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ABSTRACT

This report summarizes the final evaluation of the Parental Empowerment Program: an experimental program building on family strengths and local resources which was offered for an average of 24 months to 160 families in 10 Syracuse (New York) neighborhoods. Chapter 1 provides a conceptual overview, a program description, and a methodological summary. Chapter 2 reports effects of the empowerment program on several school outcomes, on home-school communication, and on joint activities of parents and children. Chapter 3 explores additional effects, including the influence of perception of self as parent on parent-child activities, the influence of perceptions on the child's school performance, mother-child activities and performance in school, social networks and perceptions of self as parent, social networks and mother-child activities, personal social networks and school outcomes, parental self-perceptions and home-school communications. Chapter 4 discusses the range and complexity of program impact in terms of the following topics: (1) whether the program affected children by influencing the natural ecologies of their families; (2) whether effects on child behavior can be detected and how they are causally linked; (3) how effects and processes vary for different subgroups; (4) family support as relief from stress; (5) the utility of process variables; (6) social supports as measures of program impact; (7) the reality of the empowerment process; and (8) challenging issues in the relationship between families and formal schooling. (RH)

FAMILY MATTERS: EVALUATION OF THE PARENTAL EMPOWERMENT PROGRAM

A Summary of a Final Report to the National Institute of Education

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February, 1986

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PREFACE

This report is a summary of the final report to the National Institute of Education, "Family Matters: Evaluation of the Parental Empowerment Program", dated February, 1985 and authored by Moncrieff Cochran and Charles R. Henderson, Jr. That document is available through the ERIC Document Reproduction Service (EDRS) of ERIC Clearinghouse in microfiche and hard copy (Document # PS015328).

The data analyzed for this report are in the public domain, stored on computer tape. For more information about access, write to Oliver Moles, Office of Research, OERI, U.S. Department of Education, 555 New Jersey Ave., N.W., Washington, D.C. 20208.

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The Comparative Ecology of Human Development Project is associated with a larger research effort, the International Group for Comparative Human Ecology. The five countries that have participated in this research group are Germany, Israel, Sweden, the United States, and Wales. The scientific leadership has been provided by Rudolf Fisch and Kurt Luscher (Germany), Sophie Kav-Venaki and Ron Shouval (Israel), Bengt-Erik Andersson and Lars Gunnarsson (Sweden), Jill Lewis and Ronald Davie (Wales), and Urie Bronfenbrenner, Moncrieff Cochran, William Cross, and Charles Henderson (U.S.A.) The members of this group have worked cooperatively on concepts, instruments, research methods, and cross-cultural comparison of data related to the ecology of families with young children.

A major contribution to this report was made by Liz Kiely, including computer analysis, other technical assistance, and help in preparing the manuscript. Jeanie MacDonough had the central role in the development of the school outcome measures. Ann Bell and Sam Morrie also assisted in the analysis of data. The word processing of the many drafts of the manuscript was done by Sandy Rightmyer. The report has benefited from discussions with Urie Bronfenbrenner, William E. Cross, Jr., and Zorika Petic Henderson. The authors also acknowledge the contributions to the project of the many students and staff members who have worked in the program and research since the inception of the project in 1976. Finally, a particular note of thanks is owed to our NIE program officer, Oliver Moles, for his substantive and administrative guidance.

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CHAPTER 1
CONCEPTUAL OVERVIEW, PROGRAM DESCRIPTION AND METHODOLOGICAL SUMMARY

Moncrieff M. Cochran and Charles R. Henderson, Jr.

> Today we acknowledge that the massive alteration of the natural environment made possible by modern technology and industrialization can destroy the physical ecology essential to life itself. We have yet to recognize that this same awesome process now has its analogue in the social realm as well, that the unthinking exercise of massive technological power, and an unquestioning acquiescence to the demands of industrialization can unleash social forces which, if left unbridled, can destroy the human ecology -- the social fabric that nurtures and sustains our capacity to live and work together effectively and to raise children to become competent and compassionate members of society (Bronfenbrenner, 1981, p.38).

In his article "Children and Families: 1984," Urie Bronfenbrenner refers to George Orwell's prophesy that free Western society and its basic institutions, including the family, would be destroyed by the year 1984. He argues that while Orwell may have picked the right year and outcome, he was wrong in attributing that outcome to human efficiency rather than ineptitude. Bronfenbrenner sees the erosion of the power of the family and the childrearing system as a product of public indifference, and he feels that we are failing to come to terms with some hard realities. The research described in this final report to the National Institute of Education, and the parental empowerment program assessed by the research, were conducted in an attempt to confront some of those realities.

As a prelude to the consideration of how this evaluation was organized and what we have learned from it, the reader needs a basic understanding of our ecological orientation and the nature of the intervention program itself. The rest of Chapter 1 provides this background information.

The Ecological Perspective

Detailed discussions of the project's conceptual framework, supported by literature reviews, have been presented elsewhere (Bronfenbrenner and Cochran, 1976; Cross et al., 1977). In this introduction, we review only those concepts underlying the project that provide the basis for the analyses to follow.

The ecological perspective takes as its starting point the view that human behavior is explained not only by the influences associated with the immediate settings containing the developing child (i.e., home, school classroom, etc.), but also those external settings that have an indirect impact on the child through their effects upon the mental health and general well-being of their parents (for example, the legal system, welfare system, work-place). Thus, growth is conceived as a series of encounters across as

well as within ecological systems that both include and are external to the home environment. One such encounter, the transition from home to school, is a major event in the life of a child and was one of the major focuses of our experimental program. For the young adult, there is the transition from school to full-time employment or homemaking. Later on, transitions such as that from full-time employment to retirement are experienced.

Although the ecological framework includes a number of systems through which human behavior may be influenced (mass media, education, employment, etc.), one system has characteristics with the potential to mediate the effect of external forces on the parent-child relationship. The personal social network provides parents with social links to others outside the home who can provide a variety of supportive services to both parent and child (Cochran and Brassard, 1979). These relationships may serve as bridges to other major ecological contexts, like the school and the world of work. Because it can serve so many functions for parent and child, the social network has a prominent place in our conceptual model and receives separate attention in this evaluation.

In viewing the developing person across time and space, the focus of the ecological perspective is not only on the behavior of that person but also on the perceptions, behavior, and attitudes of key people in the environment as they affect and are affected by the individual in question. Thus, the ecological approach places a premium on reciprocity, systems analysis, life course development, and, by implication, the value of longitudinal studies.

Because recent research has pointed to the possibility that laboratory-based studies of human behavior produce results that may not be replicable in natural settings, those researchers utilizing the ecological perspective also stress the importance of collecting data in surroundings familiar to the subject, using methods that provide subjects with considerable control over the research situation. In the case of the Family Matters project, these methods have consisted primarily of open-ended interviews. Related to the concern for replicability is the issue of ecological validity. Central to the concept of ecological validity is knowledge of the subject's definition of the situation, for without such knowledge the researcher has no way of knowing whether the subject is experiencing the environment in the way it is perceived by the researchers (Bronfenbrenner, 1979). Accordingly, in this research we rely heavily upon parents' perceptions of the worlds inside and beyond their families, believing that by combining these perceptions with "objective" information also related to these worlds, we can understand what motivations and constraints determine the ways that parents living in differing ecological niches organize their lives and the lives of their children.

While the forces affecting the lives of most children appear on the surface to be similar, the characteristics, quality of life, and dynamics of those forces can differ markedly as a consequence of such factors as race, income, family structure, ethnicity, and culture. Because families in the same neighborhood tend to be similar in race, socioeconomic status, family structure, and even maternal employment patterns, the neighborhood as a concept takes on special importance from the ecological perspective

(Bronfenbrenner, 1980). From this vantage point, the neighborhood becomes a major locus for what we call an ecological niche. A child's ecological niche is defined by the immediate setting containing the child (home, local park, nursery school classroom), the interconnections among those settings, and the major institutions indirectly affecting the child (parent's workplace, welfare system, school board). Certain niches occur more frequently than others in American society, and so characterize our culture. We have systematically sampled a number of these modal niches, and the analyses reported in this document reflect that sampling strategy.

The Family Matters Program: Parental Empowerment

Many aspects of the ecological perspective could be expected to shape any family support program designed with that orientation in mind. One would expect, for instance, that such a program would pay attention to, and even emphasize, systems outside an individual's psychic processes. Given this perspective, there should be special appreciation for the roles played by parents in mediating the influences of those larger systems on their child's development. The emphasis on modal ecological niches suggests a program delivered to a variety of kinds of families, and flexible enough to accomodate differing expectations and needs. The phenomenological orientation might translate into particular concern in programming for the parents' definitions of appropriate subject matter and developmental goals. These theoretical starting points did influence the goals and design of the Family Matters program, and the family supportive process that evolved came to be known (largely in retrospect) as the parental empowerment process. We assumed from the beginning that all families have strengths, and that much of the most valid and useful knowledge about the rearing of children can be found in the community itself--across generations, in networks, and in ethnic and cultural traditions--rather than in the heads or books of college professors or other "experts" (Berger and Neuhaus, 1977; Ehrenreich and English, 1979). We also recognized the legitimacy of a variety of family forms, the important contributions made by fathers to the parenting process, and the special value in cultural differences. The details of that program have been presented in detail elsewhere (Cochran, 1985; Cochran and Woolever, 1983; Bo, 1979; Mindick and Boyd, 1982; Mindick, 1980). Here we shall limit ourselves to a review of the basic goals underlying the program, and the processes engaged in to achieve those goals.

Program Goals

The goals of the program were all related broadly to the parenting role, and ranged, on a parent-involvement continuum, from simple engagement and awareness to more active initiation and follow-through. In the first instance, the aim was to find ways to recognize parents as experts, based upon our assumption of strengths and special expertise in parents and our awareness of the systematic ways in which such recognition is provided to parents in other cultures (Kamerman and Kahn, 1981). Another goal was to exchange information with family members about children, the neighborhood, community services, schools, and work. Here we were responding to the body of literature (Caplan, 1974; Sarason et al., 1977) identifying resource exchange as a key to the maintenance of mentally healthy communities. The emphasis on the exchange, rather than the dispensing of such information, was a reaction to our aversion to the deficit approach. Reinforcement of and encouragement for parent-child activities was a third goal of the program, and this priority

stemmed from the recommendations of those reviewing the early education programs of the 1960s and early 70s, who concluded that active involvement of parents in the learning of children was a key to success (Bronfenbrenner, 1974; Bronfenbrenner and Cochran, 1976; Florin and Dokecki, 1983). A fourth goal involved social exchange beyond rather than within the immediate family: the exchange of informal resources like babysitting, child-rearing advice, and emotional support with neighbors and other friends. This informal exchange process was distinguished from the information and referral process more commonly associated with formal agencies and community organizations (Stack, 1974; Cochran and Brassard, 1979).[1] Finally, we wished to facilitate concerted action by program participants on behalf of their children, where those parents deemed such action appropriate. A neighborhood-based community development process was envisioned, in which needs assessments carried out by the parents of young children would lead to the identification of issues of common concern and to a change in efforts related to those issues.

