This paper looks at the relationship between parents' social networks and aspects of child development. It has often been suggested that parents' links with kin, neighbors, friends, and local and non-local organizations are likely to have many effects on their children's development. These effects, however, have never been systematically investigated or demonstrated. In the present study, independent interviews were held with 9- to 11-year-old children and their parents living in high, medium, and low social risk areas of Sydney, Australia. The presence and number of parents' regularly seen dependable friends ("that you can call on in a crisis") emerged as a pervasive influence on child outcomes. The children's own social networks: their choice of role models; degree of socialization; happiness with their families; and level of negative emotions were significantly related to this aspect of their parents' lives. On measures of adjustment to school, it was the nature of parents' local friendships that emerged as the main predictor, but dependable friends also had an influence, these two friendship variables being related in a complex way. A separate pattern of relationships was found in respect of availability of child care supports, with parental ties to various formal organizations as the salient predictor. The findings suggest leads in many directions, some of which are briefly discussed. (Author/HP)
PARENTAL SOCIAL NETWORKS AND CHILD DEVELOPMENT

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ABSTRACT

This paper looks at the relationship between parents' social networks and aspects of child development. It has often been suggested that parents' links with kin, neighbours, friends, local and non-local organisation are likely to have many effects on children of the family; but such outcomes have never been systematically investigated or demonstrated. In the present study independent interviews were held with 9-11 year old children and their parents living in high, medium and low social risk areas of Sydney, Australia. The presence and number of parents' regularly-seen dependable friends ("that you can call on in a crisis") emerged as a pervasive influence on child outcomes. The children's own social networks; their choice of role models; degree of socialisation; happiness with their families; and level of negative emotions - all showed significant associations with this aspect of their parents' lives. The relationship was not simple or linear; for instance on certain measures it is the parents and children who are selective in their friendships who stand out from those with smaller or larger networks. On measures of adjustment to school, it was the nature of parents' local friendships that emerged as the main predictor, but dependable friends also had an influence, these two friendship variables being related in a complex way.

A separate pattern of relationships was found in respect of availability of child care supports, with parental ties to various formal organisation the salient predictor.

The findings suggest leads in many directions, some of which are briefly discussed.
This paper is concerned with the relationship between parental social networks and aspects of child development.* There is an increasing interest in the recent child development literature on the influence of the wider environment; social and geographic - the "ecology of development", to use Bronfenbrenner's term (Bronfenbrenner 1979). Parents' social networks constitute one aspect of this environment. In a useful recent review article on the topic, Cochran and Brassard have argued that the influence of parents' friends, neighbours and relatives has been too long unrecognised by those studying development. The role played by the parents themselves has been a popular study, but "little attempt has been made to place the family in a social context beyond that played by time-worn and static socioeconomic parameters" (1979: 601). Cochran and Brassard suggest accordingly that the time is ripe to "chart a new course in the study of child development" by drawing on ideas from social network analysis. In a search of the child development literature the authors found no studies using parents' networks as a major independent variable; but from a review of those studies in which network variables received incidental attention they suggest that there may be both cognitive and social effects. On the cognitive side they found indications that richer parental networks might be associated with accelerated perceptual differentiation in infancy; greater task persistence in older children; more advanced representational thinking; and greater receptivity to new intellectual stimuli. On the social side, positive outcomes hinted at include accelerated attachment in infants, greater and/or earlier independence behavior in older children, increased social role experience, less stereotyped sex role and occupational role perceptions, and more favorable self-concept and adjustment.

This is an impressive log of claims, based largely as the authors point out on passing hints and "tantalising traces" from studies conducted with quite other goals. Cochran and Brassard's review suggests a number of causal mechanisms including: enhanced parental self-esteem accruing from a satisfying social life, and translating into more effective parenting; inherent abilities of parents which manifest themselves in effective relationships with both other adults and their own children; imitation by the child of effective life-strategies modelled by the parents; parentally mediated entree of the child into a wide range of activities; exposure of the child to a wide range of observational models; greater openness to learning from such models and activities, due to early and continued exposure to varied stimulation, and consequently elaborated cognitive schema development in the child; and enhancement of child's self-esteem by gratifying interactions with a wide range of significant others. In the light of the present lack of

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basic information, however, Cochran and Brassard give priority to exploratory research, and suggest a number of useful directions for work in the area.

The Present Study

The present study was designed to investigate some of the issues raised above. The data came from a study of 305 families in Sydney, Australia, interviewed late in 1978. The families were selected randomly from six regions (Local Government Areas) themselves chosen by probability sampling to represent high, medium and low levels of social "risk" (Vinson and Homel, 1976). The risk score is a measure of cumulative social disadvantage based on 25 social indicators ranging from income and economic self-sufficiency through health, education and crime problems to family stability. Within each risk level, one LGA was in an inner, and one an outer area of the city. Three subareas (primary school feeder districts) were selected by probability sampling from within each LGA on the basis of estimated subareal risk scores. The names of 9-11 year old children were randomly selected from school rolls and letters sent home to parents requesting permission that both they and their child be interviewed. (9-11 year olds were chosen as it was feared that interviewing at earlier ages would present difficulties) (Lash and Sigal 1976). In all, 17 state primary schools and 17 Roman Catholic parochial schools serving the same areas were involved. Response rate varied with the school, from 88 percent to 53 percent, with an average of 70.4 percent. Only two parents actually refused to participate; the remainder of the non-respondents simply failed to reply, despite several reminders. No children whose parents did not give permission were interviewed. Fathers and mothers were interviewed in approximately alternate order with regard to network questions, giving close to a 50/50 division. All items related to the child's development were asked of the mother (or surrogate). There was evidence from teachers and other sources that the least coping families were least likely to reply, so that the sample undoubtedly under-represents such families, especially in the highest risk areas.

