Children Who Move
Relocation Effects and Their Context

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According to the most recent census data, nearly eleven million children in the United States annually change their residence. Residential relocation can be a severely disruptive event for adults, but little is known about its effects on children. After a brief sketch of the dimensions and background of the problem, this article reviews the extant literature to examine whether and how the mobility of children is related to their academic behavior, social relations, and general well-being. The importance of several contextual factors is noted. Finally, limitations of research and the implications for planning are discussed.

Each year, about one out of every five families in the United States changes its residence (U.S. Bureau of the Census 1983, p. 29 ff.). According to the most recent national census data, these relocations involve nearly eleven million children. The mobility rate is highest for families with young children, as high as fifty percent in some categories. Of course, not every move takes children out of a familiar home and neighborhood to a totally new and unknown environment. Table 1 shows that fifty percent of the children under five who moved between March 1980 and March 1981 remained within the same standard metropolitan statistical area (SMSA). Moreover, a large majority of them stayed either within the same central city or within the outlying areas of the same SMSA. For older age groups, the proportion of within-SMSA moves is only slightly lower. The relatively localized nature of these moves is not, however, a reliable indicator of the extent of their uprooting effects. Forced relocation, for example, often displaces families from neighborhoods designated as renewal or revitalization areas to elsewhere in the same city (Gans 1962). In spite of the short distances involved, such involuntary moves may be very disruptive and have serious implications (Fried 1965).

Many children do, of course, make a long-distance move to novel surroundings. About one out of every three moves is to a different county, and one out of six is to a different state. Comparisons over time indicate that the proportion of long-distance moves increased between 1961 and 1981 (U.S. Bureau of the Census

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TABLE 1. RESIDENTIAL MOBILITY BY AGE GROUP AND TYPE OF MOVE (1980–1981)

Type of Move	Under 5 Years	5–9 Years	10–14 Years
Within Same SMSA	49.9%	47.9%	46.3%
Within Central City	22.3%	20.5%	19.9%
Within Balance of SMSA	18.3	18.6	17.6
Central City to Balance of SMSA	6.8	5.9	6.2
Balance of SMSA to Central City	2.5	2.9	2.7
Between SMSA's	12.3	12.6	13.3
Between Central Cities	2.7	2.8	3.9
Between Balances of SMSA's	4.7	4.7	4.8
Central City to Balance of SMSA	3.4	3.4	3.7
Balance of SMSA to Central City	1.5	1.7	1.0
From Outside SMSA's to SMSA's	4.8	4.9	5.2
To Central Cities	1.7	1.4	2.1
To Balance of SMSA's	3.1	3.5	3.2
From SMSA's to Outside SMSA's	6.0	6.0	7.6
From Central Cities	2.8	2.6	4.0
From Balance of SMSA's	3.2	3.2	3.5
Outside SMSA's at Both Dates	26.9	28.6	27.4
Movers From Abroad	3.2	3.4	2.6
To Central Cities of SMSA's	1.5	1.6	1.0
To Balance of SMSA's	1.4	1.4	1.5
To Outside SMSA's	.3	.4	.2
Different County	33.2	34.6	38.2
Same State	17.2	18.1	20.2
Different State Contiguous	4.6	5.0	5.8
Different State Noncontiguous	11.4	11.5	12.2
N (in thousands)	3364	3026	2363

Compiled from U.S. Bureau of the Census (1983, p. 14, 16)

1983). In absolute numbers, more than three million children under fifteen years of age move annually to a different county and nearly one and one-half million move to a different state. In addition, nearly three hundred thousand children in this age group come each year to the United States from abroad. If one adds to these figures estimates for children of illegal migrants whose numbers are hard to document precisely (Cornelius 1982), it becomes clear that children's residential relocation is a potentially significant issue. Parents, teachers, and counselors have expressed concern about its possibly adverse effects on children's school performance, friendships, and general well-being.

CONCERNS ABOUT MOBILITY

Although migration has been described as enhancing the quality of community life through the spreading of innovations and enculturation of positive values, the literature has focused largely on its negative facets. Assuming a parallel between being on the move and lability of mind, many have studied the relation between migration and mental health (e.g., Faris and Dunham 1939; Tietze, Lemkau, and Cooper 1942; Murphy 1977; Odegaard 1936; Weinberg 1955). In 1956 the Social Science Research Council published a detailed study on the topic (Malzberg and Lee 1956), and in 1963 it was the theme for the Fifth Annual Conference on Community Mental Health (Kantor 1965a). The relationships between residential mobility and crime and delinquency (Freedman 1964) and neighborhood cohesion (Fellin and Litwak 1963) have also been studied. Moving companies have funded research and sponsored a symposium on the effects of moving (Barrett and Noble 1973), and the World Health Organization has commissioned a large-scale investigation on the adaptation problems of migrants (Zwingmann and Pfister-Ammende 1973). The point is clear: there is a general concern with possibly adverse effects of residential relocation.

The concern is most pronounced in regard to vulnerable and disenfranchised population groups. Negative effects have been most visible when people had little say in the decision to move, for example, residents of institutions for the elderly (Coffman 1983) or psychiatric facilities (Hemming 1983), wives of corporate executives (Levin, Groves, and Lurie 1980) and military personnel (Pedersen and Sullivan 1964), and in cases of forced relocation (Gans 1959; Fried 1965) and economic hardship (Gelinek 1974).

Growing children must cope, of course, with the pressures associated with their normal development, and it has been suggested that this leaves them vulnerable to additional stresses of adaptation to a new environment (Goldberg 1980). In order to help their children meet this challenge, parents have been cautioned to plan their moves between school years and authors from various backgrounds have not been remiss in providing practical guides to moving (e.g., Ruina 1970; Hopkins 1972). This article examines ways in which planners can contribute to minimizing adverse effects of residential mobility on children. The literature is replete with references to such harmful consequences (e.g., Cotter Hirschberg 1955; Stubblefield 1955; Gordon and Gordon 1958; Tooley 1970). However, careful scrutiny of the factual basis of the conclusions drawn by such authors shows that their statements are often founded in methodologically dubious studies, inferred from nongeneralizable samples, or derived from impressionistic evidence gathered in uncontrolled observations. Therefore, the first task is to document those effects that have been empirically demonstrated and to identify the circumstances under which they occurred.

