.	My likes and dislikes are the same from year to year.	(1) T	(2) F
123.	Most of my relationships with people are business-like rather than friendly.	(1) T	(2) F
124.	I don't want to be away from my family too much.	(1) T	(2) F
125.	I would be willing to give up some financial security to be able to change from one job to another if something interesting came along.	(1) T	(2) F

		TRUE	FALSE
126.	I am considered friendly	(1) T	(2) F
127.	My greatest desire is to be independent and free.	(1) T	(2) F
128.	I have a specific routine of recreational activities.	(1) T	(2) F
129.	After I get to know most people, I decide that they would make poor friends.	(1) T	(2) F
130.	I usually try to share my problems with someone who can help me.	(1) T	(2) F
131.	I am always looking for new routes to take on a trip.	(1) T	(2) F
132.	I enjoy being neighborly.	(1) T	(2) F
133.	I would like to have a job in which I didn't have to answer to anyone.	(1) T	(2) F
134.	It would take me a long time to adapt to living in a foreign country.	(1) T	(2) F
135.	Usually I would rather go somewhere alone than go to a party.	(1) T	(2) F
136.	I often do things just because social custom dictates.	(1) T	(2) F
137.	Most people have a hard time predicting how I will respond to something they say to me.	(1) T	(2) F
138.	I try to be in the company of friends as much as possible.	(1) T	(2) F
139.	If I have a problem, I like to work it out alone.	(1) T	(2) F
140.	I would be satisfied to stay at the same job indefinitely.	(1) T	(2) F
141.	I have relatively few friends.	(1) T	(2) F
142.	Family obligations make me feel important.	(1) T	(2) F
143.	The main joy in my life is going new places and seeing new sights.	(1) T	(2) F
144.	To love and be loved is of greatest important to me.	(1) T	(2) F

		TRUE	FALSE
145.	I delight in feeling unattached.	(1) T	(2) F
146.	When I find a good way to do something, I avoid experimenting with new ways.	(1) T	(2) F
147.	I seldom go out of my way to do something just to make others happy.	(1) T	(2) F
148.	I respect rules because they guide me.	(1) T	(2) F
149.	I would like the type of work which would keep me constantly on the move.	(1) T	(2) F
150.	Most people think I am warm-hearted and sociable.	(1) T	(2) F
151.	I find that I can think better without having to bother with advice from others.	(1) T	(2) F
152.	I would be content to live in the same town for the rest of my life.	(1) T	(2) F
153.	When I see someone I know from a distance, I don't go out of my way to say "hello."	(1) T	(2) F
154.	I find that for most jobs the combined effort of several people will accomplish more than one person working alone.	(1) T	(2) F
155.	I like to work on several projects at the same time so I can change from one to another.	(1) T	(2) F
156.	I truly enjoy myself at social functions.	(1) T	(2) F
157.	I would not mind living in a very lonely place.	(1) T	(2) F
158.	I see no reason to change the color of my room once I have painted it.	(1) T	(2) F
159.	I want to remain unhampered by obligations to friends.	(1) T	(2) F
160.	To have a sense of belonging is very important to me.	(1) T	(2) F
161.	I like to change the pictures on my walls frequently.	(1) T	(2) F
162.	I spend a lot of time visiting friends.	(1) T	(2) F

		TRUE	FALSE
163.	Having a home has a tendency to tie a person down more than I would like.	(1) T	(2) F
164.	When I was in school, I preferred to work on one subject until I had finished the assignment.	(1) T	(2) F
165.	I am quite independent of the people I know.	(1) T	(2) F
166.	I can do my best work when I have the encouragement of others.	(1) T	(2) F
167.	I would rather make new and different friends than spend my time with old friends.	(1) T	(2) F
168.	I go out of my way to meet people.	(1) T	(2) F
169.	My idea of an ideal marriage is one where the two people remain as independent as if they were single.	(1) T	(2) F
170.	I like to go to stores with which I am quite familiar.	(1) T	(2) F
171.	I always try to be considerate of the feelings of my friends.	(1) T	(2) F
172.	Nothing that happens to me makes much difference one way or the other.	(1) T	(2) F
173.	I often take some responsibility for looking out for newcomers in a group.	(1) T	(2) F
174.	I have a number of health problems.	(1) T	(2) F
175.	In the long run humanity will owe a lot more to the teacher than to the salesman.	(1) T	(2) F
176.	I often have the feeling that I am doing something evil.	(1) T	(2) F
177.	I am seldom ill.	(1) T	(2) F
178.	I almost always feel sleepy and lazy.	(1) T	(2) F
179.	My memory is as good as other people's.	(1) T	(2) F
180.	I am not willing to give up my own privacy or pleasure in order to help other people.	(1) T	(2) F
181.	Most of my teachers were helpful.	(1) T	(2) F