Parental Networks.

There is by now a complex literature on social networks and their influence on such variables as mental health (Caplan, 1974, reactions to stressful life events (Brown, 1978), family functioning (McCaughhey et al. 1977), the maintenance or loss of ethnic identity (Bottomley, 1975) and maintenance of social identity (Walker et al. 1972). This literature makes it clear that social networks have a number of significant dimensions, which have both independent and interactive effects. The most commonly studied dimensions have been size, frequency of contact, diversity, density or interconnectedness, and intensity (Bott, 1971; Granovetter 1973). In addition this literature distinguishes between the roles
played by friends, kin, neighbours and formal associations (Rossi 1972; Allan 1979).

In the present study the following questions were used to tap their various dimensions:

Do you have much to do with your neighbours?
   Do you say hello to any of them? Do you stop to talk to any of them? Lend things to them? Borrow things from them? Help each other if someone is sick? Help each other with child minding?

How many of your neighbours do you include among your friends?

Do you have as much, more or less contact with your neighbours than you want?

How many of your friends live in this (local area)? (None, some, most, all)

How many would that be? How often do you see them?

Thinking of all your friends, not just those who live near you, do you have any dependable friends that you see regularly, that you could call on in a crisis? (If you're in real trouble.) How many?

Do you have relatives that you can depend on in a crisis? How many? How often do you have contact with them? How many live in (local area)?

How often do you see them?

Do you or your spouse belong to - religious; community, sporting, children's and other organisations? (details) Which of these are locally based? Are any of your friends in these organisations? Do you work for, or give money to these organisations?

Child Outcomes.

Since the children interviewed belonged to a restricted age range, only certain of the child outcomes nominated by Cochrane and Brassard are included. Most of the measures are from the child interviews, which were conducted individually at the child's school, during school hours, at an interval ranging from 2-12 weeks before the child's parents were interviewed. A minority of measures, designated *, represent the parents' statements about the child.

A. Social Roles.

(i) Child Networks. Possession of regular playmates; feeling that there are interesting things to do after school; size of play network; interconnectedness of play network; possession of a best friend; frequency of fighting and arguing with other children; being chosen for games; feelings of loneliness; attitudes to classmates (likes most, some, few).

(ii) Sophistication of role models. Whether the child would like to be like a famous person or a familiar person; job child would like to have when grown up (familiar, prestige, fantasy.)

(iii). Degree of Socialisation. How well child gets along with other children (relative to others of own age); child's degree of considerateness relative to others; whether extracurricular classes taken (sport, music, etc.).

B. Self-Concept and Adjustment.

(i) Happiness with four life areas: self, friends, schoolwork, and family (each self-rated on five-point scale).

(ii) Negative emotions: frequency of feeling worried, afraid, angry and unhappy about
own life (separate self-ratings, four-point scales)
(N.B. The scales were visually represented, by means of cartoon faces depicting the appropriate emotions, which it was first established that the child comprehended (Lash and Sigal 1976)).

C. Adjustment to School

Self-rating as a student relative to rest of class; interest in schoolwork; degree of liking for school; degree of conflict with peers and teachers at school.

D. Independence Behaviour

Degree of timidity with regard to new situations*, of emotional maturity*, quarrelsomeness* and outgoingness* (all relative to others of same age); number of age-relevant tasks which the child performs unaided*.

E. Access to Neighbourly Child Care Supports

Membership of clubs and teams*; parental satisfaction with child care arrangements*; child's involvement with adults outside the family.

F. Satisfaction with being a Boy/Girl (own sex)

Self-rating on a five-point scale; Yes/no response to statement: "I really don't like being a boy/girl."

Figure 1 represents the theoretical and operationally defined model. Since there is no research evidence to date to indicate which network characteristics might be linked to which particular child outcome variables, a common pathway has been hypothesised.

Figure 1 here

Method of Analysis.

Because there was more than one variable in most outcome sets, we generally used multivariate regression techniques. Most dependent variables could not be regarded as normally distributed, since they were dichotomies or simple three or four point scales and generally they could not be collapsed into more general factors. The constraint of non-normality is usual with survey data, but with the large sample (305), the tests of statistical significance can be shown to be reasonably reliable. Predictor (network) variables were grouped into the families set out in Figure 1, namely friendship networks, kin networks, neighbour contact and participation in organisations. It was also necessary to include the risk score of each area in each model, given the method of sampling. The "simultaneous" model reduction method of Aitkin (1978) was employed, utilizing Wilk's
Lambda criterion. This method allows the Type 1 error rate for the entire model to be specified in advance thus reducing the chance of the spurious results which the more commonly-used stepwise regression procedures often produce. Moreover, it allows theoretical grouping of variables of the kind described above to be investigated in a systematic way. We used a nominal significance level of .01 for each individual variable, which corresponded to an overall Type 1 error rate of .30 for each model. Reduced models were interpreted using the discriminant functions (Timm, 1978) together with univariate statistics. In interpreting the reduced model, it is important to remember that the variables in the reduced set have been shown to be important over and above the effects of all the variables which have been omitted. Since predictor variables are usually moderately correlated with each other it is possible in any analysis for there to be a number of reduced models with approximately the same predictive power. Thus some predictor variables which have a high zero order correlation with the dependent variables but which are also correlated with other predictors may not emerge as part of a reduced model, since they have been "partialled out".