RELOCATION EFFECTS

Concerns about negative effects of relocation on children have been most pronounced in regard to academic behavior, social relations, and general well-being. Do mobile children perform more poorly in achievement tests? Do they have fewer friends? Do they exhibit more emotional disorders? The following literature review provides no unequivocal answers to these questions, but it orders findings obtained in nearly fifty years of research and identifies potentially significant variables in need of further study, while pointing to factors relevant in community planning. The discussion is based on an extensive inventory of the extant literature, in part presented in the appendix.[1] Studies of immigrant children are not included, except in a few instances where findings highlight salient points of broader significance.

Academic Behavior

The dominant research focus has been on academic behavior. Three general subareas can be distinguished: achievement, school attitudes and attendance, and participation in extracurricular activities.

A majority of the investigations has examined academic achievement, using various performance indicators. First, as regards scores on intelligence tests, Patterson (1950) found in a study of 611 Scottish school children, aged twelve to thirteen, that those who had attended a greater number of schools fared more poorly. Similar results were obtained by Bollenbacher (1962) in an analysis of IQ-scores of 5,578 sixth graders in Cincinnati public schools, by Justman (1965) in an investigation of 934 sixth graders in sixteen schools in disadvantaged areas in New York City, and by Frazier (1970) who compared 357 locally mobile and 311 nonmobile sixth grade children in eighteen public schools in Denver. This negative relation between mobility and IQ-scores is counterbalanced, however, by various studies which failed to find any relationship (Downie 1953; Burchinal and Jacobson 1963; Evans 1966; Steinhausen 1983). Moreover, one researcher found that children in faster growing communities had higher IQ-scores.

Other studies have examined children's performance on achievement tests in

reading, arithmetic, science, social studies, and languages. Again, the results are inconclusive, regardless of subject area. Larson (1940) and Justman (1965) found that mobile children obtained lower scores than their stationary counterparts, but opposite findings come from studies by Greene and Daughtry (1961) and Evans (1966), whereas no relation was found by Moore (1966a, 1966b), Long (1975), and Steinhausen (1983).

Further academic indicators include grades and progress in school. Among thirteen thousand Arizona students, aged eight to sixteen, those who had moved more often had lower grades, in particular when their fathers were in agricultural occupations (Tetreau and Fuller 1942). Similarly, Levine, Wesolowski, and Corbett (1966) found a negative relation between the number of previous schools attended by elementary school students in an ethnic inner-city neighborhood in New Haven and their grade point average, particularly in older age groups. Another study of 2,899 Arizona pupils shows a negative relation between age-grade level and mobility (Larson 1940). Analyzing national census data, Long (1975) also observed that a higher frequency of interstate moves was associated with an increasing likelihood of below-modal grade enrollment in the eight to seventeen year-old age group, except for children with highly educated fathers. Finally, it has been reported that moves delay children's academic progress by about one-third year (Beach and Beach 1937), that mobile children are promoted less often (Frazier 1970), and that children experience academic deficiencies during the first six months following a long-distance move (Barrett and Noble 1973).

Summing up these findings, it appears that the results regarding children's performance on intelligence and achievement tests are conflicting; the pattern for more routine-like progress in school suggests a negative relation with mobility, qualified by social-class background.

Children's attitudes toward school have also been linked to relocation. Beach and Beach (1937) report that children who moved more often had poorer attitudes toward teachers and school, although they did not explain how teachers made this assessment. In a more systematic factor-analytic study, Schaller (1974b) also found that mobility was negatively related to attitudes to school in a sample of 440 Swedish fifth and sixth graders. Aurelius (1979) found three years after their arrival in a suburb of Stockholm, Sweden, that working-class Finnish immigrant children had a higher truancy rate than did their Swedish peers but noted that children with adjustment difficulties tended to come from families with prior problems. In another study of teenagers in Cedar Rapids, Iowa, only eleventh grade boys who had moved from farms were absent from school more often, presumably because of different parental attitudes in farming families toward continued formal education for boys (Burchinal and Jacobson 1963). Frequency and recency of moves were associated with fewer school absences in 434 high school juniors in Savannah, Georgia (Greene and Daughtry 1961), but Hinojosa and Miller's (1984) study of sixth grade Mexican-American migrant children in rural Texas communities showed a positive relationship with the dropout rate and absenteeism.

These findings do not reveal a clear pattern. There is evidence suggesting that relocation may predispose children negatively towards school and result in greater absenteeism. However, the relation appears to be confounded by characteristics of the children and their families and by circumstances surrounding the move. Beyond this, there are indications that school changes are easiest to cope with in springtime (Barrett and Noble 1973).

Finally, Moore's (1966a, 1966b) study of 1,259 seniors in seven large high schools in suburban Denver examined participation in extracurricular activities. After accounting for social class and IQ, Moore

found that mobile students were significantly less involved, particularly those with four moves or more. More recently, Hinojosa and Miller (1984) obtained a related finding that showed a negative relationship between the dropout rate of Mexican-American migrant children in sixth grade and their involvement in school groups and participation in extracurricular events.

A number of considerations are relevant in interpreting the research reviewed thus far. For one, the observations are one-time recordings which cannot show more than a correlation between academic behavior and mobility. We do not know anything about the direction of the relationships. Does relocation affect children's intelligence negatively, resulting in lower scores on IQ-tests? Or are mobile children with low IQ-scores an instance of selective migration? These questions point to methodological limitations of the research to which we will return later.

Social Relations

Several authors have examined relocation effects on children's social interactions, particularly with peers. Sometimes their conclusions are based on uncontrolled clinical observations made during therapeutic treatment of problem children. Cotter Hirschberg (1955), for example, states that mobility results in temporary impairment of children's capacity to make and maintain social contacts, citing support from a single illustrative case. Similar observations have been made by Switzer, et al. (1961) and Tooley (1970) without attempts to compare nonmobile children who have similar problems or mobile children who do not have problematic social relations.