Implementation Strategies

The program was offered to 160 families, each containing a three-year-old child, in 10 different Syracuse neighborhoods. Initially, two separate mechanisms were used to involve families in activities related to their children. One, a home-visiting approach, was aimed at individual families and made available to all participating families in half of the program neighborhoods. Families in the other five neighborhoods were asked to become involved in group activities with clusters of other Family Matters families in their own neighborhoods in an effort to emphasize mutual support and cooperative action, with family dynamics and the parent-child dyad as a secondary (although still explicitly acknowledged) focus. Families were involved with program activities for an average of 24 months, and the program itself came to a close early in the summer, prior to first-grade entry for most of the target children included in the study.

Activity Home Visits--Our home- and family-focused strategy took the form of home visits with parents and their children designed to give recognition to the parenting role, reinforcement and enrichment of parent-child activities, and shared information about child care and community services. Paraprofessionals hired from the Syracuse community were trained to exchange information about childrearing with parents and, when appropriate, to provide examples of parent-child activities geared to the developmental age of the child.[2] The starting point was to be based on the orientation that the parents were experts about their own children, and so early home visits were

[1]Our neighborhood workers did provide referrals to other agencies and organizations, and received training for that purpose. This information and referral effort was not, however, identified initially as a special goal of the program.

[2]Prior to implementation in these 10 "main study" neighborhoods, the program was pretested with 36 families in three pilot neighborhoods. This pilot effort was funded by the Mott Foundation, and is described in detail in our final report to the foundation (Cochran, 1982).

spent learning the parents' view of the child and seeking out examples of activities that were already being carried out with the child and defined by the parent as important for the child's development.

Once parents began to sense that the workers were serious in valuing the parental point of view, they identified for us a wide variety of activities they were doing with their children that they felt made a difference both to parent and child. Our workers brought activity examples back to the office, wrote them up in a standard format, and returned them to the parent along with a request that other project workers be permitted to share the activity idea with other families in the program. This process accomplished two goals: first, it further recognized the parent as important and productive, and second, it was a way of gathering parent-child activity information from parents for parents, rather than relying upon the "professional-as-expert" model, which many of our parents had come to expect from outside agents. As time passed and a strong trust relationship developed between home visitor and family, some parents began to ask for information beyond parent-child activities. Those requests were for information about child development ("Is my child developing normally?"), suggestions regarding where to turn for resources to address needs not directly related to parenting (landlord difficulties, marital discord, trouble getting food stamps, etc.), and a list of the other families in the neighborhood belonging to the Family Matters project and receiving home visits. Basic child development and childrearing information was provided to families in fact-sheet form from the local Cooperative Extension office. For basic needs like housing, employment, legal assistance, and food, referrals were made to other local agencies and organizations in as personalized a fashion as possible. The requests for information about other Family Matters families stimulated us to merge our two implementation strategies (see below).

Clusters and Groups--The goals specific to this linking strategy have been to reduce feelings of isolation by bringing families together at the neighborhood level, to encourage the sharing of information and informally available resources among families, and, when parents voiced a need to have changes made in the neighborhood, to facilitate action in pursuit of those changes. In this second approach we stressed the value of clusters and groups of families, rather than the individual family. The social systems of special interest were those natural helping networks of neighbors, relatives, and friends upon whom many families depend for information and a wide variety of essential services (Tolsdorf, 1976; Collins and Pancoast, 1976; Killilea, 1976; Cochran & Brassard, 1979; Gourash, 1978).

The initial home visits in the five cluster-building neighborhoods were limited to a process in which worker and family got to know each other and the worker could learn from parents how they felt about the neighborhood as a place to bring up children. After this relatively brief initial period of familiarization with individual families, the worker set out to arrange a first group meeting, the purpose of which was to introduce neighboring families to one another in a friendly and supportive atmosphere and to begin to get a sense from the group of what changes in the neighborhood might contribute to making life easier for families with children living there. Child care was provided at all Family Matters gatherings, and parents were encouraged to bring their children with them. There was always time for parents to socialize with one another, and the worker/facilitator also looked

for ways to encourage participants to turn to each other as resources outside the regular group.

Program Evolution--We had predicted in our original grant proposal (Bronfenbrenner and Cochran, 1976) that a combination of home visits and clusters would be more attractive to parents than either approach alone. Two early findings seemed to confirm that hypothesis. On the one hand, once certain families became comfortable with home visiting they began to express an interest in meeting neighbors involved with the program, forcing workers into the difficult position of having to resist the constructive initiatives of parents in order to prevent contamination with the cluster building approach. On the other hand, only about half of the invited families in the cluster-building neighborhoods could be coaxed out of their homes and into group activities.

Based on these two sources of programmatic tension, we decided after nine months to merge the two approaches. Workers in the group-oriented neighborhoods began to make themselves available as often as every two weeks for home visits focused initially upon parent-child activities, and those who had been doing only home visits started to facilitate the formation of neighborhood groups and clusters.

One consequence of access to both components of the newly integrated program was an increase in overall program participation. Initially this took the form primarily of more parent-child-activity home visits, mainly to families who previously had been offered only the neighborhood-linking alternative. With more time came involvement by more families in clusters and groups, and some who participated simultaneously in both home visiting and neighborhood-based group activities.

The Home-School Transition--As the children associated with the program grew older and approached the age of entry into kindergarten and first grade, we placed increased emphasis on programming related to the transition from home to school. These activities, prepared for delivery in both home-visiting and cluster-grouping formats, focused on topics like the values of home and school, evaluating kindergarten and first grade classrooms, preparing for a parent-teacher conference, understanding the child's report card, and parent-child activities for school readiness. The emphasis in each of the activities was always on the parent as the most important adult in the life of the developing child.[3]

Research Design

The planning for the Comparative Ecology Project began formally in 1975, with the initial proposal submitted in 1975 and funded in May 1976. The

[3]At no time did staff members from the Family Matters program directly involve school teachers or other school personnel in program activities. A request to include such efforts in the program, made to the National Institute of Education during contract renegotiations in August-September 1980, was denied on the grounds that any effects of work with teachers would be confounded with those of work with parents.

National Institute of Education initially funded four years of research, including the gathering and analysis of baseline data. Then, in a renewal of the contract, three years of support from November 1980 to October 1983 were provided for the collection of follow-up data and the joint analysis of the two data points, with an emphasis on the evaluation of program effects on the child.

A pilot study involving 36 families from three neighborhoods began in Syracuse in January 1978, with data collected through August of that year. A second wave of data was gathered on the pilot families during the period October 1979 to April 1980. Baseline interviews for the 276 main-study families were carried out from October 1978 through the end of 1979. Analysis of these data continued until early 1983.

Program work with families began after baseline data collection was completed in a given neighborhood. For the city as a whole, programs took place from January 1979 to May 1981. The average length of involvement for families was 24 months. Following the end of the program, follow-up data were collected on 225 families from October 1981 through July 1982.

Sample Design

In the design and selection of a sample for this study, we set out to accomplish several objectives. First, there needed to be enough families to permit inclusion of a broad range of family types, thus permitting some generalization of findings and the study of reasonably detailed distinctions among families and individuals, where indicated by the data. Second, and acting strongly to limit the first, we wished to utilize a relatively time-consuming in-depth interviewing procedure, in order to obtain the kind of detailed case material that makes possible the qualitative search for statements of causality as well as broad-scale quantitative examination of relationships. Therefore, the sample had to be small enough to accommodate such an approach within the limits of time and money. Given these considerations, our sample is unusual in its planned diversity of family types (together with the intensive interview data from each family). Studying families from a number of ecologies gave us greater potential to understand relations that hold across groups, and to make more general inferences regarding these relationships.

In terms of our ecological theory, there are special characteristics that identify the neighborhood as a major locus for the formation of an ecological niche. The ecological integrity of those characteristics served as the basis for the decision to deliver the Family Matters Program at the neighborhood level, and to tailor it to the particular needs of different neighborhoods.

Neighborhood Selection - We employed a stratified random sampling procedure at both the level of neighborhoods and of families. First, 29 city and 28 suburban neighborhoods in the Syracuse, New York area were identified. The neighborhoods were then further classified by income level and by ethnic/racial composition. Using three income levels and four ethnic/race

levels,[4] we randomly selected neighborhoods within the 12 subclasses (where such neighborhoods existed), giving a total of 18 main-study neighborhoods (in addition to two pilot neighborhoods).[5]

Selection of families - Once study neighborhoods had been specified, we began the process of identifying all the families with a three-year-old child in each neighborhood. Race (Black vs. nonblack), family structure (married vs. single), and sex of target child were factors of primary interest, and it was possible to obtain information regarding them for the families at the time of sampling. We then employed a stratified random sampling method within each neighborhood, choosing families within each of the eight subgroups defined by family race, family structure, and sex of child. Of course, certain categories were not possible to fill (for example, Black families in certain of the white neighborhoods), and other subclasses were, therefore, correspondingly increased. This method of sampling resulted, as was our intention, in a higher proportion of Black and single-parent families than in the Syracuse area as a whole, and also made certain a substantial sample of ethnic whites. The baseline sample is shown in Table 1.

Table 1
Baseline Sample Distribution
Race by Family Structure by Sex of Child

	Black		White		
Sex of Child	Unmarried	Married	Unmarried	Married	Total
Boy	20	11	28	79	138
Girl	30	17	16	75	138
Total	50	28	44	154	276

The rate of agreement to participate varied by neighborhoods, ranging from nearly 100% in certain neighborhoods to approximately 50% in others. (Refusal rates by race, family structure, and sex of child are shown in the full report to NIE.)

Stratifying by the variables discussed above, including neighborhood income, also resulted in a good sample distribution across family income. Approximately half of the mothers in our study are employed (some part and

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[4]The three neighborhood income levels, based on estimated median 1970 family income are: low (under $8,000), moderate ($8,000-$10,000), middle ($10,000-$13,500), and high (over $13,500). No high-income neighborhoods were included in the sample. The ethnic/race levels used were: city Black (over 50% Black); city mixed (10-49% Black); city ethnic white (30% or more first- or second-generation foreign born); and suburban nonethnic white (under 10% Black and under 30% ethnic white).

[5]In each of the 12 subclasses, if there were three or fewer neighborhoods, each was included in the study; if there were more than three, we randomly chose three.

some full time). Analyses focusing on the family-level factors have included mother's education (12 years or fewer; more than 12) and maternal work status (not employed, working part time, working full time)[6] along with factors from the original design. (See full report for more detailed information about ethnicity.)