Results.

Table 1 presents a summary of findings. The most striking feature is the repeated appearance of friendship networks, and in particular the presence/absence and number of regularly seen dependable friends ("that you can call on in a crisis"). Local friendships emerged as the main predictor for Variable Set C, Adjustment to School. There is a complex relationship between these two friendship variables which is discussed below. Variable Set E, Access to Child Care Supports, shows a different pattern, with organisational membership and ties as the salient predictor.

A. Social Roles.

(i) Child Networks.

The multivariate P value for the full model was .073 (i.e., much less than our cut-off of .30). Univariate values from the reduced model indicated that the item "Child likes most
of the children in his/her class" made the greatest contribution to this outcome (P < .001). Figure 2 plots the mean scores on this item by number of parents' dependable friends, the significant predictor item (P = .03).

Figure 2 here:

It will be seen that children whose parents lay claim to only one dependable friend emerge as least likely to like most of their classmates. The discriminant function coefficients however indicate that the item "Most of child's friends know each other" also needs to be taken into consideration in interpreting the reduced model. By examining the discriminant function coefficients, we can interpret what high, average and low scores mean on this dimension. A high score corresponds to the situation in which the child likes most of his/her classmates, but most of his/her friends do not know each other. This suggests that the child's network is dispersed into a number of separate groupings. On the other hand, a low score corresponds to the situation in which the child does not like most of its classmates, but most of its friends know each other. This suggests that the child might be part of a small cohesive clique. The other two possibilities - the positive nondispersed and the negative dispersed - are relatively closer to the two poles than to the middle ground. The dimension is interpreted graphically in Figure 3.

Figures 3 and 4 here:

Figure 4 plots discriminant function scores against parents' number of dependable friends. It indicates that the children who form cliques, in the sense described above, or who have negative dispersed networks, are most likely to come from families who report only one friend they would depend on in a crisis (see also Figure 2). Possible explanations for this finding are considered in the discussion section of this paper.

(ii) Sophistication of Role Models

This variable set was concerned with the reality versus fantasy orientation of the child. Since an ordinal scoring on the desired-job question seemed inappropriate, the three types of answer - familiar non-prestige (e.g. typist), prestige (e.g. doctor) and fantasy (e.g. pop star), were entered in the model as three separate factors. Where more than one desired job was nominated, fantasy was given precedence over prestige and prestige over familiar. The univariate P values in Table I show that both familiar-non-prestige and prestige job were significant (P < .025, < .01). Figures 5a and 5b plot mean scores against presence/absence of at least one dependable friend, the significant predictor item (P = .04), and indicates that parents' lack of any dependable friends is
associated with children's choice of non-prestige jobs, and presence of friends with

prestige job choice. As in the previous analysis the discriminant function coefficients indicate that a second variable - in this case child's nomination of a familiar rather than a famous role model - needs to be taken into consideration. Figure 6 illustrates the discriminant function, on which a high score corresponds to a prestige job choice and real person role model, and a low score to familiar non-prestige job and famous person role model. The function is also plotted against presence/absence of dependable friends in Figure 7. The nature of these functions suggested that parents' socioeconomic status might be influencing the results, and the dependable friends variable was accordingly cross-tabulated against areal risk score. This showed that absence of dependable friends was associated with living in a higher risk area (mean risk for no dependable friends group = .83 compared with .51 for the group with friends, a difference of .2 of a standard deviation.)

These figures are interpreted as indicating a constellation of parents' lack of close friends, and the child's low job aspiration and choice of familiar role model, modestly associated with neighbourhood risk level. Focusing on the occupational status of the family; it is noteworthy that only one of the 19 families in the two highest categories had no dependable friends, but the overall correlation with occupational status was weak.

(iii) Degree of Socialisation.

Presence/absence of at least one dependable friend is again the significant predictor item, \( P = .04 \) with the parent-rated item "Child gets along better than average with other children" the most significant outcome variable, and child's taking of special lessons also showing up in the discriminant function. The significant item and the DFC scores are plotted against presence/absence of dependable friends in Figures 7 and 8; a high DFC score here describes better than average relationships with other children and the taking of special lessons.

Taken in conjunction with the material presented above regarding role models, a job choice and mention of a famous person were correlated (Cramer's \( V = .18 \)).
consistent picture of personal and social constriction among the children of the adults without dependable friends begins to emerge.

B. Self-Concept and Adjustment.

(i) Happiness with self, friends, schoolwork and family.

The multivariate probability value for the full model fell just within the acceptable level of significance. The univariate P values indicate that the child’s happiness with its family is the significant item in the outcome set (P = .000), and once again, it is presence/absence of a dependable friend in the parents’ lives that predicts this outcome, absence being associated with the child’s rating of itself as less happy about its family. Mean values on the 2-point scale were .03 for the group with dependable friends and .19 for the no-friends group (a difference of about one standard deviation in favor of the group with friends). This finding then elaborates the picture already provided by the variables discussed above.

(ii) Frequency of negative emotions (worry, fear, anger and unhappiness with life.)