Other studies have collected less impressionistic evidence, using more systematic procedures. In an early study mobile students were judged by their teachers to have less good attitudes towards their peers (Beach and Beach 1937). Along the same line, Aurelius (1979) found that Finnish immigrant children in Stockholm, Sweden, were more prone to conflicts with classmates and enjoyed a lower status among their peers. Using sociometric data, Downie (1953) found a nonlinear relationship between mobility and social acceptance, with students who had made two or three moves being more popular than those who never moved and those who moved more frequently. In another sociometric study, mobile children were much more isolated than nonmobile children (Rakieten 1961), but several investigations have failed to demonstrate a relation between moving and peer acceptance (Burchinal and Jacobson 1963; Falik 1966; Young and Cooper 1944; Ziller and Behringer 1961). The contradictory findings from the above studies are difficult to interpret since their validity is either dubious because of failure to control for potentially confounding factors or are hard to assess because of a lack of information on such factors.

A more satisfactory multivariate analysis of Swedish eleven and twelve year-olds, controlling for social class and verbal IQ, found significant effects of mobility on peer relations (Schaller 1974b). Mobile children reported more problems with their peers, were together with fewer peers during their leisure time, and were less often chosen as playmates. Answers obtained directly from children also leave little doubt about the importance of peers in their relocation experience. Lehr and Hendrickson (1968) asked 150 relocated middle-class children in grades two through six what they disliked most about their move. By far the greatest dislike was "leaving friends," mentioned by forty-seven percent. What did they miss most? Friends, was the answer of sixty-three percent. Is it difficult to make new friends? It depends. For ten percent of six to ten year-old children who made long-distance moves into greater Louisville, it was not easy according to their parents (Barrett and Noble 1973); this proportion rose to one-third for those aged eleven

and up, perhaps because of increased difficulty in getting accepted into established peer groups. The authors speculate that these figures may be different for families less affluent and less educated than those comprising their sample. The significance of family milieu is illustrated further by the fewer relationship problems diagnosed by Steinhausen and Remschmidt (1983) in Greek migrant-worker children as compared to West German controls; the greater coherence of Greek families was seen to function as a buffer absorbing potentially adverse implications of relocation. In this connection, it is also noteworthy that children in an urban renewal area studied by Northwood (1976) expressed much more negative feelings about their relocation if it disrupted contacts with relatives.

To recapitulate, the results obtained in early research are inconclusive, in large part because of a lack of methodological sophistication. More recent studies indicate that mobility may have negative repercussions for children's social relations, notably when children are in their early teens and when the move is involuntary. A growing body of literature appears to substantiate the significance of social supports in mediating effects of stressful events (Cobb 1976; Cochran and Brassard 1979; Dean and Lin 1977), and further research is needed to examine their role in children's relocation experience.[2]

Well-being

The term "well-being" is used here as a general label for various aspects of mental and physical health discussed in the relocation literature. Included are a wide range of emotional disorders, measured in various ways. Gordon and Gordon (1958) examined population census data, county juvenile court records, and files of private and mental health clinics. They suggested that high population turnover resulted in emotional problems, particularly among boys. Their assertion was not backed up, however, by defenses against methodological threats inherent in this type of aggregate analysis and discussed later. This same critique applies to an earlier geographical analysis which found a positive correlation between rates of residential mobility and juvenile delinquency in fifty-eight census enumeration areas in Berkeley, California (Stuart 1936). Using individual data in a comparison of seven thousand delinquents, aged fourteen to seventeen, with the general population in that age group in Los Angeles, Simpson and Van Arsdol (1968) found no differences in mobility rates after controlling for ethnic origin. Pedersen and Sullivan (1964) found no direct relation between number of moves and psychiatric classification of army personnel children as "normal" or "disturbed." Rather, the relationship was modulated by the extent to which children's parents, especially their mothers, accepted mobility and life in the military. Aurelius (1980) also failed to find dramatic evidence for negative relocation effects on emotional well-being. In a retrospective pre- post-move comparison of Finnish immigrant children in Sweden, seventy-five percent of those without conduct disorders before the move did show symptoms following the move, but for fifty percent of these, they disappeared within three years.

Opposite this fairly meager evidence for adverse implications there are several studies which did not find any relocation effects on mental health (Burchinal and Jacobson 1963; Kantor 1965b; Bricker 1973) and other investigations which showed that mobile children had, in fact, fewer emotional disorders (Greene and Daughtry 1961; Touliatos and Lindholm 1980; Steinhausen 1983; Steinhausen and Remschmidt 1983). These divergent research results again hint at the significance of contextual factors.

A few studies have reported results on more specific measures. For example, Bricker (1973) and Aurelius (1979) found a lower self-esteem for mobile children, and in Kroger's (1980) study, moving distance was negatively related to self-acceptance. Gigliotti (1976) reports a posi-

tive relation between sense of control and stability.

While limited observations do not indicate differences in motor movements between mobile and nonmobile children (Aurelius 1979; Steinhausen 1983; Steinhausen and Remschmidt 1983), one recent study did find that the mobility rate among acutely burned children, aged one to six, was significantly higher than among a comparable age group of the general United States population (Knudson-Cooper and Leuchtag 1982). Unfamiliarity with the hazards of a novel environment is one possible explanation for this finding which ties in with other studies concerned with the link between stressful life events and ill health (Coddington 1972; Heisel et al. 1973).

Reviewing the research on well-being, it appears, not surprisingly, that here also there is no simple and direct relation with mobility. Rather, some relations are more probable than others, depending on a number of contextual factors.

CONTEXTUAL FACTORS

The preceding has documented empirical support for relocation effects on children. It shows that studies have looked for and found predominantly but not exclusively negative implications. It also indicates, however, that consequences of moving should be seen in the context of additional factors illustrated in Table 2. The discussion below distills from the review a number of variables to illustrate at various levels their intervention in, or interaction with, relocation relationships.[3]

To begin with, at the personal level, children's age and gender most clearly differentiate their responses to relocation. After about age ten it seems that successful adaptation in school (Levine, Wesolowski, and Corbett 1966; Schaller 1974b) and peer group integration (Barrett and Noble 1973; Schaller 1974b) become more difficult. Boys, who appear to anchor more of their activities in the

TABLE 2. FACTORS IMPLICATED IN RESEARCH ON MOBILITY EFFECTS

Interacting Independent Variables	Multiple Interdependent Outcomes
Personal	Academic Behavior
e.g.,	e.g.,
—age	—achievement tests
—gender	—grade point average
—personality	—attendance
—IQ	—extracurricular activities
Family	Social Relations
e.g.,	e.g.,
—ethnic origin	—number of friends
—social class	—peer acceptance
—composition	—contacts with adults
—integration	General Health
School	e.g.,
e.g.,	—self-esteem
—curriculum	—sense of control
—size	—psycho-motoric functioning
—teacher/student ratio	—anxiety
—student turnover	—aggression
Community	
e.g.,	
—population density	
—land-use pattern	
—access to facilities and services	
—economic climate	
—political culture	
Mobility	
e.g.,	
—distance of move	
—timing of move	
—degree of choice	
—recency of move	

neighborhood than do girls, seem to react more negatively to relocation (Lehr and Hendrickson 1968; Northwood 1976), although in one study girls, spending perhaps more time indoors, suffered more often from acute burns following a move (Knudson-Cooper and Leuchtag 1982).