Table 2 shows the distributions of families that participated in the follow-up phase of the research, and so constituted the sample available for pre-post comparison of program effects.

Table 2
Number of Families by Program, Race, and Marital Status

		Control	Program	Total
Black	Single	19	21	40
	Married	10	13	23
White	Single	16	23	39
	Married	54	69	123
	Total	99	126	225

Program assignment - Programs were assigned on the basis of neighborhoods, with eight neighborhoods selected as controls and 10 receiving the intervention. We attempted to achieve as good a balance as possible of each of the two original programs[7] and of control across neighborhood income types and neighborhood ethnicity types. When it was possible to sample three neighborhoods per subclass, assignment of the three conditions (including control), one to each neighborhood, was made randomly. Similarly, where there were two neighborhoods per subclass, once the decision had been made regarding which two conditions would be assigned to that subclass, the actual assignment to neighborhoods was random. The program assignment was not divulged to families, to the program staff, or to the interviewers until after baseline interviewing had been completed in a given neighborhood.

Sample attrition - In any longitudinal study, it is important to study the possibility of differential patterns of attrition in the treatment and

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[6]Full-time work is defined as working more than 35 hours per week; part-time work is defined as from 4 to 35 hours per week, including some occasional workers; not working includes those who do not work and those whose work is extremely limited or irregular.

[7]After nine months of program operation, the home-visiting and neighborhood-clustering appraoches were merged into a single Family Matters program.

control groups from Time 1 to Time 2. Even in a design that is successfully randomized at baseline, selective attrition (usually by self-selection) can produce noncomparability at Time 2.

To examine this possibility in our sample, we used a dichotomous dependent variable: participated in Time 2 data collection vs. did not participate. The variable was examined as a function of program assignment, race, and family structure. The model was analyzed by both general linear model methods and in the logistic linear model (logistic regression). There were no attrition differences by program assignment or other factors, and no significant interactions. This is an important and highly desirable result: there appear to be no serious problems of bias from selective attrition.

Demographic comparability at baseline - It is important to know whether the program and control groups were comparable in order to to determine whether forces other than those exerted by the program might be contributing to change between baseline and follow-up. Ten demographic variables were analyzed in several repeated-measures models, each including a program classification factor (program and control) and a time factor (Time 1, Time 2 assessment), in order to assess comparability.

No nonequivalence at Time 1 was found for family income, use of external child care, mother's or father's education, or father's work hours. Black families in the control group had more children at Time 1 than did Black families assigned to programs. There was an overall pattern of older children in the control groups. Greater mobility (number of moves during the three years prior to baseline) and a lesser length of time in the current neighborhood was found for two-parent families in the control group as compared to their program counterparts, while the reverse held for single women. Overall, white control families had a greater residential stability than program whites, while the tendency was reversed for Black families.

In summary, the program families were not different in overall socioeconomic status from the control families. Where nonequivalence did occur, it involved residential mobility and mothers' working hours, and only occured at the level of interactions between factors in the design. We do not regard these initial program differences either as unexpectedly numerous or as posing great analytic difficulties. Of the variables showing differences, only mother's work hours was related to outcome variables at baseline (Cochran, et al., 1981). We have examined these potentially confounding variables in the analyses reported here, removing them from final models only if they could be shown to have negligible effect.

Data Collection Instruments

The Social Networks Interview - Our interest was as much in describing the social ecology of family life as in measuring amount and kinds of social support. We began with a general definition of what constitutes membership ("People who make a difference to you, and are important in one way or another"), and then asked the respondent to apply that definition to categories of people characterized by well-known roles and contexts (neighborhood, relatives, work- or school-mates, people in agencies or organizations, etc.). Information was then gathered about the content exchanges and leisure-time activities that the parent engaged in with his/her

"network members," thus distinguishing a functional from a more peripheral social circle. A third and more primary circle was distinguished by asking the parent to designate the "most important" network members from the rest of tne list and to talk about why they were important. The interview concluded with the collection of basic background information about the members of the primary and functional circles.

In the follow-up phase, procedures for identifying changes in network membership were included at the beginning of the Wave II interview, which is provided in the full report. Once the membership list was updated, the interview proceeded very much as during baseline.

The social network variables included in this report are discussed in Chapter 2.

The Child-Caregiver Activities Interview - This instrument was designed to yield data bearing on the actual behavior of parents with their children. It was used in an interview conducted with the mother (and in Wave II, separately with fathers in two-parent families) in which the parent was asked to describe the activities of the morning, afternoon, and evening of the previous day engaged in by the child and by all persons in the child's immediate environment. The interview contains checklist questions regarding amount of activities of all types engaged in by the child independently and with his or her parents. The analyses in this report focus on variables derived from these checklists. Those variables are described in Chapter 2.

The Stresses and Supports Interview - This interview was constructed to identify sources of environmental stress and support experienced by each parent in a dozen domains existing both within and outside the home. The choice of domains was based on the free responses of parents to open-ended interviews conducted in a series of pilot studies. Half lie in what we have called the mesosystem, including day care settings, children's informal play groups, and school. The exosystems that emerged in our pilot studies were primarily those involving the activities of parents outside the home, including conditions of work (for both self and spouse), sources of income and financial security, family services, social organizations, and neighborhood conditions. The environmental forces operating within the home itself were assessed in 4 more domains of the interview: housing conditions, housekeeping chores, the activities of the spouse and other household members, and, finally, the parents' perceptions of themselves and of the child. The analyses included in this report were limited by agreement with NIE to those perceptions by the mother of herself and her child. The variables themselves are described in Chapter 2.

The Home-School teacher questionnaire and parent interview - These two instruments were used for the first time in the second data assessment period. Variables were derived based on the following kinds of information contained in the interviews:

The teacher questionnaire: The teacher of each target child was requested to fill out a detailed questionnaire, focusing on the following areas:

a. Home-school relationship. The aspects to be covered included frequency, occasion, initiator, and content of all contacts and communications between the target child's parents and teacher, as well as the teacher's attitudes about contact with the family.

b. Child's school behavior. Scales derived from questionnaire items allow specific attention to be focused on aspects of the child's behavior in school such as initiative, interest in learning, task orientation, conduct in school, and relations with teachers and peers.

c. Child's school record of academic performance. Each teacher was asked to complete a copy of the report form in use in the Syracuse City School District. This provided information on the child's school performance in reading and other language arts, mathematics, social studies, science, art, music, and physical education, the child's social behavior and work and study skills, and the child's record of attendance.

Parent interview: Parents were asked about the home-school relationship as it affected themselves and their child. The following topics were included in both open-ended and structured questions.

a. Information possessed by the parent about the child's school experience and performance, and about school resources and policies that affect parents and their children.

b. A record of contacts and communications (frequency, occasion, initiator) paralleling that in the teacher questionnaire.

c. Parent attitudes about the child's school experience and about the home-school relationship.

Specification of Programs For the Analysis

During the first 9 months of program delivery, families in five neighborhoods received home visits, while in the other five program neighborhoods families were being encouraged to gather together in cluster groupings. After that initial period, the two programmatic strategies were combined and families invited to select home visits, cluster groupings, or some combination of the two approaches. The result was a rather individualized program, in which particular families chose the arrangements that they felt best suited their needs. The challenge for program evaluation was to determine whether to attempt analyses which differentiated some of the various combinations selected most often by program families, or to avoid the complexity of those possibilities and simply distinguish program from control families.

Following many analyses of these various models, with a particular emphasis on school outcomes, we decided to use a model throughout this report that included just the simple two-level comparison based on the nominal assignment of a family either to control or to the program condition. This was the most conservative approach. It minimized artifacts due to small subclass sizes and to self-selection of families into various levels of participation.

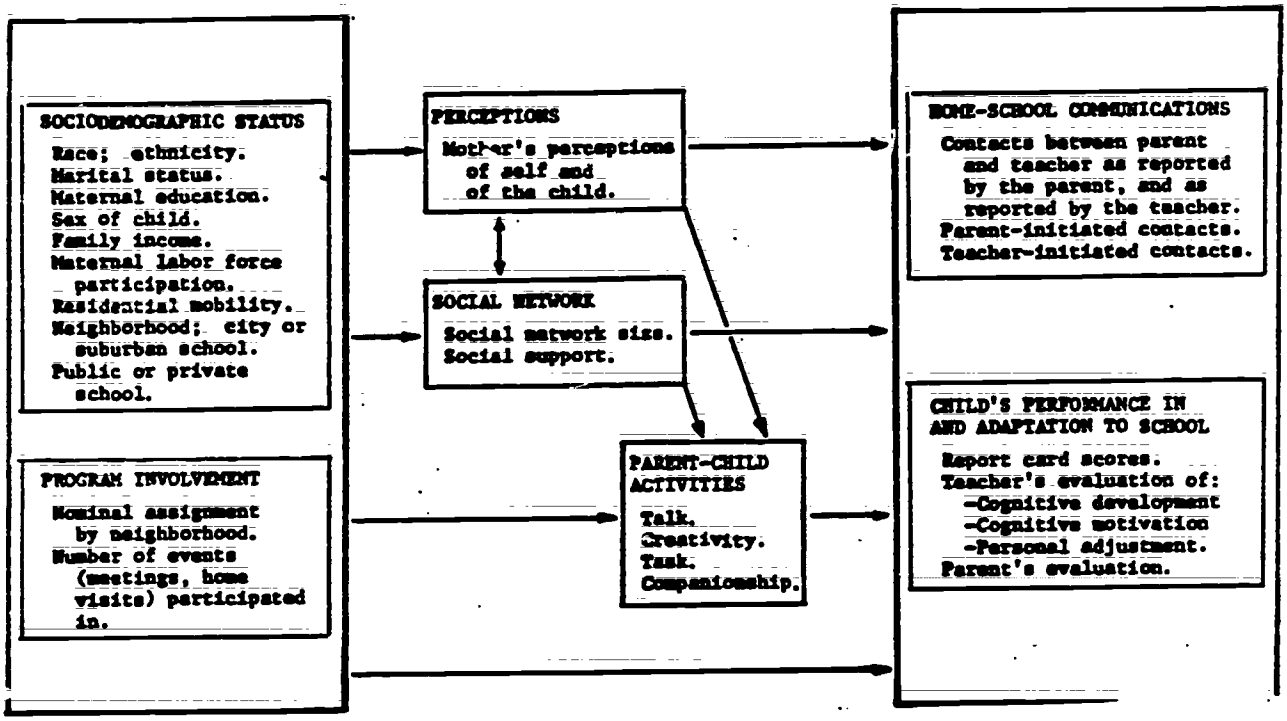
Analytic Methods

Summary of Statistical Methods

Our conceptual schema is presented in Figure 1. It provides an overview of the hypothesized interrelations among the major classes of variables. Home-school communication and the child's performance in school, although conceptually distinct, are shown in a single box, to minimize the number of

FIGURE 1

CONCEPTUAL SCHEMA FOR PROGRAM EVALUATION:
HYPOTHESIZED INTERRELATIONS AMONG DOMAINS



connecting arrows. Sociodemographic variables and the program are also shown in a single box. The analyses presented in subsequent chapters emphasize the joint effects of these variables and the program. This involves an examination of the main effects and interactions among all of these variables, including the program, in relation to the other domains indicated by boxes in the diagram. The arrows, as drawn, are intended to imply the possibility of interactions among any variables (from any domain) that appear in a specified model.