This child outcome also was associated with the number of dependable friends, but the relationship was more complex. Only one item (unhappiness with life) was significant on its own (P < .05), with the parents reporting between two and nine dependable friends having children with the lowest (best) scores. However, there was a tendency for parents who reported 20 or more friends to have children with high unhappiness scores, a pattern which was accentuated in the discriminant function. All four items loaded on the discriminant function, with fear and unhappiness with life making the largest contributions (Table 1).

Figure 10 here

The increase in negative emotion in the 20 or more friends group (shown in Figure 10 for the discriminant function) is contrary to the main trends in the data, and is discussed further below.

C. Adjustment to School.

This variable set contained five items, three of which related to the child’s feelings about school and two of which concerned the child’s involvement in fights or arguments at school. Table 1 shows that fighting with other children was the most significant single variable (P < .025), although the discriminant function included contributions from two of the attitudinal items (which because they ranged across three and five point scales should be accorded nearly the same weights as the fighting variable).

Unlike previous variable sets, the parents’ number of local friends emerged as the
best predictor, with the interesting addition of the proportion of friends who lived locally (P = .046). Thus aspects of both size and diversity of parents' friendship networks were related to school adjustment. (It should be noted that number of local friends and total number of dependable friends were correlated, with r = .32) Figure 11 shows the proportions of children who got into fights of sufficient seriousness to cause trouble with the teacher or Headmaster, by both aspects of parents' friendship networks. Figure 12 presents the same information for the discriminant function (high scores indicate a high incidence of school related problems).

Insert Figures 11 and 12.

Both figures suggest a contrast between two groups of families: those with an extensive network of both local and non-local friends whose children were relatively well adjusted at school, and those families with a relatively limited network of mainly local friends whose children had a high incidence of school related problems. Families who had no local friends at all were strongly separated from the group with limited local networks, probably because they comprised a mixture of three types: new arrivals in the area, the genuinely isolated, and middle class families who were isolated by choice from local contacts. The possibility that different patterns of sociability in working class and middle class areas could help explain these findings is pursued in the discussion.

E. Access to Neighbourly Child Care-Supports.

This item set shows a different pattern of results, with organisational membership and ties the salient predictor items. Figures 13a and 13b depict mean scores of the two outcome variables which have statistically significant values.

Insert Figures 13a and 13b here.

Two discriminant function dimensions emerged in the analysis. The first takes cognisance of only the two items depicted in Figures 13a and 13b, a high score corresponding to high parental child care satisfaction and high club/team membership. The second dimension also describes high child care satisfaction, but involves a contrast between club/team membership and involvement with adults outside the family ("adults with whom you like to talk and spend time").

Despite its large weight in both discriminant functions, satisfaction with child minding arrangements should not be given too much weight in the interpretation, since only 12 parents gave a response other than "very satisfied". Most of the variation in scores comes from the adult involvement and group activities variables.

Figure 14 here.
Discriminant contrast scores for the two dimensions are shown in Figure 14. The first dimension here appears to describe a child-oriented situation, where the child's out-of-school time is occupied with various organised activities, and the parent takes some part in these activities. The second dimension appears to contrast parental membership of adult-oriented child-excluding groups with involvement in community groups, and to suggest that the former type of membership acts to lessen the child's involvement with non-family adults, perhaps by separating the worlds of parents and children. It should be noted that belonging to children's organisations and belonging to community organisations is differentiated predominantly on the second rather than the first dimension. From the discriminant function weights we can interpret this to mean that children of parents in community organisation are more likely to be involved with non-family adults.

The nature of the "other" organisations mentioned is very mixed, and is discussed further below.

**Summary of Network Effects.**

Figure 15 represents a graphical representation of the main findings. The common pathways shown in Figure 1 have been separated out and the non-significant network measures deleted.

**Discussion.**

Parental social networks appear to have multiple effects on their children's experience of life. In particular the presence and number of regularly seen dependable friends emerges as a pervasive influence. The children's own social networks; choice of role models; degree of socialisation; happiness with their family; and level of negative emotions all show significant association with this aspect of their parents' lives. It seems then that the parents' possession of "real" friends can be regarded as a variable which influences development of children of the family in many ways. Whilst such an effect has been quite often suggested (e.g. Caplan, 1971; Cochran and Brassard, 1979; Bronfenbrenner, 1979) it has never before, as far as we are aware, been demonstrated systematically. Bronfenbrenner for instance reports that he could find only one study of parental networks and family interaction (McAllister et al 1973) and that this study concerned itself only with the behaviour of the parents (199:238). Similarly Abernethy (1973) found that mothers with a closely knit network felt more competent in the mothering role; but presented no independent data from the children. (In the present study, it will be recalled, the children were interviewed independently at school, at periods ranging from 2-12 weeks before parents were visited and interviewed.)
The relationship however is not a simple or linear one. With respect to children's social networks, it is the children whose parents lay claim to only one "good" friend who stand out from all others. Why should this be? Inspection of the interview protocols revealed some interesting aspects. It seems that the parents of the children who form "cliques" (low score on the discriminant function) are themselves selective in their friendships, by force or by design. The more prosperous parents (in the lower risk areas) gave largely positive material reasons for living in the area - pleasant land and trees, good houses, the right price, availability of schools and the like. Their closest ties were to relatives, the wife's mother in particular, their evaluation of the area was tempered - some things good, some bad - and their commitment to it, as measured by how they would feel about moving, rather modest. Their membership of local organisations was somewhat low, and their commitment to friendships outside the family cautious. The "crisis" in which they felt they could call on one dependable friend was either hypothetical or child-related. The poorer parents (in the higher risk areas) shared these selective attitudes, but were more likely actively to dislike the area, to be there because it was the best they could manage in terms of price or in terms of convenience to work or relatives, and to be uncertain as to how long they would stay (sometimes this depended on the landlord, rather than their own decision). The crisis they nominated was likely to be a material one. (One Greek immigrant father for instance, who had been unemployed for seven months, but was committed to mortgage repayments on an inner city house, mentioned a number of "dependable" relatives and one "dependable" friend who had loaned him money towards the mortgage payments.) Apart from their "cliquey" characteristics, the children displayed a range of attitudes to themselves and the various aspects of their lives. Some (generally in the poorer areas) shared their parents' active dislike of their surroundings, some seemed quite unhappy, and some had problems such as learning difficulties and overweight; others seemed well-adjusted children.