A number of studies point to the importance of family characteristics. For example, fathers' occupation (Tetreau and Fuller 1942) and education (Long 1975) have been found to interact with relocation. Parents' attitudes also play an important role; if they are favorable, children react more positively; if they are negative, children tend to suffer from adverse effects (Pedersen and Sullivan 1964; Barrett and Noble 1973; Northwood 1976). Several authors have stressed the significance of family functioning (Stubblefield 1955; Rakoff 1981). Evidence from studies of immigrant children shows that they tend to score better on various measures of well-being than native counterparts in control groups (Touliatos and Lindholm 1980; Steinhausen 1983; Steinhausen and Remschmidt 1983). The differences are attributed to differences in family coherence and integration which are considered stronger in the cultures of migrant children, although here, too, there are differences from one ethnic group to another (Steinhausen 1983).

Along with personal and family characteristics, features of children's old and new neighborhoods, no doubt, also affect their relocation experience. Access to other children, school, shops, libraries, cinemas, places to hang out, all help mold children's daily activities. Research, however, has by and large focused on standard measures of school performance and mental health, while adopting a reductionist psychological perspective on social relations. It is generally explicitly or implicitly concluded that hindrances to children's successful adaptation are to be found in their personality or family milieu; sometimes the school is also given passing notice. The significance of the community and neighborhood context is virtually ignored.[4] Yet environmental variables such as land-use pattern and population density have been found to play a prominent role in children's daily lives (Lynch 1977; Van Vliet— 1981). These findings are important for planners, because they identify factors amenable to their professional intervention.

The conspicuous absence of attention to the community environment reflects the intellectual background of most authors. The literature on children's relocation has been produced largely by psychiatrists and psychologists, followed by educational consultants, academic counselors, school administrators, and social workers. The general relocation literature has clearly demonstrated, however, the neighborhood's significance in voluntary and involuntary moves (Gans 1962; Fried 1965; Michelson 1977). The research lacuna is all the more evident, considering the important functions which the community environment fulfills for children (Van Vliet— 1983b).

Table 2 illustrates that studies of relocation effects on children involve many more variables than a simple, dichotomously scored mobility factor and a supposedly direct effect. Rather, there seems to be a constellation of interacting factors, of which mobility is one, with multiple interdependent outcomes. The decision to move, for example, is itself prompted by, among other things, the economic opportunities in a community and the family's position in the socioeconomic structure; effects of moving are, in turn, filtered through, for example, community and family related variables. Likewise, academic behavior and mental health appear to be, in part, a function of social support systems, themselves affected by relocation. There is, in other words, a complex configuration of variables. The arsenal in Table 2 provides potential for a number of flow chart arrangements with alternative causal sequencing of the variables involved. To establish correct patterns,

research will have to come to grips with a number of methodological and theoretical deficiencies that have hampered much of the research to date.

LIMITATIONS OF RESEARCH

Limitations of research on children's residential relocation derive from several sources. Most importantly, the research designs employed have generally been ill-suited to study adaptation effects of moving. Several investigations have simply recorded the incidence of, for example, behavioral disturbance symptoms in a sample of mobile children without comparative data from a control group of nonmobile children. Worse still, a few reports generalize from a biased sample of mobile children, namely those who had been treated by the authors for problems which were attributed to the move.

Although most research does include a comparison group of one kind or another, epidemiological studies are few. It appears that virtually all of the reported analyses are cross-sectional, based on data collected at one point in time after the move. By implication, findings from these studies can show correlations only; that is, relocation may be associated with certain manifestations which the researchers presume to be the outcome of moving.[5] If no baseline data are collected prior to the move, there is no way of telling whether the symptoms were present prior to relocation, perhaps even prompting the move.

This possibility is well illustrated by one study in which length of residence in the same house in Baltimore was negatively associated with personality disorders, whereas there was no such relationship with length of residence in the city (Tietze, Lemkau, and Cooper 1942), suggesting that instability is more strongly associated with intracity mobility than with intercity mobility. This seems counterintuitive, since long-distance moves are typically more disruptive. The finding likely reflects an artifact of the sample; long-distance movers are generally middle- or upper-class people who have better resources for coping, particularly with purposely planned changes. The intracity movers in all likelihood relocated for different reasons, perhaps connected to already existing problems. Such a reversal of presumed causality is found in another study by Robins and O'Neil (1958) who after thirty years followed up on St. Louis adolescents with behavioral and emotional problems. Compared with randomly selected controls in the same age group, also from St. Louis, the former patients were characterized by significantly higher mobility rates. In this case, the problems very clearly preceded and probably contributed to mobility rather than being caused by it.

These two studies highlight a limitation inherent in the *ex post facto* design. A few studies have attempted to overcome the problem by relying on retrospective observations. This approach, however, is beset by difficulties stemming from threats to the validity of recall data over an extended period. Several researchers have tried to circumvent this last problem by using objective data from cumulative student records, thereby severely restricting their range of dependent variables.

Only two studies have collected data at two points in time, thus permitting statements about the impact of moving in a before-after comparison (Kantor 1965b; Northwood 1976). Neither study is definitive. Kantor's research was limited to a checklist of behavioral symptoms (reported by mothers rather than the children themselves), while Northwood's work was largely exploratory and plagued by the fact that the researchers took on the role of counselors, in effect biasing the findings. The point is clear: more longitudinal research is needed. Data should be collected before children move, shortly after they move, and at some later time to see whether effects are indeed attributable to relocation and, if so, whether

and how they are attenuated in an adaptation process (cf. Michelson 1977).