It is important to distinguish between what we mean by direct and indirect effects. Direct effects are those implied by a single path on the diagram -- most particularly, the effects of the program on child outcomes without operating through other elements on the model. In contrast, indirect effects are those that affect the child through the parents (or the parent-child interaction), as measured by parents' perceptions of self and child, by their reports of activities with the child, and by social network measures. Thus, in a formal sense, there is an isomorphic relation between direct and indirect effects, and single- and simultaneous-equation statistical models. Analyses based on simultaneous equations are not presented in this

report. They will be the subject of future work. We do retain the direct/indirect effect terminology, even for analyses carried out by single-equation methods. Thus, for example, the term "indirect effect" is used in discussing the effect of the program on school outcomes through change in social networks. The true indirect effect is not partitioned out, however, and we can not know with certainty which part of a significant network term in the equation is the indirect effect of the program and which part is a direct network effect or the indirect effect of other factors.

The core of our first-stage statistical analyses involves single-equation models, using regression techniques (including analysis of variance and covariance). These models frequently involve specifying different regressions for each subgroup in the model (analysis of homogeniety of regressions), the simultaneous examination of group (ecological) and individual effects, and repeated measures on the dependent variables. (For more detail, see the full report, Chapter 2.)

Subclass sizes - The adequacy of subclass numbers in the design requires some discussion. Clearly, we have more categorical variables of importance than can be included jointly in any given model. Our general approach has been to look at a series of models with different combinations of factors, attempting by this stage-wise process to gain a good understanding of the underlying relations. As we use models that concentrate on subsamples (for instance, comparing single vs. married white women, or Blacks vs. whites), fewer variables can be included, owing to the smaller sample numbers of the latter groups. The numbers of families in each of the subgroups included in this report were shown earlier in Table 2.

Analytic Models

A large number of alternative models were examined in the process of developing those ultimately presented in this report. Some of these are discussed in the following chapters, along with the final models used. There is, however, a core model that was derived and is used throughout the entire report. As already discussed, the program is examined as a two-level factor, based on nominal assignment to program and control groups. The program factor (program/control), race (Black/white), and family structure (married/unmarried) are in this basic model. The subclass sizes in this model are those shown in Table 2. Maternal education, as an indicator of socioeconomic status, is also in this model either categorically ($\leq$12 years > vs. 12 years), or in continuous form with regressions specified separately by subgroups. In a primary model form, an intervening variable of interest -- for example, a measure of parent-child activities -- is included with separate regressions for the eight basic subclasses while the outcome -- for example, the child's performance in school -- is examined. In this model, the primary focus is whether the relationships -- of school performance on activities, in this example -- are the same for the eight model subclasses, and in particular whether these regressions are the same for program and control.

The Remainder of the Report

Chapters 2 and 3 in this summary report provide the basic results of examination into the workings and impacts of the parental empowerment prog In Chapter 2 we consider those results as separate domains: the relations

between program involvement and child performance in school, mother-child activities, changes in mothers' personal networks, and mothers' perceptions of their parenting abilities. An effort is made to understand relationships between domains in Chapter 3 -- for instance, the relationship between increased use of mother's network and her child's performance in school, as a function of program involvement. Chapter 4 is used to focus an integrated set of findings on the primary research questions posed in the original proposal to the National Institute of Education, and to explore the implications of those findings for the future of families and public education in the United States.

CHAPTER 2
SEPARATE OUTCOMES OF THE EMPOWERMENT PROGRAM

Moncrieff Cochran and Charles R. Henderson, Jr.

The five classes of outcomes expected to be affected by participation in the Family Matters program are included in Figure 1. Each of those sets of variables is examined separately in this chapter in an effort to identify the dimensions of family ecology most strongly associated with involvement in the program. When presenting these results we begin with behavior in that domain in the model furthest removed from the home -- the child's behavior in school -- and then proceed systematically through relations and perceptions operating closer to and then within the immediate family: parent-teacher communications, social network ties, parent-child activities, and the mother's perception of herself as a parent. These findings will provide the foundation for a set of more complex analyses which are presented in Chapter 3.

Effects on School Outcomes

One of the primary goals of the program intervention -- even if indirect -- was to facilitate the child's interaction with and performance in school. Many of the activities of the Family Matters Program were aimed at improving the child's cognitive skills. It is these cognitive performance outcomes, as well as measures of the child's work habits and interpersonal relations at school, that are examined here.

The data on school performance and adaptation come from two sources: school records (including report cards, attendance records, and information on the child's assignment to special education, remedial help, or being retained in the same grade); and a set of questions, called the Teacher Survey, prepared by the project and completed by the teachers of each of the project's children in April through June of 1982 (when most of the children were completing first grade).

The report cards did not have identical formats for all children in the sample. Therefore, the project asked private-school teachers to transform the grades they had given into the format of the more prevalent public-school form, thus making it possible to confine attention to this form only. To provide comparability across the total sample, items for which there was no obvious match for all school types were eliminated from consideration.

The selection of individual variables and construction of scales were based on analyses of correlations between variables, content validity, and a sequence of preliminary analyses of variance and covariance. The reduced list of variables was then subjected to intensive analysis to examine program effects. That array is presented in the full report (Cochran and Henderson, 1985). They can be organized into several general categories: measures of the child's cognitive development, cognitive motivation and work habits, and social and interpersonal characteristics. Here discussion is confined to those variables considered most important and those that best illustrate common patterns of results. These are not the only variables for which significant results were identified. They are representative of more general patterns.

Six of the 225 target children available for analysis at Time 2 were classified by the schools as being in special education. These children had conditions ranging from learning disabilities to Down's syndrome. In all cases, they were not graded by the standard criteria, and we cannot assume that the teacher used the same criteria for those children as for others in response to the Teacher Survey. Therefore, a decision was made to exclude these cases from the analyses of school outcomes and of home-school communications, and from the analyses linking school outcomes to other variables (Chapter 3).

In the course of analyzing the school data, we became aware of the importance of distinguishing public and private schools. The patterns of results are quite different for these two settings. The private-school sample is smaller than the public. Therefore, the first set of results is given for the public-school sample only, where a more fully specified model with larger subclass sizes could be used. Later a model is considered that permits comparison of public with private schools.

In this public school analysis, program (control vs. program), race (Black vs. white), and family structure (one- vs. two-parent families) are the primary classification factors. One set of analyses considered simply those variables and their interactions. It is also important to bring in a measure of socioeconomic status that is available and valid for the entire sample under consideration. Since the sample was not uniformly distributed by SES across race, family structure, and program groups, controlling for socioeconomic status was important. Previous work with baseline data showed mother's education to be our best measure of SES; preliminary analyses of school data confirmed this. In this instance, mother's education was included categorically with two levels ($\leq$12 years, >12 years).

The statements of findings to be presented in this report are based on tests that are significant at the .10 level or better, unless otherwise indicated. That is, every assertion made in the text, even without an explicit reference to a table and a probability, is significant at the .10 level or better. The tables of results give probabilities that are significant at the .20 level or better for any tests shown by the table configurations.

A reminder is important at this point. Results are reported in the language of program children "scoring higher" or "performing better" than the controls, for certain family types, with the sense that the program produced the differences. While this causal process may in fact exist, at this stage we are simply reporting group differences, which could be due to something other than the program itself. We have not been able to eliminate these apparent program effects by adjustment for sociodemographic variables, but this process will continue beyond the scope of this report. In addition, it is important to emphasize that no adjustment has been made for innate or initial ability, because no tests of cognitive development were conducted at baseline. Therefore the possibility that the children selected for the program began with an innate cognitive advantage cannot be completely ruled out.

Results for Children in the Public Schools

There are two overall program findings, statistically significant across a number of variables, that emerge from the public-school data. We find, first, strong and quite coherent positive program effects for children in the public schools from two-parent families (across race and education groups) and for children from lower-SES families, as measured by mother's education (across race and family-structure groups). This pattern of results means that the effects are typically strongest in more narrowly defined groups. For example, for two-parent families in which the mother had lower education, the program effect was significant for a high proportion of all variables. The general pattern of results held most strongly for the measures of cognitive development, but was also present for certain other variables.

The second major pattern involved the comparison of public and parochial schools. The positive program effects did not hold as strongly in the private schools. There was a tendency toward negative program effects for the private-school sample, but this effect was largely limited to two-parent white families in which the mother had low education (n=11). The results of those data analyses are presented separately below.

Cognitive development - The pattern of positive program effects, particularly for two-parent families and for lower-SES families (mother's education $\leq$ 12 years), is seen most strongly in the report card evaluation of the core subjects of reading, language, math, and science, as opposed to subjects such as music and health or to ratings of work-habits or social-behavior. The pattern is also seen in the vocabulary/language Teacher Survey variables.

The average report card score for the core subjects is shown in Table 3. The patterns shown in the table illustrate those found for all of the major cognitive variables analyzed. Note that the program contrast is significant for the overall main effect (bottom row in table), for married couples, and for low maternal education, as well as for many of the subclasses that contribute to these effects (e.g., two-parent Blacks, two-parent whites). This pattern was also evident in the "vocabulary" and "auditory skills" variables taken from the Teacher Survey.

Cognitive motivation - The results for variables concerning the child's work habits and personal characteristics, which might be thought of as contributing to success in school, are interesting in comparison to the cognitive development variables. Relatively few of these variables show a program effect. The absence of differences on these variables between program and control children can from an overall perspective be regarded as reassuring, because it indicates that the teachers are not operating with a basic response set.