By contrast, the children with positive attitudes to classmates and dispersed networks tended to take part in a variety of activities and to have parents with an active community involvement and commitment to their local area, even where the area itself was a poor one. For example, one father of such a child worked as a council gardener in the high risk inner city area where the family lived. He was politically active in the Australian Labor Party, as was his wife, a breakfast waitress in an inner city hotel. Both also belonged to a number of other community, religious and sporting organisations. The father felt the area was cohesive because residents shared the same working class background, income and lifestyle. He nominated six dependable friends, several of whom had helped the family out financially when his union was on strike. His son Shaun was one of five children, took lessons in dancing and art, belonged to Cubs as well as church organisations and had a number of adult friends outside the family with whom he liked to
talk and spend time. Shaun mentioned that several gangs in the area regularly tore down playground equipment and threw bottles around, but he considered the area friendly, and liked living in a city environment, liked most of his classmates, and had friends in each of the various activity groups in which he took part.

The absence of any dependable friends is associated with different and more clearly negative child outcomes. Children in these families tended to mention a fantasy rather than a familiar personal role model, in combination with modest job aspirations, to get along less well than average with other children (in their parents' eyes), not to take special lessons, to be relatively unhappy about their families, and to be of lower socioeconomic status. The interview material showed that these families suffered from a variety of stresses - money worries, long hours of work, marital stress or separation, and poor living conditions. Immigrant parents from non-English speaking countries were particularly likely to work long hours in low-income jobs or in small businesses - e.g. greengrocer shops and corner stores - such that their opportunities for establishing and maintaining close friendships were minimal. Single parents and families which had suffered various misfortunes had often moved downwards into cheaper areas where they felt they had little in common with other residents. Since these were often high-immigrant areas, language barriers and the work patterns of the immigrant families were a further barrier to friendship formation. A number of the children were living on social security with elderly relatives - most often a grandmother - following departure of the mother or both parents, and these relatives were more concerned with survival, and with keeping the child clean, "good", and away from "rough elements", than with more expansive aspirations. A number of parents' ambitions for their children were of a negative kind - the s/he should not be a cleaner or a factory hand. "Keeping ourselves and getting by without having to seek aid from outside the immediate family were commonly cited as goals and virtues; so that having friends who could be called on in a crisis was not necessarily seen in a positive light. The children's lives can perhaps best be described as constricted - in interests and activities, school achievement, job aspirations, social skills, fluency and imagination. Along with this constriction went a variety of anxieties about their families; that they might die, or get hurt, lose their jobs, be murdered, (a taxi driver's child), be frozen in the freezer at work (an ice cream factory worker's son), that they quarrelled a lot, that they didn't have any money, that they had to live in "an old dump", about not having a father, and "because my mother is worried all the time as she is 62 years of age" (this was a grandmother in fact, the real mother and the father having deserted the children).

Feelings of unhappiness, fear, worry and anger were also associated with the parents' dependable friends, but the relationship was more complex. The children with
least negative emotions were those whose parents reported between two and nine dependable friends. As this range emerged for other outcome sets also (although not as strongly as here) it can perhaps be regarded as the "optimum" or "healthy" range. The unexpected negative attitudes of children whose parents claimed large numbers (20 or more) of friends was a surprise. The interview protocols indicated that this was mainly due to the inclusion in the group of a number of small shopkeepers with large numbers of clients whom they classed as friends, and also of some long-time residents in an area, like the mother who lived in a house bought originally by her father and stated that "after 43 years here I've got too many friends to count". In fact "lots" and "too many to count" was a common response from this group, and perhaps indicates a different definition of friendship from that employed by other parents, and not incompatible with feelings of isolation and unhappiness in a child of the family. One child in such a family for example, who lived above the Manchester shop in which both parents worked long hours, rated her happiness with her life very low, was often bored and lonely, often felt angry about different things and in particular about "always staying home and never going out. Not all children from such backgrounds were unhappy of course. Children who helped out in family shops and businesses were often exceptionally mature self-confident friendly children. One Greek-born milk-bar owner pointed out that 278 good friends came to his wedding and a couple of hundred to each of the children's christenings and that many of these would help him out in a crisis. His daughter had an exceptionally large number of friends, child and adult, and seemed set to follow in his footsteps.