Problems exist not only in research design, but also in sampling procedures, analytic strategies, and scope and operationalization of measures. These points are only mentioned here since a fuller discussion is provided elsewhere (Van Vliet— 1985a). Above all, however, it is important to develop an adequate conceptualization of the research questions. As is the case in the literature on effects of apartment living on children (Van Vliet— 1983b), researchers characteristically have adopted a "sniper approach" in studying effects of children's relocation; that is, they have presumed that relocation is a problem and then, without a prior conceptualization as to why this should be so, set out to prove or disprove its existence, using whatever data happened to be available or could be readily obtained.

This critique renders a harsh and perhaps somewhat unfair generalization of the literature, but the fact is that explanation of research results is typically statistical and ad hoc, rather than theoretical. This approach is unfortunate because at best it yields predicators, which are of limited value in developing potentially useful support policies and programs. A theoretical framework is required to guide subsequent methodological decisions and aid in the interpretation of research results.

IMPLICATIONS FOR PLANNING

Approaches to support children's adaptation to relocation are, by and large, on a micro level. Yet, as stressed earlier, the community context also impinges on children's relocation experiences. It is on this more aggregate level that planners can help to effectuate supportive conditions. As should be evident from the above review, there is no solid research basis for formulating far-reaching conclusions. However, points gleaned from the literature do permit some observations, which should be considered in the context of the following remarks.

First, it appears that relocation *per se* does not have uniform effects. Some children may be affected, whereas others are not, and different children may be affected differently. Moreover, like relocation, *not* moving and blocked mobility may also have potentially negative implications (Loo and Mar 1982; Michelson 1980). The specific effects are mediated by, for example, personality characteristics, family milieu, school, and community environment. Acknowledging that under certain circumstances relocation effects do occur, planners have to be cognizant of factors outside their domain, not amenable to their intervention, but nevertheless likely more significant in bringing about the effects (see Table 2). Second, relocation need not necessarily have negative effects. Research has been biased toward finding adverse consequences. Some studies, however, have reported positive outcomes of moving. This, too, is important information. It indicates a possible reorientation from responding reactively to improve coping responses following relocation to planning proactively to minimize or prevent the occurrence of risk factors (Van Vliet— 1985c). Third, to the extent that planners can have an impact, their influence is limited to the creation of conditions that promote opportunities for children's enhanced growth, while minimizing the potential for negative effects. Planners may operate within this framework in at least three areas: schools, social supports, and forced relocation.

Schools

Schools have long shown concern about the mobility of students (Wattenberg 1948). Measures adopted to ease students' transition include curricular adjustments and special welcome programs. In the United States, sending teachers in one school district can provide receiving teachers in another district with specific information on students' achievement in various areas through the Migrant Student Record Transfer System (Guzman

1981). This computerized procedure facilitates identification of academic areas needing support. Planners can supplement these efforts by providing accurate projections of net migration rates of the school-age population. Educational programming and budgeting require such advance information for efficient and effective general allocation of resources and specifically those targeted for migrant children. Unlike fertility, which has delayed effects since there is a five-year lead time from birth until school enrollment and which is routinely recorded as a vital statistic, migration requires the development of estimation methods not plagued by the problem of multicollinearity (Lawrence and Smith 1984).

Schools also rigidly delimit attendance areas according to strict local boundaries. Although most moves are local, in many instances school transfer is prescribed by bureaucratic reasons rather than travel distance. While planners cannot assume the role of school administrators, they can aid in delineating the most appropriate attendance areas, advise on appropriate age distributions and population densities, and devise suitable student transportation methods.

Social Supports

Difficulty in forming new friendships and developing social contacts is a frequent theme in the relocation literature, and empirical research suggests that mobile children may encounter such problems. Planners may alleviate these problems by providing opportunities for social interaction. Research has found that various aspects of children's social relations are affected by specific features of the neighborhood environment (Van Vliet— 1981; Berg and Medrich 1980). Particularly important are child density and land-use pattern. One study has found, for example, that children who had fewer than seventy-five children their age per square kilometer in their neighborhood shared fewer activities with friends, had fewer friends, and complained more about a lack of friends than did children in neighborhoods with higher densities (Van Vliet— 1981). Likewise, children knew more adults in their neighborhood if it contained places for recreation, such as sports buildings and auditoriums, and institutional land uses associated with community organization, such as community centers or police and fire stations. Promoting adequate numbers of children within age groups and a proper mix of commercial, public, and semipublic spaces in residential areas will help to insure the provision of opportunities mobile children need to establish and develop social support networks. It will also facilitate the operation of community-based prevention programs as described by, for example, Nann (1982). Considering the importance of peer relations in children's development (Van Vliet— 1985b), it is likely that neighborhoods which facilitate formation of friendships also foster children's overall well-being. Such environments may also aid in the adaptation and integration of the child's family, which will, in turn, positively influence the child's general well-being. There are also indications that community growth and decline affect children's ability to maintain friendships (e.g., Morgan 1946). Further research is needed to determine what exactly these relations are, but here, too, planners may be instrumental in bringing about favorable population patterns and trends.

Forced Relocation

Research has demonstrated that degree of choice in moving is an important factor in successful adaptation. Moreover, children cope better when their parents are more accepting of relocation (Pedersen and Sullivan 1964; Barrett and Noble 1973; Northwood 1976). Recognizing the problem of involuntary residential displacement, the United States Congress requested in 1978 that the Department of Housing and Urban Development (HUD)

report on its nature and extent and present recommendations for a national policy. After a two-part volume concluded that the available information was insufficient, Section 105(b) of the Housing and Community Development Act of 1980 required HUD to follow up (U.S. Department of Housing and Urban Development 1981). In this recent assessment, Annual Housing Survey data are used to estimate that in 1979 between 1.7 and 2.4 million people in the U.S. were involuntarily displaced. This figure represents four to six percent of those moving, although in urban areas forced relocation comprised ten to twenty-five percent of all moves, and it exceeded fifty percent in selected revitalization areas (U.S. Department of Housing and Urban Development 1981, p. VI). It is estimated that children may be part of about twenty-five percent of these households.