Social relations - The social-relations variables produced a consistent trend of negative as well as positive program effects. For most of these social relations variables (see the full report for a complete list of the variables in this group), there was a negative effect in the white,

Table 3
Average Report Card Scores*
(Core Subjects)

			Control	Program	$\bar{Y}_2 - \bar{Y}_1$	prob.
Black	Single	(15,18)	26.85	27.94	1.09	
	Married	(8,9)	26.13	31.34	5.21	.15
White	Single	(11,19)	27.00	29.06	2.06	
	Married	(36,48)	29.41	32.89	3.48	.02
Single	Low Ed.	(21,33)	25.57	26.27	.70	
	High Ed.	(5,4)	26.27	30.72	4.45	
Married	Low Ed.	(23,32)	24.71	30.48	5.77	.01
	High Ed.	(21,25)	30.82	33.75	2.93	
Low Ed.		(44,65)	25.14	28.37	3.23	.03
Married		(44,57)	27.77	32.12	4.35	.03
Overall		(70,94)	26.85	30.31	3.46	.03

*Numbers in parentheses show cell sizes for control and program subgroups.

single-parent, high-education program comparison. There are, however, only two program and three control families in this group. For this reason the result is not to be given great weight.

Parochial vs. Public Schools

There was a general trend across most variables for higher scores by children in private than in the public schools. When the program-by-school-type interaction is examined, there was also a tendency for the control children in public schools to be lower than the other three subclasses. For example, for the report card core subjects variable we have the following:

Table 4
Core Subjects by Type of School

	Control	Program
Public	26.51	29.14
Parochial	30.42	31.90

This is an interesting pattern. Perhaps there is some self-selection mechanism operating in the case of those families who make the decision to send their children to private schools. Or maybe the grading (and other evaluation) in private schools was such that most children are placed at the higher end of the scale. Either of these possibilities would create a situation in which there was relatively less room for improvement in grades to be effected by the program in the private schools. This would explain the greater program effect in the public schools. The overall impression is that the program has compensated in the public school setting for what would otherwise be the negative effects of lower socioeconomic status on early school performance.

Program Effects, School Outcomes, and Family Mobility

For each family in the study, we determined at follow-up data collection the number of residential moves made during the preceding four years. The sample available for analysis at Time 2 was limited to those families remaining in the Syracuse community, so the moves were ones made within this region. We hypothesized that greater mobility might impair program effectiveness and examined school outcomes in the usual model, but now also included mobility with regressions specified separately by program and control. We found, for the cognitive outcomes, that moving had no real impact on the cognitive performance of children in the control group, but that it had a negative effect in the program group. The difference between the two sets of regressions was statistically significant. This indicates that for the program families the program was more successful with those who were residentially stable.

School Outcomes and Family Income Level

An examination of whether adjustment for family income level strengthened or reduced the basic findings in the public school sample led to the conclusion that there was no great change in the results as given above. Looking at regressions for income by model subgroups itself proved interesting, however. We discuss here the results for the entire sample. Across the entire range of school outcomes, there was at least a trend for program regressions to differ from control regressions, with many of those differences significant at the .05 level or better. These nonhomogeneous regressions were generally positive for the control families and flat (or even negative) for program families. This indicates that greater income--in the absence of any intervention--was associated with better performance by the child in school. But the data suggest that this is not so for the families receiving the program: the program apparently buffered the negative consequences of low income. This pattern was seen in three of the four subgroups; it was not evident for children in white, two-parent families. The pattern was strongest for noncognitive variables such as interpersonal relations, personal adjustment, social maturity, and cognitive motivation. But similar trends held for most of the cognitive variables as well.

Discussion

Program effects have been demonstrated for measures of cognitive performance in school. Are these a coherent set of findings, or are they better explained by artifact and sociodemographic and other characteristics that might not have been controlled for in the analyses? As mentioned above, we have no way of knowing the child's innate cognitive abilities or his or her level of performance at Time 1, before the program started. Thus, there is a heavy burden of proof required to attribute empirical differences in school performance to the influence of the program.

Does the evidence that is available in support of program effects have any credence? The positive effects are seen for most of the cognitive performance variables, and the lack of effects in other domains argues against a response set as the explanation for cognitive performance differences. It is also encouraging that sociodemographic controls do not substantially eliminate the program effects.

Additional evidence of the coherence of the results for school performance is the program's apparent buffering effect on the adverse consequences of lower income. The fact that a rather strong positive effect of greater family income on the child's school performance in the control group was not seen with the children whose families participated in the program is another indication that the program itself was exerting a positive, independent influence upon the families it served.

There is also evidence of a ceiling effect in these data. Evaluations were higher in parochial than in public schools, and the positive program effects were stronger and more consistent across family types in the public schools. One possible explanation for less program impact in the parochial settings is that grades are already high in the private schools and there is comparatively less room for further improvement by the program. Evidence from other studies also shows higher grades in private schools (e.g., Coleman, 1974).

The fact that the program appears to have had its greatest effects for families in which the mother's education is high school or below, especially for two-parent families, could also be interpreted in a similar way to the public-private finding. Perhaps the more educated mothers, regardless of the program, were more effective in assisting their children to develop the skills necessary for higher school performance, thus leaving little room for the program to work.

Impact on Home-School Communications

Interest in the quantity and quality of relations between home and school has grown over the past five years as educators and family advocates have come to appreciate the contribution that the other can make to the development of the child. There is growing realization that partnership between these two influences in the life of the child may be mutually beneficial both fulfilling the aspirations of parents for the future of their children and meeting the expectations placed upon schools by the communities they serve

(Bronfenbrenner, 1979; Lightfoot, 1978; Seeley, 1981). Reference was made in the NIE contract proposal to the fact that from a research standpoint little is actually known about patterns of communication between parents and teachers, especially as those patterns relate to first-grade children (see also Gotts and Purnell, 1984). Thus this part of our research and evaluation effort has been an exploration in largely uncharted waters. Our general hypothesis has been that "the educational potential of the school is enhanced to the extent that linkages are established and maintained between family and school both prior to and after the child's entry." (NIE Proposal, Cochran, 1980). This hypothesis actually consists of two separable parts, one of which will be addressed here. The immediate question is whether "linkages are established and maintained between family and school," and whether in turn involvement with the Family Matters program affected that establishment and maintenance. Consideration of whether "the educational potential of the school is enhanced" is reserved for later in this summary report.

Data were gathered about home-school communications from the mother via an interview and from the child's teacher via a questionnaire (see protocols in the full report). Descriptive statistics were examined for nine categories of communication: notes, telephone calls, informal talks, academic assistance, report cards, group meetings, observations, conferences (parent-teacher), and classroom volunteering. Low frequency of response in a number of categories led to the reduced set shown in Figure 2, which includes three categories of communication, each containing variables representing both teacher's and parent's perspectives of communication generated from both sources.

Figure 2
Home-School Communications Variables

	Parent Respondent	Teacher Respondent
Conferences*	At parent request At teacher request	At teacher request At parent request Regularly scheduled by school
Notes**	Parent sent note Parent received note	Teacher received note Teacher sent note
Telephone Calls**	Parent called Parent received call	Teacher called Teacher received call

*Conferences, coded initially by raw frequency (0-20), were recoded as a simple dictotomy (0, 1+) to reduce the impact of outlying values and produce a more normal distribution of scores.

**Notes and calls were also initially coded simply for frequency (0-50). Again, to eliminate outlying values the code was collapsed (0, 1, 2, 3, 4, 5+).

While activities designed to prepare parents for effective communication with school personnel were a significant part of the Family Matters

program, we recognized that other forces were also at work in determining the frequency of communication between home and school. In most instances, initiation of home-school communication is made by teacher or parent when there is a feeling that something is wrong -- that the child is in difficulty. To examine this phenomenon we identified those children who were indicated by two or more sources to be "not doing well" (see Technical Note 4.2 of full report for criteria used to distinguish children). Eighty children were distinguished in this manner (control and program). Table 5 provides a comparison of the levels of home-school communication for those families with the levels for the rest of the sample (n = 139).[8] The reader can see in Table 5 that, in 12 of 13 instances, reported communication is higher with families where the child is perceived as struggling than with those involving a more "successful" child. Ten of those 12 differences show statistical significance. The single variable showing no real difference between group means is the only one initiated by the school system rather than the parent or teacher. Clearly, communication is linked with the perception that the child is having difficulty in school.

Convinced of the importance of distinguishing children perceived as in some difficulty from those deemed "doing all right," we proceeded to make control-program comparisons separately for those two groups. No

Table 5

Mean Frequencies of Contact: Overall Sample by Child Performance Level

	Doing Well n = 139	In Difficulty n = 80
Conferences		
Parent reported requesting	.10	.22
Teacher reported receiving request	.15	.26*
Parent reported receiving request	.10	.23*
Teacher reported requesting	.20	.43***
School invited	.83	.81
Notes		
Parent reported sending note	1.31	1.51*
Teacher reported receiving note	1.21	1.55
Parent reported receiving note	.89	1.52*
Teacher reported sending note	1.40	2.60***
Telephone Calls		
Parent reported calling	.87	1.33**
Teacher reported receiving call	.52	.83*
Parent reported receiving call	.47	1.12*
Teacher reported calling	1.06	1.76***

* ≤ .05
** ≤ .01
*** ≤ .001

[8]The sample (n=219) consisted of all Wave II families except those in which the child was identified by the school as in need of special education (6 families).

program-control differences were found for the group of parents and teachers in which the children were seen as performing satisfactorily.

Closer examination of the magnitude of difficulty experienced by program and control children in the "difficulty" group indicated that greater difficulty was experienced by children in the control portion of that group. (See details in full report.) Because evidence already indicated that communications increased with amount of perceived difficulty (Table 4), we realized that accurate comparison of communications by control and program parents and teachers in the "difficulty" group would require statistical control for these remaining differences in level of difficulty. This was accomplished by including "level of difficulty" in the analyses as a covariate. Table 6 shows the findings generated by the control-program comparison of families whose children were considered in some sort of difficulty, controlling for the magnitude of that difficulty.

Four patterns can be identified in Table 6. The first is one of no program effect on home-school communication for Black, single parent families. A sharp contrast is provided by the second pattern: consistent differences in favor of the program for parents in Black, two-parent families. Especially noteworthy are three instances in which the difference appears in reports by both parents and teachers (conferences at parent

Table 6
Contacts Between Home and School
Children in Difficulty Only*

	Black				White			
	Single		Married		Single		Married	
	F	P	F	P	F	P	F	P
Conferences								
Parent requested			2.9	.09(+)	3.5	.07(-)		
Parent received request			3.5	.07(+)				
Teacher received request			3.3	.08(+)	3.6	.06(-)		
Teacher requested								
Telephone Calls								
Parent called							1.8	.19(-)
Teacher received call			8.1	.01(+)				
Parent received call			4.8	.03(+)	3.5	.07(+)		
Teacher called			2.8	.10(+)	2.6	.11(+)	2.5	.12(+)
Notes								
Parent sent note			5.2	.03(+)	1.8	.19(-)	5.5	.02(-)
Teacher received note			2.1	.16(+)				
Parent received note			11.7	.001(+)			4.3	.04(-)
Teacher sent note								

*Analysis limited to children in difficulty (n = 80), with the measure of difficulty entered continuously as an adjustment for differences between control and program subgroups in degree of difficulty experienced by the children.

request, telephone calls by teacher, notes sent by parent).[9] The third pattern shows fewer conferences and more phone calls for the white, single parents in the program. Finally, the program parents in white, two parent families appear to be less involved with notes than were their control counterparts, especially from the parents' perspective.