For one variable set - the child's adjustment to school - the parents' local friendship network proved to be the key factor in the statistical analysis. It is interesting to note that half of the 26 families whose friendships were limited to a small number of local contacts were in unskilled occupations. These were the families whose children were in most conflict with the school system. By contrast fewer than one third (32 percent) of the 50 families whose children had more positive attitudes to school and who had extensive local and non-local friendship networks were in these occupational categories. This is consistent with the comments of Allan (1979) who has noted for Britain that local ties (workmates and neighbours) are more important to the working class than to the middle class. In any case, these observations suggest that aspects of family life associated with social class (in addition to friendship network) may contribute to poor adjustment at school. One possibility is supported by data from our survey: parents limited to a small number of local friendships were more likely than the contrast group to report feeling worn out, rushed, worried about money or depressed about their lives, and were much more likely to regret having had children (15 percent compared with two percent). Thus conflict at school may be one manifestation of class related stresses on the family.
A third strand in the present study is the child care support variable, which is independent of parental relationships with friends and neighbors, but strongly associated with membership of community, children's and other organisations, and the possession of friends within these associations. In particular, parents who participated solely or mainly in organisations coded as "other" were strongly differentiated from parents who participated in children's or community organisations, in that their children were less likely to be involved with adults outside the family and were less likely to belong to any clubs, teams or group activities. These families were predominantly immigrants, were usually members of ethnic organisations (which we coded under "other") and put a great deal of stress on the family as an influence in the life of the growing child. However it should be emphasised that for many immigrant groups the term "family" implies the extended rather than the nuclear family, and "grown-ups within the family" may have included a range of kin.

For example, a Chinese mother and father belonged to the Chinese Mandarin Club and had friends in the club, had a number of relatives living locally, but had no local friends and little contact with neighbours. Their nine year old girl Leonie was described by her mother as "somewhat shy"; she did not belong to any groups and knew no grown-ups outside the extended family with whom she could talk or spend time. Leonie reported being lonely sometimes, and it seemed that her activities outside school were oriented largely around the family. Not all families of this type were immigrants. A second nine year old girl, Carolyn, was the daughter of a single mother living in a Housing Commission flat in a poor suburb. The mother had good neighbour contacts, a number of local friends and was generally coping well, and Carolyn enjoyed spending time with a neighbour who "understands me and Mum." However, while her mother at least belonged to the Aquarium Society (but to nothing else), Carolyn belonged to no clubs or teams and had no special lessons or classes.

All these families shared the characteristic that the parents' group membership did not appear to involve the child to any extent in specific children's activities. In some cases (the single mother, for example) this seemed to be because the parents had no resources to spare on children's or community organisations, while in other cases it was part of a deliberate choice on the part of the parents to isolate themselves from local community life and to devote themselves to associations which promoted their particular cultural heritage. The key point seems to be that the parents' organisational affiliations did not provide an entree for the child either into a wider network of non-kin adults or into organised children's activities.

What other causal processes mediate the complex patterns described above? A number of possibilities were mentioned earlier in this paper: the social learning of
parent-modelled activities and attitudes; the enhanced self-esteem associated with gratifying social activities; and the general level of effectiveness of differing parents, manifesting itself both in relationships with other adults and in parenting skills. All of these seem likely to play a part in the outcomes described in this study. Parents' membership of children's and community organisations acts as an entree for their children into group activities, but appears also to influence the child's social attitudes, as evidenced by greater interest in the company of non-family adults. Similarly a child like Shaun had copied not only his parents outgoing attitudes and activities, and also their optimism and liking for their world; to the extent that his distress at the local gangs of vandals had not affected his liking for what was in fact a very rough area. It was interesting also to find Shaun describing his mother's best quality as "the fact that she put up with a lot of kids", suggesting considerable parenting skills on her part. Another child who lived on a five acre block with many pets, including a much-loved pig, explained that "because I've been brought up with animals I love them and worry about them", indicating that her parents had succeeded in creating a powerful learning environment of a different kind. By contrast, the ten year old girl who felt that "all the shopkeepers rob you here" appeared to have internalised her mother's own negative preoccupations. The often-startling concerns voiced by the children growing up (to be reported elsewhere) strike a rich vein in exemplifying multiple influences of the environment: "I don't want to do all that screaming and stuff", "Men like raping women when they're grown up", "When you drive a car someone yells at you 'you stupid woman'," "You have to get married and your husband yells at you and punches you up when you have an argument".

The fact that it is "dependable friends" rather than other noteworthy characteristics that emerges as most salient suggests that the parental qualities associated with making and maintaining meaningful friendships are far more influential than the nature and extent of kin and neighbour ties. This finding is relevant to an active debate in the sociology of kinship and friendship (Allan 1979), and we plan in consequence to look further into the relationships between our families of network variables. This will involve consideration of the different definitions of friendship and family that pertain in differing social groups.

Not all developmental outcomes were related to parental networks, and not all network variables were influential. Independent behavior, as measured in this study, was indeed independent! The fact that all outcome measures on this variable were parent-rated rather than child-rated may be a factor here. However it is also worth looking more closely at Cochran and Brassard's argument for including this variable in their model. They build their case in this instance from the literature on single-parent
families, which shows that lone mothers are forced to make many emergency demands on their network contacts which they are unable to reciprocate. To avoid further draining these network resources they accordingly require their children to take on responsibilities and tasks for which they would otherwise turn to friends, neighbours and relatives. Cochran and Brassard thus hypothesise that independence behavior in the child is likely to be associated not so much with strong or weak network resources as with those that are already overdrawn. As we did not have a measure of this variable, the hypothesis remains to be tested. Satisfaction with being a boy or girl was also unrelated to network characteristics, but as we show elsewhere, (Homel and Burns, in preparation) much of the variance in this item is due to the child's sex, and also to the interaction between sex and ethnic background, hence parental networks could not be expected to exert a strong influence.