HUD has undertaken a number of regulatory and other actions to ensure that HUD-assisted programs that might generate displacement provide appropriate levels of relocation assistance. In this context, Baltimore, Los Angeles, Minneapolis, and other local governments are using HUD innovative grants under the Community Development Block Grant Program for projects to aid low- and moderate-income residents of revitalizing neighborhoods to remain in their communities. HUD technical assistance funds have also been used to develop local strategies for managing revitalization and minimizing displacement. Furthermore, aid is given to sixty HUD-certified housing counseling agencies in fifteen cities to develop and incorporate displacement prevention counseling into their programs.

It is clear that these policy measures were not developed with special reference to children. Rather, they are aimed at the "exosystems" (Bronfenbrenner 1979) in which children are embedded—their parents, neighbors, schools, and commercial and noncommercial enterprises in their neighborhood. However, children may benefit indirectly as has been shown in several studies of rehoused slum dwellers (Wilner et al. 1962; Wegelin 1978).

Policies could also be instrumental in facilitating the relocation of families with children by curtailing rental practices that restrict access to rental housing. A recent national study conducted for HUD has shown that the proportion of rental apartments in the surveyed buildings that exclude children had increased by fifty percent in the 1974-1980 period, so that currently one out of every four rental units is inaccessible to families with children (Marans and Colton 1985). These practices, coupled with exclusionary zoning (Calvan 1979), further hamper an often already difficult search for new housing. Planners should explore ways in which any unjustifiable barriers could be removed through policy and legislative measures.

CONCLUSION

This article has reviewed the relocation literature to examine the effects on children and to identify circumstances under which they occur. By ordering a previously scattered but large literature, this article has cumulated evidence that certain groups of children require a concerted effort supportive of their relocation. In discussing implications for planning the purpose was not so much to provide solutions as to raise issues requiring further study and to outline areas and ways in which planners can facilitate children's moves. An elaboration of these issues and the development and subsequent assessment of approaches to them are now awaited.

NOTES

1. While a few earlier reviews are available, these are less comprehensive in their coverage, more limited in scope, and descriptive rather than interpretative (Schaller 1972a, 1972b), or they are concerned with international migration (Ekstrand 1978; Aronowitz 1984).

2. Such a study is presently being conducted by the author.

3. This discussion is far from comprehensive and is intended for illustrative purposes only to accentuate contextual factors as a class of analytically significant variables. For a recent excellent discussion, see Stokols and Shumaker (1982).

4. An exception is a study by Gordon and Gordon (1958), suggesting a positive relation between community stability and mental health; this relationship is, however, subject to methodological criticism and apparently less an outcome of purposeful design than of lack of individual level data.

5. A few studies using geographical correlations are subject to another pitfall. Using aggregate data from census tracts or enumeration areas, they make statements about relations on the level of individuals living in those areas. This procedure may involve an "ecological fallacy" (Robinson 1950)—essentially an unjustified shifting of levels of analysis.

APPENDIX. STUDIES OF CHILDREN'S RESIDENTIAL MOBILITY: SELECTED CHARACTERISTICS AND FINDINGS

Reference	Sample	Independent Variables	Data Collection	Data Analysis	Main Findings
Beach and Beach (1937)	About 100 families with 188 children in California elementary and high schools	Move/nonmove	School and department of education records Teacher ratings	Cross-tabulation	Moves delay academic progress by about 1/3 year No relation with IQ-scores Moves associated with somewhat lower level of scholarship Children who moved most had "poorer" attitudes toward peers, teacher, and school
Larson (1940)	2,899 pupils in 3 Arizona communities, selection not specified	Number of schools attended	State register + record forms Available survey data	Cross-tabulation	Mobility associated with delayed age-grade scores and lower achievement test scores, especially in languages
Tetreau and Fuller (1942)	13,000 Arizona students, aged 8–16	Number of moves made Origin of moves	Questionnaire filled out by children with teachers' help	Cross-tabulations	Generally, least mobile children attained best grade Agricultural occupation of father: more negative effect of mobility; professional occupation: less negative effect
Patterson (1950)	611 school children aged 12–13, Scotland	Number of schools attended	School records	Correlations	Migrants have lower IQ-scores
Downie (1953)	All 5th to 8th graders in Hermiston, small boom town in Oregon (N = 454)	Number of schools attended Transfers Number of months in Hermiston public schools	Self-administered questionnaire Sociometric measures	*t*-test	No effect of moving on mental ability or IQ-scores No consistent findings regarding social acceptance by peers
Cotter Hirschberg (1955)	One boy	?	Clinical observation	—	Moves result in temporary impairment of capacity to make contact with other human beings and in greater or lesser degree of isolation

APPENDIX (continued)

Reference	Sample	Independent Variables	Data Collection	Data Analysis	Main Findings
Stubblefield (1955)	Unspecified number of clinical cases	?	Observation in psychiatric therapy	—	Healthy family relationships are most significant stabilizing factor
Gordon and Gordon (1958)	850 psychiatric referrals and unspecified number of court cases in 5 counties with varying mobility rates	County mobility rate	Case records of private + public mental health clinics 1950 census data County juvenile court records	X^2 Illustrative case studies	Positive correlation community mobility and emotional disorder in children Greater incidence of disorders among boys, except among blacks
Greene and Daughtry (1961)	434 high school juniors in Savannah, Georgia (4th grade); heterogeneous	Number of voluntary inter-school moves (i.e., not required by administration) Weighted recency of mobility score Weighted distance of mobility score	Student records on grades and test scores	X^2	Number of moves: none (26%); 1 (28%); 2 (21%); 3 (11%); 4 (7%); 5 (3%); 6+ (3%) Moves associated with fewer school absences + higher arithmetic scores More recent movers had more favorable home adjustment scores and fewer school absences Greater distance movers had better adjustment scores and better marks in biology, Spanish, and music
Bollenbacher (1962)	5,578 6th graders in Cincinnati Public Schools; 2,800 girls	Number of schools attended	Student records	Analysis of covariance	Within CPS, achievement in reading and arithmetic not related to mobility after controlling for IQ Within CPS, mobile children had significantly lower IQ
Burchinal and Jacobson (1963)	7th–11th graders in Cedar Rapids, Iowa, schools (N = 432)	Move from farm Move from city Never moved	School records Questionnaire	Analysis of covariance	No differences in physical complaints, worries about illness, tendency to illness, depression, excitability, loneliness, fears, fatigue, liking friends, being liked by friends, average scores in school and community activities, IQ-scores, average grades, achievement test scores, and