		TRUE	FALSE
182.	We ought to let the rest of the world solve their own problems and just look out after ourselves.	(1) T	(2) F
183.	My life is full of interesting activities.	(1) T	(2) F
184.	I often question whether life is worthwhile.	(1) T	(2) F
185.	I am able to make correct decisions on difficult questions.	(1) T	(2) F
186.	I believe people tell lies any time it is to their advantage.	(1) T	(2) F
187.	Rarely, if ever, has the sight of food made me ill.	(1) T	(2) F
188.	I find it very difficult to concentrate.	(1) T	(2) F
189.	I am always prepared to do what is expected of me.	(1) T	(2) F
190.	Many things make me feel uneasy.	(1) T	(2) F

191. How many children do you have?

(1) None
(2) 1
(3) 2
(4) 3
(5) 4 or more

192. When you made your last inter-city move, how stressful did you find the experience?

1	2	3	4	5
Not at all stressful		Moderately stressful		Very stressful

193. How easy was it for you to establish new friendships?

1	2	3	4	5
Not at all easy		Moderately easy		Very easy

194. Would you rate your (nuclear) family as being a close one?

1	2	3	4	5
Not at all close		Moderately close		Very close

The following question is to be answered on the questionnaire itself.

In the following table, please list the names of all the cities/towns you have lived in, the years you lived there, and the reasons for each move.

City/Town	Country	Lived there from Month Year	to Month Year
A.			
B.			
C.			
D.			
E.			
F.			
G.			
H.			
I.			
J.			
K.			

Why did you move from:

A to B? _____

_____

B to C? _____

_____

C to D? _____

_____

D to E? _____

E to F? _____

F to G? _____

G to H? _____

H to I? _____

I to J? _____

J to K? _____

Thank you very much for your time and kind co-operation. It is greatly appreciated.

Please send us the completed IBM cards AND the questionnaire itself in the enclosed stamped, addressed envelope. When the entire study is completed (1973) we will send you a resumé of our findings.

Appendix I

Demographic Characteristics of Subjects in Study II

Table 1

Age	f	%
1. 20-25	198	34.3
2. 26-29	126	21.8
3. 30-34	94	16.3
4. 35-40	66	11.4
5. 40+	94	16.3

Table 2

Sex	f	%
1. Male	300	51.9
2. Female	278	48.1
Marital Status		
1. Married	331	57.3
2. Single	220	38.1
3. Divorced	12	2.1
4. Separated	12	2.1

Table 3

Place of Birth	f	%
1. Canada	299	52.0
2. U.S.A.	63	11.0
3. Britain	50	8.7
4. Europe	81	14.1
5. Other	82	14.3

Appendix I (Continued)

Table 4

Education	f	%
1. grade 1 to 7	9	1.6
2. some high school	43	7.4
3. high school graduate	48	8.3
4. partial college	97	16.8
5. College graduate	381	65.9

Appendix J

Demographic Characteristics of Subjects in Study III

Table 1

Education	f	%
1. grade 1-7	0	0
2. some high school	8	13.8
3. high school graduate	16	27.6
4. partial college	11	19.0
5. college graduate	22	37.9

Table 2

Age	f	%
1. 20-25	3	5.2
2. 26-29	7	12.1
3. 30-34	8	13.8
4. 35-40	11	19.0
5. over 40	29	50.0

Table 3

Place of Birth	f	%
1. Canada	41	70.7
2. U.S.A.	6	10.3
3. Britain	2	3.4
4. Europe	8	13.8
5. Other	1	1.7