The present findings suggest leads in many directions, and it is hard to accord priorities. However we plan next to look systematically at those variables which have been considered only impressionistically in this paper, by constructing and testing a structural relations model which includes demographic, mobility and some other "midway" variables - for instance commitment to one's area of residence - along with those investigated in the present study. Our aim is to illuminate the pathways of influence from environment to child, or, to use Bronfenbrenner's term, the salient features of differing ecologies of development.
References


Homel, R. and Burns, A. Sex Role Preferences in Children: Same Sex and Ethnic Variations (in preparation).


<table>
<thead>
<tr>
<th>Variable</th>
<th>Multivariate A and P values for full model</th>
<th>Significant items in dependent set</th>
<th>Univariate P values from reduced model</th>
<th>Discriminant function coefficients</th>
<th>Significant predictor items (reduced model)</th>
<th>Multivariate A and P values (reduced model)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(A) Social Roles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) Child Networks</td>
<td>.12</td>
<td>.073</td>
<td>Likes most children in his/her class</td>
<td>&lt;.001</td>
<td>.94</td>
<td>Number of dependable friends</td>
</tr>
<tr>
<td>(ii) Sophistication of role models</td>
<td>.51</td>
<td>.25</td>
<td>Most friends know each other</td>
<td>N.S</td>
<td>-.29</td>
<td>Possession of .97 at least one dependable friend</td>
</tr>
<tr>
<td>(iii) Degree of Socialization</td>
<td>.47</td>
<td>.06</td>
<td>Familiar (non-prestige) job only</td>
<td>&lt;.025</td>
<td>-.44</td>
<td>Possession of .97 at least one dependable friend</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>At least one prestige job</td>
<td>&lt;.01</td>
<td>.84</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>At least one fantasy job</td>
<td>N.S</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Familiar rather than famous role model nominated</td>
<td>N.S.</td>
<td>.30</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>*Gets along better than average with other children</td>
<td>&lt;.025</td>
<td>.72</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Has special lessons</td>
<td>.10</td>
<td>.68</td>
<td></td>
</tr>
</tbody>
</table>
### Child Outcomes

<table>
<thead>
<tr>
<th>Variable</th>
<th>Multivariate Λ and P values for full model</th>
<th>Significant items in dependent set</th>
<th>Univariate P values from reduced model</th>
<th>Discriminant function coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>(B) Self-concept and adjustment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) Happiness with self, friends, schoolwork and family</td>
<td>Λ: .41, P: .30</td>
<td>Family</td>
<td>.000</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>(ii) Frequency of negative emotions (worry, fear, anger and unhappiness with life)</td>
<td>Λ: .38, P: .09</td>
<td>Worry, fear, anger, unhappiness with life</td>
<td>&lt;.10, .10, N.S., &lt;.05</td>
<td>.34, .71, .20, .58</td>
</tr>
<tr>
<td>(C) Adjustment to School</td>
<td>Λ: .32, P: .20</td>
<td>Fighting with other children at school, Lack of interest in school work, Dislikes going to school</td>
<td>&lt;.025, N.S., &lt;.10</td>
<td>.87, .24, .26</td>
</tr>
</tbody>
</table>

### Parental Networks

<table>
<thead>
<tr>
<th>Significant predictor items (reduced model)</th>
<th>Multivariate Λ and P values (reduced model)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Possession of at least one dependable friend</td>
<td>Λ: .94, P: .000</td>
</tr>
<tr>
<td>Number of dependable friends</td>
<td>Λ: .90, P: .04</td>
</tr>
<tr>
<td>Proportion of friends who live locally</td>
<td>Λ: .84, P: .046</td>
</tr>
<tr>
<td>Number of local friends</td>
<td>Λ: .</td>
</tr>
</tbody>
</table>

**TABLE 1** (Continued)
<table>
<thead>
<tr>
<th>Variable</th>
<th>Multivariate Λ and P values for full model</th>
<th>Significant items in dependent set</th>
<th>Univariate P values Discriminant function coefficients</th>
<th>Significant predictor items (reduced model)</th>
<th>Multivariate Λ and P values (reduced model)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(D) Independence behavior</td>
<td>.36</td>
<td>.63</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(E) Access to child care supports</td>
<td>.43</td>
<td>.02</td>
<td>*Satisfaction with child care arrangements &lt;.001</td>
<td>.72</td>
<td>1.14</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Child's involvement with adults outside the family N.S.</td>
<td>.06</td>
<td>.42</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>*Child's membership of clubs and teams &lt;.001</td>
<td>.69</td>
<td>-.40</td>
</tr>
<tr>
<td>(F) Satisfaction with being a boy or a girl.</td>
<td>Univariate F(58,246) = .66</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* These items were rated by a parent of the child.
Figure 1. Model of Hypothesised Relationships Between Parental Social Networks and Aspects of Child Development.