APPENDIX (continued)

Reference	Sample	Independent Variables	Data Collection	Data Analysis	Main Findings
					parent-child relationships 11th grade boys from farms more often absent from school
Pedersen and Sullivan (1964)	27 boys, referrals for outpatient evaluation or treatment; diagnosed as nonpsychotic Aged 11–15, 30 "normal" controls; volunteered from 118 who had received outpatient medical attention Mostly from army families	Mean number of moves	Parent interviews, including Likert scales	*t*-test	Classification "normal"/ "disturbed" not directly linked to number of moves Mothers of normal children scored significantly higher ($P < 0.05$) on mobility acceptance scale Mothers and fathers of normal children scored significantly higher ($P < 0.01$) on acceptance of military scale
Justman (1965)	934 6th graders in 16 New York City schools in disadvantaged areas	Number of different schools attended	Student records	*t*-test	Significantly negative relation between mobility rate and +IQ Idem between mobility and reading achievement
Kantor (1965a)	3rd graders in 15 St. Louis County public schools N = 379–440	Move within St. Louis Metropolitan area during the 2-year study	Interview with mothers, including behavior symptom checklist, over 2-year period	X^2 Analysis of covariance	Mothers in families who moved reported higher initial levels of disturbances in their children Moves not related to change in reported disturbance levels
Evans (1966)	97 5th and 6th graders in Bunker Hill, Indiana. Many from military families	Move/nonmove	Student records	Comparison of median scores	No relation between moving and IQ-scores Mobile children scored better in achievement tests in reading, social studies, arithmetic, and science
Levine, Wesolowski, and Corbett (1966)	Grades 1–6 working-class children in ethnic neighborhood of New Haven CBD; 30% from broken homes. N not specified but inferred c. 500	Number of schools attended	Student records	Cross-tabulations (not presented) X^2	Those who moved more had a poorer grade point average, especially in older age group Girls who moved more had lower marks for citizenship, not boys No effect of origin of move

APPENDIX (continued)

Reference	Sample	Independent Variables	Data Collection	Data Analysis	Main Findings
Moore (1966a)	1,259 seniors from intact families in 7 largest high schools in Denver, CO, suburb. All enrolled since junior year.	Number of moves, excluding those within school district	Student records	Anova with multiple covariance	No effect on achievement test scores No effect on percentile rank Less extracurricular participation, especially with 4+ moves
Moore (1966b)	See above	Moving pattern, i.e., when last move and whether preceded by others	See above	See above	No effect on achievement test scores No effect on percentile rank Less extracurricular participation, especially with 4+ moves
Lehr and Hendrickson (1968)	150 middle-class children in grades 2–6 from intact nuclear families who moved previous summer	Number of moves Time of most recent move	Open-ended 15-minute interviews with child Interviewers also rated children on scales according to nonverbal responses	—	Leaving friends is greatest dislike concerning moving (47%) 63% miss friends most of all Boys missed neighborhood friends more than girls No effect of distance of move
Frazier (1970)	311 nonmobile and 357 locally mobile 6th graders in 18 public elementary schools in Denver, CO, participating in ESEA Title 1 project for enriched and improved education	Number of moves	Pupils' cumulative school records	*t*-test Anova X^2	Mobile children significantly less often promoted At 3rd and 5th grade, significant difference in reading achievement and IQ-scores between mobile/nonmobile children Number of moves gives inconsistent results
Tooley (1970)	Unspecified number of clinical cases	?	—	Observation	6-year-olds and 13/14-year-olds suffer most
Black (1972)	210 6th grade pupils in 7 high-mobility/low-income elementary schools in Columbus, OH, public schools	Movement history (types of school attended) Movement pattern (number of times enrolled) Time of movement (grade level at time of move) Mobile > 2 moves	Student records California mental maturity test form California reading test	Analysis of covariance Anova	No significant difference between mobile/stationary students in relation to reading achievement Idem among mobile children
Barrett and Noble (1973)	318 children aged 3–18 from 159 families who made nonmilitary long-distance	Recency of move	Questionnaire filled out by parents, including behavioral	*t*-test Anova	For 10% of 6–10-year-olds, not easy to make friends Idem for 31% aged

APPENDIX (continued)

Reference	Sample	Independent Variables	Data Collection	Data Analysis	Main Findings
	moves into greater Louisville, 1969–1971, using one major moving company. This was a 71% response to bill of lading follow-ups. Upper-middle class.		checklist and open-ended questions		11 and up Difficulty in making friends independent of quarter during which child moved For 20% of 6–10-year-olds, school change difficult Idem for 33% aged 11 and up Spring easiest for school change, especially among age 11 and up 90% of parents with "good" attitude to move reported no or good effects on their children Bad effects more often reported for children above 11 Temporary academic deficiency in 6 months following move
Bricker (1973)	N = 135 (90 who moved between 9/70 and 1/72 + 45 random controls). Drawn from 1,050 3rd, 4th, and 5th graders (ages 8–11) in 3 public elementary schools in upper-middle-class Chicago suburb	Move/no move	Teacher rating of social adjustment Coopersmith self-esteem inventory form	*t*-test	No difference in mean social adjustment scores Mobile children had significantly lower self-esteem scores
Schaller (1974a)	I: N = 335 children in Göteborg, Sweden (158 in 4th grade; 177 in 5th grade; 168 girls) II: N = 514 children in Göteborg, Sweden (267 in 4th grade; 247 in 5th grade; 53% girls)	I & II: Number of moves	I & II: Self-administered questionnaire during school hours	I & II: *t*-test X^2	I: Children who had never moved had more negative expectations about an imaginary move than those who had moved II: Willingness to move again related to number of adjustment problems faced after previous move and number of previous moves Local movers reported fewer adjustment problems than long-distance movers

APPENDIX (continued)