Discussion

The emergence of a positive "conference effect" associated with program involvement was combined, for the Black, married parents, with similar differences in telephone and written communications. Together these findings indicate that this group of parents was especially eager to play a role in making the school "work" on behalf of their children. These parents showed various signs of upward social mobility; they lived in two-earner households and had recently purchased homes in an integrated neighborhood. These data suggest that they also placed high value on schooling as a means for assuring the future success of their children.

The data in Table 6 also seem to indicate that something is constraining the white program parents from parent-teacher communications that would otherwise occur at a relatively high frequency (high control group means). In the case of the white, single mothers, fewer conferences appear to be balanced by relatively more telephone calls. But this is not the case for the white, married families, leading us to wonder whether they are in some sense resisting the impulse to communicate with the teachers of their children.

What might account for this resistance?. One possibility is that this subgroup of program parents faces other external demands, which somehow interfere with home-school communications. A look at background characteristics like educational level, working hours, number of children, and residential mobility (see Technical Note 2.1 in full report) does not support this hypothesis. Is it possible that involvement with the program itself reduced the tendency of these parents to initiate or respond to school-related communications? Might the program designers and workers have been sending messages that suggested alternatives to increased communications as appropriate responses to signs that the child was having some difficulty in school? This possibility is considered in Chapter 4.

Systems of Informal Social Support as Program Outcomes

The conceptual model guiding the planning, implementation, and now evaluation of this educational intervention includes the expectation that children in families involved in the program will perform better at school than those without access to program activities. The direct links between program assignment and various school outcomes were examined earlier in this chapter. Equally of interest, from our ecological perspective, are any links that might be found between program involvement and the psychological and social environs of family members, especially as this more proximate focus

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[9]There was nonhomogeneity for the regressions of several of these outcome variables on the "difficulty" covariate. For this reason these findings have more limited generalizability than would otherwise be the case.

might in turn be linked to school outcomes. Attention is directed here to the personal social network.

In the original proposal to the National Institute of Education we hypothesized that "the effectiveness of the family as a childrearing system is enhanced by the existence of a supportive social network made up of relatives, friends, neighbors, and other persons outside the immediate family" (NIE Proposal, Cochran, 1980). The networks-related question of interest for this evaluation is, "Has participation in the Family Matters program altered the social supports available to mothers in ways that have significance for their attitudes toward and activities with their children and for those children's performance in school?" This larger question is better subdivided into two smaller ones: "Has participation in the program altered social supports?" and, if so, "Are these changes reflected in parents' attitudes, parent-child activities, or child performance in school?" There is a small but growing body of evidence to support the assertion that certain network characteristics are related to parent and child outcomes (Abernethy, 1973; Crockenberg, 1981; Belle, 1982; Zelkowitz, 1981; Tietjen, 1979; Homel and Burns, 1981; Bee et al., 1982). We know of no instances, however, in which changes in network structure or functioning have been linked directly to program intervention, or where parent and child outcomes have been associated with these changes. Here we will be concerned only with program-related alterations in social supports. Findings involving the ways that changed networks are associated with more positive school outcomes are presented in Chapter 3.

The networks variables analyzed for this report are shown in column 1 of Figure 3. The names and definitions of the constructs represented by these variables are provided in columns 2 and 3 of the figure. Further discussion of concepts and methods related to variable construction can be found in the full report.

Figure 3

Network Constructs and Variables

Construct	Definition	Variable names*
Centeredness	The degree that a parent's network is dominated by individuals in a particular role (kin/nonkin; neighbors, workmates, other friends)	Number of kin Number of nonkin
Resource Strength	The use made by parents of network members for the exchange of social support and material resources	Functional network size Amount of: emotional support, childrearing advice, baby-sitting support, financial support No. of members you borrow things from. No. of members with whom you discuss work.
Intensity	The affective depth of network ties	Primary network size
"Supportiveness"**	The degree to which the network is composed of members viewed by the parent as "making things easier for me."	No. of "difficult" members.

* These variables are used to measure changes in social support between baseline and follow-up; comparison is made of means created by subtracting Time 1 scores from Time 2 scores. See also Technical Note 6.1 in full report.

** For reasons of time, this construct was not used in this assessment of the Family Matters program. The data are available and will be included in analysis to be submitted for publication in the near future.

It is important to note that the network variables consist primarily of change measures, and differ in that way from any of the other data presented in this document.

A review of baseline findings (see full report) served to underscore the importance of socioeconomic factors for network relations. Therefore the basic models used to analyze network data included mother's education as a continuous variable, and contained the three factors now familiar to the reader (program, race, family structure) with regressions on education specified separately for each subclass.

Program-related Changes in Network Size

There are various size dimensions of personal networks that have potential significance for parents. Total size includes all of the people whom they list as "important in one way or another." Membership in the functional network is limited to those people from the total who are identified as engaging in specific exchanges with the parent (emotional support, childrearing advice, etc.). The primary network is a still smaller subset of the total: those members whom the parent distinguishes as "most important." (For more detail, see the full report.) In anticipation of the more differentiated findings reported below, it can be said that the most substantial impacts of the program on mothers' personal networks can be seen at this primary level. For one subgroup -- white, single mothers -- this effect expanded outward into the functional and even the total levels of the network.

Because changes in the personal networks brought about by the program are not obvious at the level of the overall network, these data are not presented in this summary. One discriptive note deserves mention, however. Those data involving the total network reveal that personal networks do not necessarily expand over time during this stage in the mother's life. Total network size declines slightly over time for three of the four control subgroups, and for one of the four subgroups receiving the program.

Change in Functional Membership

Mean changes in sizes of the functional networks over the three-year period of the program are shown in Table 7, distinguishing kinfolk from nonkin. The table indicates, for example, that the networks of Black, single mothers in the program increased by two nonkin members, while those of white, single program mothers decreased by about 1.5 relatives.

The first striking feature of this table is the number of negative signs appearing for the kin means. Closer inspection of the data for relatives reveals that the means for all four white subgroups have grown smaller with time, while this is true in none of the four Black groups. This is reflected in a statistically significant difference ($p < .05$) between the overall Black and white means (B = +0.5; W = -1.0), controlling for mothers' education. In general, then, it appears that Black mothers become somewhat more involved with kin over time during this phase of their lives, while white mothers reduce that involvement to some degree.

Table 7
Change in Size of Functional Network:
Kin/Nonkin Comparison

		Kin		Nonkin	
		Control	Program	Control	Program
Black	Single	.05	.83	.84	2.00
	Married	.70	.85	.70	.00
White	Single	-.62	-1.56	-.56	2.48
	Married	-.48	-1.13	1.31	-.04

From the programmatic standpoint, no kin-based comparisons with control subgroups show differences that approach statistical significance. In the case of nonrelatives, however, both Black and white single mothers showed an increase greater than that which occurred in the control group ($p = .08$ for each subgroup).

The Content of Exchanges

Six categories of network exchange content were examined for each respondent: childrearing advice, babysitting, borrowing, financial assistance, job-related exchange, and emotional support. From the standpoint of program impact, the interest is in change over time in the number of network members available to the mother for each content category. A summary of findings is presented below. (See Tables 6.6 and 6.7 in the full report for presentation of the data in greater detail.)

We begin with single mothers, where indications of a program effect have already been reported for number of nonkin at the total and functional network levels. White, single mothers included in the program reported more nonrelatives with whom they engaged in borrowing ($p = .07$) and emotional support ($p = .08$). In the case of those working outside the home, there was an increase in work-related support from nonkin in favor of the program that reached statistical significance ($p < .05$). The pattern for Black, single mothers was similar to that for their white counterparts, although not quite as consistent. Effects in favor of the program were seen for borrowing ($p_{nonkin} < .05$) and as a trend for emotional support ($p_{nonkin} = .14$). In the case of work-related support, however, it was the control-group mothers who reported a substantial increase from kin, while the program mothers reported no appreciable change ($p_{kin} = .01$).

There was some indication in Table 7 that participation in the Family Matters program might have been associated with limits to the increase in size of functional networks for married mothers, and especially white, married mothers. For these mothers, the same pattern appears with reports of borrowing activities: those in the control group report an increase in borrowing from relatives, while program mothers indicate no real change (p_{kin}

=.09).[10] A somewhat similar pattern can be seen for Black, married mothers with respect to advice, but involving primarily nonrelatives(p_{nonkin} =.05; p_{kin} =.17, both in favor of controls). We had also noted earlier a general tendency on the part of white mothers, irrespective of program, to reduce the number of kinfolk in the network over time, a pattern not reported by Black mothers. This same pattern is especially evident here for single mothers in relation to financial support, where Black single mothers show a mean increase of 1.3 relatives while their white counterparts report a decrease of 1.1. This difference proves highly significant as a race-by-family-structure interaction ($p < .001$). The relevance of this finding is enhanced by the fact that the U.S. economy was experiencing a sharp recession during the time period between our data collection points.

The Primary Network

The primary network is made up of those people from the total membership whom the mother identifies as "most important" to her (see Technical Note 6.1 in the full report). Many students of social support have confined theirinvestigations to these very intense ties and attest to their importance (Belle, 1982). Changes in numbers of primary kin and nonkin over time are shown as difference scores in Table 8.

Table 8
Change in Size of Primary Network:
Kin/Nonkin Comparison

		Kin		Nonkin	
		Control	Program	Control	Program
Black	Single	2.79	1.28	1.32	2.61
	Married	1.30	2.31	1.60	1.31
White	Single	.81	1.61	1.62	3.74
	Married	1.07	2.84	2.76	1.81

Most apparent when comparing these findings with overall changes at the functional level (Table 7) is the absence of negative values; there has been an increase in the size of the primary network between baseline and follow-up even for mothers in the control group. These data suggest that, in general, mothers expand their involvement with intimate relationships outside the immediate family as they proceed through this stage in the family life cycle.

This general growth in the primary network over time seems to have been further stimulated in some instances by involvement with the Family Matters program. The pattern here is a familiar one: program effects for single mothers expressed via unrelated friends. For single parents as a whole the effect appears as a program-by-family-structure interaction, and is highly

[10] It is interesting to note the parallel between this finding and that related to home-school communications, where the program seemed to reduce certain types of communication by white, married parents.

significant ($p_{nonkin} < .01$). It also appears for each subgroup (white $p_{nonkin} = .05$; Black $p_{nonkin} = .08$). More of a surprise, because it had not been apparent at other levels of the network, is a positive program effect seen with kinfolk for white, married mothers ($p_{kin} < .05$). The pattern of kin means for married Black mothers is similar to that for whites, although the comparison does not approach significance due in part to much smaller cell sizes.