<table>
<thead>
<tr>
<th>Parental Networks (Grouped into &quot;families&quot;)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Neighbours -</td>
</tr>
<tr>
<td>Size of network</td>
</tr>
<tr>
<td>Frequency of contact</td>
</tr>
<tr>
<td>Nature of contact</td>
</tr>
<tr>
<td>Satisfaction with contacts</td>
</tr>
<tr>
<td>2. Friends -</td>
</tr>
<tr>
<td>Possession of local friends</td>
</tr>
<tr>
<td>Number of local friends</td>
</tr>
<tr>
<td>Possession of dependable friends</td>
</tr>
<tr>
<td>Number of dependable friends</td>
</tr>
<tr>
<td>3. Relatives -</td>
</tr>
<tr>
<td>Possession of dependable relatives</td>
</tr>
<tr>
<td>Number of dependable relatives</td>
</tr>
<tr>
<td>Frequency of contact with dependables</td>
</tr>
<tr>
<td>Proximity of dependable relatives</td>
</tr>
<tr>
<td>Number of locally-resident dependables</td>
</tr>
<tr>
<td>4. Organisations -</td>
</tr>
<tr>
<td>Number &amp; type of organisations to which</td>
</tr>
<tr>
<td>self or spouse belong</td>
</tr>
<tr>
<td>Friendship contacts in these organisations</td>
</tr>
<tr>
<td>Intensity of involvement in these organisations</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Child Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Social Roles</td>
</tr>
<tr>
<td>(i) Child Networks</td>
</tr>
<tr>
<td>(ii) Role Models</td>
</tr>
<tr>
<td>(iii) Degree of Socialisation</td>
</tr>
<tr>
<td>B. Self Concept and Adjustment</td>
</tr>
<tr>
<td>(i) Happiness with life areas</td>
</tr>
<tr>
<td>(ii) Frequency of negative emotions</td>
</tr>
<tr>
<td>C. Adjustment to School</td>
</tr>
<tr>
<td>D. Independence Behaviour</td>
</tr>
<tr>
<td>E. Access to Neighbourly Child Care Supports</td>
</tr>
<tr>
<td>F. Satisfaction with Being a Boy/Girl</td>
</tr>
</tbody>
</table>
FIG. 2 Mean scores for 'Child likes most of children in his/her class', by number of parents' dependable friends.
FIG. 3 Interpretation of discriminant function for child network

clique negative dispersed
positive non-dispersed multiple groups
Mean discriminant function scores for child network variables

**FIG. 4** Mean discriminant function contrast scores for Child Network variables, by number of parents' dependable friends
Interpretation of discriminant function for sophistication of role model.
Figs. 5a and 5b. Mean scores for job choice, by parents' possession of dependable friends.

- Probability of mentioning a familiar job.
- Probability of mentioning at least one prestigious job.

<table>
<thead>
<tr>
<th>No friends</th>
<th>At least one friend</th>
</tr>
</thead>
<tbody>
<tr>
<td>35</td>
<td></td>
</tr>
</tbody>
</table>

- No friends
- At least one friend
Discriminant function scores for sophistication of role model by number of parents dependable friends

- Prestige job
- Familiar person
- Familiar job
- Famous person

No friends  )  At least one friend
FIG. 8
Mean Scores on "getting along better than average with other children" by possession by parents of dependable friends.
Discriminant function contrast scores for degree of socialization variables by parents possession of dependable friends.
Figure 10. Discriminant function contrast score for frequency of negative emotions, by parents' number of dependable friends.
Figure 11. Proportions who fight with other children at school, by parents' local friendships

- Most/all friends in local area
- Some of friends live in local area
- No friends in local area
Figure 12. Discriminant function contrast scores for adjustment to school, by number and proportion of local friends.
Fig. 1a and 1b. Parent satisfaction with child care, and child's membership of clubs and teams, by parent participation in organisations.

Satisfaction with child care score

Proportion of children in clubs and teams

<table>
<thead>
<tr>
<th>Organisation Type</th>
<th>Satisfaction Score</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>No organisations</td>
<td>1.8</td>
<td>1</td>
</tr>
<tr>
<td>Community organisation</td>
<td>2.05</td>
<td>2</td>
</tr>
<tr>
<td>&quot;Other&quot; organisation</td>
<td>1.95</td>
<td>3</td>
</tr>
<tr>
<td>Many organisations</td>
<td>1.85</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Children's organisation</th>
<th>Friends in Community organisation</th>
<th>Friends in &quot;Other&quot; organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>No organisations</td>
<td>Low satisfaction</td>
<td>Low satisfaction</td>
</tr>
<tr>
<td>Community organisation</td>
<td>High satisfaction</td>
<td>High satisfaction</td>
</tr>
<tr>
<td>&quot;Other&quot; organisation</td>
<td>Low satisfaction</td>
<td>Low satisfaction</td>
</tr>
<tr>
<td>Many organisations</td>
<td>High satisfaction</td>
<td>High satisfaction</td>
</tr>
</tbody>
</table>

Community organisation and "Other" organisation categories have a range of satisfaction scores from 1.8 to 2.05, while the "Many" organisation category shows a similar trend but with a slightly lower range from 1.85 to 1.95. The proportion of children in clubs and teams follows a similar pattern, with the "Many" organisation category having a higher proportion than the other categories.
Figure 14. Discriminant Function Contrast Scores for two Dimensions of Child Care Supports, by participation in organisations

Dimension 1

Child not in group activities.

Child may be involved with non-family adults/child may not be in group activities.

Dimension 2

-5
-4
-3
-2
-1
1
2
3
4
5

x Member & friends in community organisation

x Member of community organisation

Not a member of any organisation

x Member of children's organisation

x Member of "other" organisation

x Member and friends in "other" organisation

Child in group activities.
Figure 13: Summary of Results

Sophistication of role models

Frequency of negative emotions

Adjustment to school

Possession of dependable FRIENDS

Local FRIENDS

Membership of Community, children's special interest groups

Degree of socialization

Happiness with Family

Access to child care supports