Reference	Sample	Independent Variables	Data Collection	Data Analysis	Main Findings
Schaller (1974b)	N = 440 children in Göteborg, Sweden (217 in 5th grade; 223 in 6th grade; 223 girls)	Number of moves	Self-administered questionnaire Sociometric test IQ-test	Factor analysis Anova	Mobile children have significantly more negative attitudes towards school, reported more problems with peers, spent less leisure time with peers and were less often chosen as playmates Mobility and verbal IQ of about equal importance in explaining effects; social class of minor importance
Long (1975)	U.S. population in 8–17-year-age group	Number of interstate moves Rate of population change	1970 population census and data from National Center for Health Statistics	Cross-tabulation	Increasing frequency of interstate migration associated with increasing likelihood of below modal grade enrollment, except for children with highly educated fathers Interstate migration associated with lesser likelihood of above grade enrollment Positive relation between community growth and children's IQ, reading, and arithmetic scores seen as function of selective migration
Gigliotti (1976)	1,540 4th–6th graders in 7 predominantly black schools plus 1,319 4th–6th graders in 10 predominantly white schools. Purposive sample with mix of urban/suburban, SES, and achievement levels	Individual stability score (= function of length of attendance at present school) Community stability score (= mean of individual scores)	Class room-administered questionnaires	Partial correlations *t*-test	For whites, community stability positively related to sense of control; for blacks, the relationship is inverse Individual stability and sense of control are positively related, but significantly only for blacks
Northwood (1976)	72 children in grades 2–9; 51% Mexican/Indian; 30% black; 40% middle class; 64% from intact families. All forced to move	Pre- post-move comparison	Interviews with children before move, 1 and 2 years afterwards. Open- and closed-ended. Also with 31 household heads	Frequencies Cross-tabulations	Sharp decline in positive feelings regarding move; after 2 years: mostly negative Before move: no difference boys/girls; after move: boys more negative

APPENDIX (continued)

Reference	Sample	Independent Variables	Data Collection	Data Analysis	Main Findings
					Younger children more negative Negative if: more moves; disruption of regular school shift; fewer contacts with relatives Children's participation in decisions concerning move had no effect If parents positive, children, too
Aurelius (1979)	Working-class children; grades 1–9 in Stockholm suburb, Sweden. Finnish (N = 50); southern European (N = 37); Swedish migrants (N = 44); Swedish controls (N = 106)	Migrant status	Teachers interviewed by phone 3 years after arrival in Sweden	X^2 Frequencies Fisher's Exact Test	All migrant + immigrant children rated as having more adjustment problems than controls Finns judged less talkative and less trustworthy than Swedish controls Southern Europeans had less status, were less trustworthy and more prone to conflict with classmates (especially boys) Finns had lower self-esteem and higher truancy rate Southern Europeans had lower self-esteem, were more defiant, less sociable, more aggressive and shy No differences in psychomotor activity, stereotypes, speech disturbances, anxiety, sensitivity, ability to concentrate, weight, and height
Aurelius (1980)	Finnish immigrant children in Sweden, 6–17 years; 21 boys + 19 girls	Pre- post-move comparison	$2\frac{1}{2}$ hour broad-ranging interview with parents 3 years after arrival, including 30-item behavioral check list	Fisher's Exact Test *t*-test	Children with symptoms before move still have them 3 years afterwards 75% of those without symptoms before moving got them afterwards but, of these, 50% of symptoms disappeared within 3 years No differences boys/girls

APPENDIX (continued)

Reference	Sample	Independent Variables	Data Collection	Data Analysis	Main Findings
Goldberg (1980)	200 mobile adolescents, their parents, and men and women (ages 24–60) who had been mobile adolescents. Upper-middle class. Availability sample	Move (not specified)	Recorded conversations Written accounts	Content analysis	Descriptive and interpretative account; no specific findings reported
Kroger (1980)	11th graders in randomly selected large Tallahassee, FL high school and smaller city high school. Screened for intact middle-class homes; 16–17 years; 49% girls, 79% Caucasian.	Recency of moves Distance of moves Modal age for moves Number of moves	Self-administered questionnaire filled out on a group basis	Pearson's correlation Kendall's tau Anova Partial *r*	X of moves = 2.63 68% between 1–5 moves 16% did not move 14% moved within past year Self-concept related to distance of move and model age, but not to recency of moves and number of moves
Touliatos and Lindholm (1980)	2,991 white native-born + 97 children with foreign-born parents, all enrolled in K–grade 8 in suburb of Houston, TX	Migrant status	Teacher ratings	Anova	Children of Chinese, Japanese, of Southeast Asian descent exhibited significantly fewer disorders than children of native-born parents
Knudson-Cooper and Leuchtag (1982)	330 acutely burned children, 1–6 years, 35% girls, excluding foreign nationals + non-English speaking. Galveston clinic; movers (N = 117) and nonmovers (N = 213)	Move/Nonmove	Medical records Interviews with 78 parents/ guardians	X^2	Mobility rate among burned children higher than among comparable age group of general U.S. population, especially among girls Burns especially frequent in first months following move Moves associated with other major life events
Steinhausen (1982)	38 children of migrant workers (MW) in Federal Republic of Germany, out-patients in unit for child and adolescent psychiatry plus 890 remaining patients over 21-month period; c. 60% boys. Age: 1–5 (8%); 6–10 (40%); 11–14 (34%); 15–18 (19%)	Migrant status	Patient records, including ratings by psychiatric workers	Anova	No differences between MW children and controls in reading, math, writing, motor movement, IQ MW children have fewer conduct disorders In MW children greater incidence of enuresis

APPENDIX (continued)

Reference	Sample	Independent Variables	Data Collection	Data Analysis	Main Findings
Steinhausen and Remschmidt (1983)	For pre-study: 238 children of Greek migrant workers (MW) in West Berlin, aged 8–11; 105 German controls matched for sex, age, and social class. For main study: 70 Greek and 50 German children selected from above samples (unclear how)	Migrant status	Psychological tests Interviews with parents	Anova	Greek children scored lower on hyperactivity, conduct disorders, emotional and relationship problems, and psychomotor disturbances No difference in learning problems and psychosomatic complaints Less emotional and social strain in Greek families Migratory characteristics much less related to disturbances than family characteristics
Hinojosa and Miller (1984)	96 Mexican-American migrant children, 6th grade, in rural communities near Corpus Christi, TX	Migrants as identified by Texas Education Agency vs. national average	69 were interviewed; 27 got mailed questionnaire	Pearson's correlation Anova Multiple regression *t*-test	Dropout rate significantly related to involvement in school groups, attending extracurricular activities, absenteeism, and duration of migratory trip

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