These program effects seen at the primary level of the network are more pervasive than any identified in the functional or total networks. Further analysis of the data (full report) left little doubt that the changes in size of the primary network over time included the addition of some individuals who were nowhere to be found in the networks at baseline, and that for some types of mothers these additions were more plentiful with program participation than without. These analyses also indicate that in most instances the overall change between baseline and follow-up was greater than that accounted for by the addition of new members, leaving us to conclude that a certain amount of the growth over time was due also to changed perception of membership included at both time points. That is, participation in the program appears to have brought to parents a greater appreciation for the importance of certain people at follow-up (defined as primary) than was evident at baseline (when the same people were present only at functional or total level).

Discussion

The research question guiding the organization of this section was, "Has participation in the Family Matters program altered social supports?" Our analyses indicate that an affirmative response can be given with some confidence. But the findings are not that simple. Mothers in some circumstances were affected more than those in others, and those circumstances also influenced the aspects of network structure manifesting change.

Unmarried mothers - Our data indicate that single mothers were especially responsive in network terms to program involvement, and that this responsivity was more evident with unmarried Caucasian women than with their Afro-American counterparts. White, unmarried mothers in the program reported more nonrelatives in their networks, overall and at the functional and primary levels, than did their controls. A closer look at the content of exchanges revealed involvement with larger numbers of people around borrowing, work-related support, and emotional support -- always with nonkin. At the primary level, change mostly consisted of the addition of nonrelatives nowhere present in the network three years earlier (baseline). Overall, these women reported contact with somewhat fewer relatives at follow-up than had been the case at baseline.

Black, unmarried mothers who participated in the program also added a significant amount of new nonkin membership to that portion of the network they thought of as "most important" (primary). They were less likely, however, to report increases at the functional level, and the increase in new primary membership was almost as apt to involve relatives as nonrelatives. This reflected a more general tendency by Black than by white women to rely upon kinship ties.

Married mothers - With married women, program effects were much less pervasive than proved to be the case for single mothers, and what effects we did discern were confined to relations with kin. In the case of married, Afro-American women there was an increase at follow-up in the number of relatives reported in the primary network, many of whom were new members.

White married mothers involved with the program reported some decrease in overall network size in comparison with the appropriate controls, which was still more apparent at the functional level. This decrease was limited to nonrelatives. It was balanced at the primary level for mothers in the program by an increase in kinfolk. Closer examination shows that these kin were primarily people present in the network three years earlier but not defined as especially important at that time. So whereas for Black married mothers the increase in primary kin consisted of "first timers," in the case of white mothers it was made up largely of relatives already present before but now endowed with greater importance.

Parent-Child Activities

As we shift our attention to parent-child activities our interest in program outcomes moves from settings and contexts outside the home -- the school, the personal social network -- to social activities undertaken within the immediate family. The Child Caregiver Activities interview consisted of both open-ended questions, which were coded for content, and a variety of checklist questions added to the follow-up assessment. In this report we concentrate exclusively on the variables derived from checklist questions concerning the mother's report of joint activities with the child. These questions allowed for a 4-point response (never; once in awhile; a lot; almost every day) to questions such as "We do household chores together" and "We make up stories together." A complete list of the questions can be seen in the copy of the interview included in the full report. The 55 original questions were reduced to 13 summary variables, and then condensed to five even more aggregated summary variables for presentation here. Four of these joint activity summary variables were labeled talk, creativity, tasks, and companionship. The fifth consisted of a "total activities" score.

The Effects of the Program on Joint Activities

The approach used to analyze parent-child activities was based on our experience with baseline data, and on the work with school outcomes reported earlier in this chapter. The core model included program/control, race, marital status, and mother's education. While these comparisons did uncover some predictable differences -- more activities reported for all variables by mothers with more than by those with less schooling, for instance -- there are essentially no program effects in the results. An attempt to look at change in amounts of reported parent-child activity between baseline and followup also produced no coherent or interpretable patterns.

Several different explanations for this absence of program effects are possible. The most obvious is that the project staff was unable to convince parents of the importance of engaging in activities with their children, despite the emphasis placed on such activities during the entire tenure of the program. A second possibility is that checklists recording the frequency with which parents engage in activities with their children may not be well suited

to capture the kinds of impacts that program participation had on the behavior of the parents of six-year-olds. A third -- and related -- possibility involves the fact that the amount of time spent daily with their children by these parents had been sharply reduced by the fairly recent entry of the children into first grade. It may be that this large-scale change so dominated mothers' perceptions, and therefore their reports, that it masked any of the more subtle differences that might have been caused by an educational program like Family Matters.

Mothers' Perceptions of Themselves as Parents

The items used to construct the "perception of parenting" variable were taken from the Stresses and Supports interview administered to the mother. These items consist of responses to checklist questions on a 7-point scale. The mother was asked to rate her perception of her own performance in areas like "teaching my child the difference between right and wrong," "spending enough time with my child," and "teaching my child the skills and knowledge not taught in school." The complete set of questions is included in the full report.

The model used for analysis of perceptions was the same as that used for parent-child activities (programs, race, marital status, and maternal education). Models that look in greater detail at the two-parent white sample and that were productive in baseline analyses (e.g., examination of three levels of maternal work status) are not considered in this report.

The results of the program-control comparison of mothers' perception of parenting are shown in Table 9.

Table 9
Mothers' Perceptions of Self as Parent

		Control	Program	Difference
Black	Single	144.1	149.1	5.1 (.49)
	Married	160.3	148.4	-11.9 (.09)
White	Single	130.7	146.9	16.2 (.01)
	Married	141.9	142.8	0.8 (.77)

Table entries are means with probabilities in parentheses. Perceptions were more positive for white mothers in the program than for those in the control group, owing especially to unmarried mothers, and for all program-involved single mothers in comparison to their control group equivalents, with the exception of Blacks in the lower educational group. Married Black mothers in the program showed less positive self-perception than their control-group counterparts. It appears, then, that the program produced more positive perceptions in white single mothers (whose control group mean of 131 was the lowest of the eight subgroups) and less positive perceptions in Black married mothers (where the control group had the highest mean score, 160).

Summary

We have now completed presentation of the findings relating involvement with the empowerment program to each of the separate components of our ecological model -- what we are refering to as direct effects until there is evidence suggesting that one or more of them is mediated by change in another. The findings have been presented separately. What sort of a picture emerges when they are considered in relation to one another?

School performance is the outcome of particular interest to the National Institute of Education. Our findings indicate that involvement with the program is associated with better performance in school, especially for children with married parents whose mothers had no more than (and often less than) a high school education (the "less educated" mothers in our sample).

What about children in one-parent families, for whom the program showed no overall impact in these rather straightforward, single-outcome analyses? Must we conclude that involvement by their parents (usually mothers) in empowerment activities did not translate into school performance? Not necessarily. It is possible that some subset of those children did perform better in school because their parents participated in Family Matters, a subset for which changes more immediate to the mother's own personal experience led in turn to the child's improved performance. Several possible candidates more "immediate" to the mothers were considered in this chapter: their own personal networks, the activities they reported engaging in with their children, and their perceptions of their own performance as parents.

Of these possibilities, which seems most likely to be "mediating" the effect of program involvement on the child's school performance, based upon the findings reported in this chapter? The most likely possiblity would appear to be changes in the mothers' personal networks. The networks of unmarried mothers involved with the program expanded at both the functional and primary levels. These changes took place in relations with nonkin; the program could not be linked with increase in contact with relatives, and may even have contributed to a reduction in contact with kinfolk by single, white mothers.

Another possibility involves the mother's perception of her own performance as a parent. The perceptions of white, single mothers enrolled in the program were much more positive than those in the control group, and perhaps this more positive set of feelings revealed itself in relations with the child or the school, which resulted in improved school performance.

Parent-child activities would not appear from our findings to represent a strong candidate for mediating the effects of the program on the child's school performance. This may not be because the activities themselves are unimportant: we have discussed the possibility that for one reason or another the data collected may have been inadequate for the desired task.

Contacts between parents and teachers proved very interesting because analysis of them revealed the power of the deficit orientation to control the initiatives of both teachers and parents. Contact beyond a minimal amount was contingent upon definition of the child as "in school difficulty," which meant that to a certain extent contact increased as school performance declined. It

was heartening to see, however, that when children were having difficulty, parents involved with the empowerment program engaged in more contact with the schools than did parents without access to the program.

We now proceed to analyses that explore the possibility of the kinds of "intervening," or "indirect," or "mediating" effects considered in this summary. Findings generated by those analyses are presented and discussed in Chapter 3.

CHAPTER 3

BEYOND DIRECT EFFECTS: EMPOWERMENT, SOCIAL SUPPORT, AND THE LINKS BETWEEN ECOLOGICAL FIELDS

Moncrieff Cochran and Charles R. Henderson, Jr.

This chapter is devoted to an exploration of processes through which the empowerment program might have affected outcomes of interest to the investigators and the National Institute of Education. These outcomes included both school performance and domains more ecologically accessible to parents: their perceptions of themselves in the parenting role, activities with their children, and their own personal social networks. As the description of the empowerment program in Chapter 1 indicates, each of these ecological fields was given explicit attention in program development. Program impacts directly related to each of these fields were presented and discussed in Chapter 2. In this third chapter the interest is in how involvement with the program might have affected relations among the ecological fields just mentioned -- the link between social networks and school outcomes, for instance, or between social networks and perceptions of self as parent. In looking at these more complex differences between program and control samples, we believe that light is being shed on indirect effects, by which are meant effects of the program on ecological fields relatively distant from the parent, mediated by other domains. For instance, the child's performance in school can be thought of as a parental concern that is beyond the immediate control of the parent but that may be affected by circumstances in more accessible domains, like perceptions of self, parent-child activities, or social supports. Relationships between pairs of these domains are examined in this chapter as a function of exposure to the empowerment program, controlling as before for preexisting differences in socioeconomic status. Where differences by program assignment are found in these links between domains, we speculate about process, the possibility that change in one domain is dependent upon change in the other, while remaining mindful of the fact (expressed earlier) that some influence other than program involvement may better explain the relationships. Put another way, this chapter "addresses the question of how program effects are achieved; whether they operate directly on the family or the child, or indirectly by altering external sources of stress and support, the family's social network, the nature of the parent-child activities, or connections between home and school" (NIE Proposal, Cochran 1980).

Movement away from the earlier interest in direct effects is reflected in a change of statistical method. Instead of concentrating on comparisons of means in analyses of covariance, with program assignment as the independent variable and one or another ecological outcome on the dependent side, we now shift our interest to the homogeneity by program assignment of the regressions of one ecological domain upon another. For instance, is the relationship between a change in networks over time and school performance different for families involved with the program than it is for those in the control group? The methodology for testing these differences between regressions is given in Chapter 2 of the full report. The results are shown here for appropriate subsamples as control-program comparisons of regression coefficients representing relationships between pairs of ecological domains.

The organization of Chapter 3 reflects its preoccupation with these relationships between pairs of ecological fields. Beginning with perceptions of self as parent and parent-child activities, we progress through a series of paired combinations, gradually building, for each of the four family types (Black unmarried parent, Black married parent, white unmarried parent, white married parent), a composite of the relationships among the various domains included in our conceptual model (Figure 1, Chapter 1), all as a function of assignment to the program or the control group. A brief review of the variables being compared in this chapter is provided below, followed by findings and discussion for each set of relationships. A synthesis of the various findings generated by the data viewed as a whole is provided at the end of the chapter.

Variable Descriptions

The variables considered in this chapter consist of a subset of those described in Chapter 2, selected because they provided the most insight into the program-control comparisons considered there. In the case of mothers' perceptions of themselves as parents the variable consisted of the mother's rating of her performance on a 25-item checklist, with each item consisting of a seven-point scale (see Chapter 2, page 52). The four mother-child activity variables -- talk, creativity, tasks, and companionship -- were derived from a set of 55 check-list questions completed by the mother, each of which was presented as a four-point scale (see Chapter 2, page 51). The social network variables carried forward from previous analyses were concentrated in the primary network. They included change in number of primary ties between baseline and followup (both kin and nonkin) and number of kin and nonkin found in the primary network at followup who were nowhere present in the network at baseline ("new primary membership"). The home-school contact variables are the same as those presented in Chapter 2 (page 40) conferences, notes and telephone calls as initiated by parents and teachers. Finally, the school outcome variables were drawn from the Teacher Survey and included the following domains: personal adjustment, interpersonal relations, relationship to teacher, cognitive motivation and report card score average for core subjects (see page 32 for more details).

The Influence of Perception of Self as Parent on Parent-Child Activities

Table 10 shows the regressions and probabilities associated with each of the four mother-child activity variables, by subgroup and for the program and control groups as a whole. It also provides the tests of equality of regressions by program for Blacks, whites, and averaged across the two races.

There is a strong and consistent finding of positive regressions for white mothers in the program (both single and married), for all types of mother-child activities. From the table it is clear that for those mothers in the control group there is no relation between perceptions and activities, but for those in the program, more positive perception is strongly associated with more joint activities. It appears that for those mothers with higher self-perceptions, involvement with the program translated this orientation, in part, into involvement in activities with the child.

Table 10
Relationships between Perception of Parenting and Mother-Child Activities

		Control	Program	Diff
Talk	Black	.059 (.64)	-.048 (.51)	-.107 (.46)
	White	.019 (.69)	.148 (.00)	.129 (.05)
	Total	.039 (.56)	.050 (.24)	.011 (.88)
Creativity	Black	.067 (.29)	.037 (.32)	-.030 (.68)
	White	.023 (.34)	.084 (.00)	.061 (.07)
	Total	.045 (.18)	.060 (.01)	.015 (.70)
Tasks	Black	.137 (.19)	.035 (.56)	-.102 (.40)
	White	.054 (.17)	.157 (.00)	.103 (.06)
	Total	.096 (.09)	.096 (.01)	.000 (1.00)
Companion-ship	Black	.180 (.13)	-.069 (.32)	-.248 (.07)
	White	.049 (.27)	.194 (.00)	.145 (.02)
	Total	.114 (.07)	.063 (.12)	-.051 (.49)

Table entries are estimated regression coefficients with probabilities in parentheses.

The reader may remember from results reported in Chapter 2 that no direct relationship was found between program involvment and mother-child activities. How then might the program influence the relation between mother-child activities and maternal perceptions of self as parent? The possibility exists because while there may be the same mean amounts of mother-child activity in the control and program groups, greater variation in the amounts of activity reported by program mothers makes possible the relationship with an influence like maternal perception of self. From a psychological perspective it can be argued that one effect of the Family Matters program was to give salience to parent-child activity. Given increased awareness of such activity, mothers in the program may have become more likely to express their perceptions of themselves through this relationship, reducing involvement when perceptions were relatively negative and increasing activity when perceptions were positive. Viewed in this way, one effect of the program was to cause mothers to express their perceptions of themselves as parents, negative as well as positive, in terms of the amount of activity they engaged in with their children.

The Influence of Perceptions on the Child's School Performance

The causal effect of perceptions on activities can be assumed to be fairly immediate, in that the parent can initiate many if not most of the activities as a direct result of how she is feeling. The relation between perceptions and the child's performance in school should be more tenuous, since some aspect of perceptions must first have an effect on the child (perhaps through activities), and then through the child, alter school outcomes -- a more indirect process. Whether for this or for some other reason, the results in this subsection are more spotty than are those elsewhere in this chapter. The one consistent result across a variety of cognitive and interpersonal school outcomes shows positive regressions for single-parent families in the control group, especially whites, and flat (or less positive) regressions for program families. The difference between these regressions is frequently significant. Since the program cannot cause the positive regression in the control group, the difference may be the result of sampling artifact or, alternatively, perhaps the positive relation is the normal state for this group, and the program caused a change to nonsignificance.

Mother-Child Activities and Performance in School

The attempt to use parent-child activities as a vehicle for improving the child's school performance was one of the primary purposes of the program. In Chapter 2, we presented some positive relationships between program involvement and school outcomes. Here the question of whether any of these program differences might be associated with variation in reported involvement with joint activities is examined. The total sample was included in the analysis using the standard program-by-race-by-family-structure model. Mother's education also turns out to be of considerable importance in the analysis, but only for the married white sample are there enough families to permit a split by educational level. (See full report for more details.)

The primary result is positive regressions for all four types of mother-child activities across a broad range of school outcomes, for two-parent white program families in which the mother has more than 12 years of education. There is evidence suggesting that similar results would have occurred more broadly if the other race-by-marital status subgroups had contained enough parents to permit comparison by educational level.

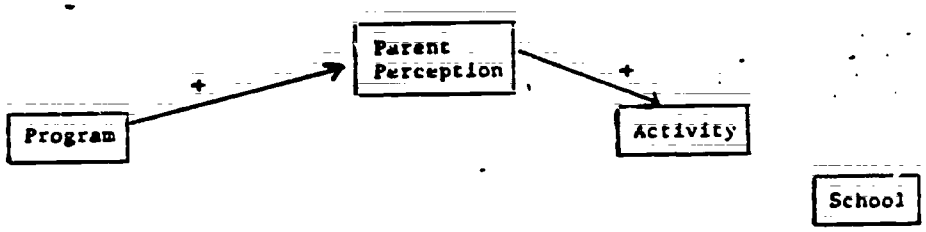
Task-oriented activities showed overall program differences in regressions for the noncognitive school outcomes, with positive slopes for program and flat or negative for controls; these individual regressions were not highly significant, but the differences between them were strong, especially for Black mothers. Companionship activities also showed overall positive regressions for program families, and a negative trend for controls, but with greater emphais on congnitive outcomes than was the case for task activities. The largest differences, in addition to married white mothers with education beyond high school, were for single mothers as a whole. Talk and creativity activities showed few significant regressions for groups other than married white mothers in the program.

We have now examined the relationships of perceptions of parenting with mother-child activities, parenting perceptions with child performance in school, and mother-child activities with school performance. These findings are combined with those from Chapter 2 involving direct links to produce the composites shown in Figure 4.

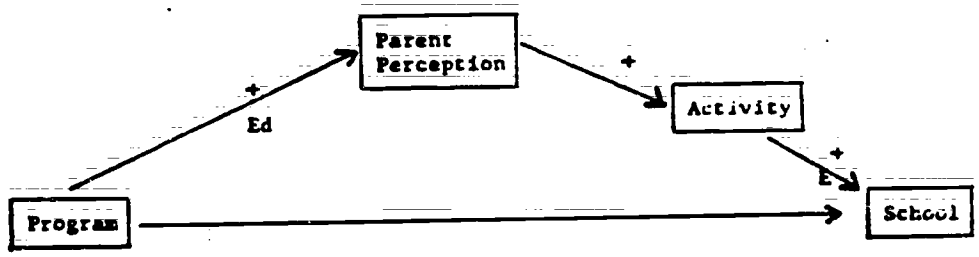
FIGURE 4

PERCEPTIONS OF SELF AS PARENT, PARENT-CHILD ACTIVITIES, AND SCHOOL OUTCOMES

White, One-Parent Families.



White, Two-Parent Families.



Several broader generalizations can be shown from the figure. Most obvious is the fact that these connections are largely limited to the Caucasian families. This is partly because of cell sizes: the larger number of white two-parent families made it easier to show effects for this subgroup. In the case of the unmarried white mothers it may also have been because of the disparity in "perception of parenting" scores between the program and control subgroups. This disparity may have provided room for the consequent difference in regressions with activities not available to the Black subgroups.

Another finding evident through the composite is a potential "pathway" for explaining the effect of the program on the child's performance in school. This hypothesized "process" involves the mother's view of her own parenting performance and her activites in concert with the child. It appears to operate only for married mothers and their children.

Social Networks and Perceptions of Self as Parent

Our perception of parenting measure is a summary variable combining the scores of 25 items specific to various parenting behaviors (see Chapter 2). The personal-network variables are those described earlier in this chapter, which are located at the primary level of the network, distinguish kin from nonkin, and measure both overall change during the three years of the program and the addition of primary network members new to the entire network since baseline data collection.

Table 11 provides the reader with an overall picture of the relationships between change in primary networks and perceptions of oneself as a parent, as a function of program assignment and controlling for mother's educational level. The kin and nonkin categories are shown in the left-most column of the table. Reading across each table from left to right, the first set of data consists of the estimated regression coefficients, subgroups of the parenting variable on the network variable, controlling for mother's educational level. For instance, in Table 11 the regression of white unmarried mothers' perception of parenting scores on the increase in number of kin in their primary networks was -3.23 for the control group and 1.22 for the program group. The probability associated with each individual regression is shown in parentheses. The final two columns in the table give the F statistic and its associated probability for the tests of the equality of the program-control regressions.

Table 11

Perception of Self as Parent and Change in Primary Network

	Regression Coefficients (Prob.)		Test of Equality of Regressions	
Kin	Control	Program	F	Prob.
Black Single	0.60 (.57)	1.00 (.64)	0.03	.87
Black Married	-0.71 (.69)	-1.37 (.36)	0.08	.78
White Single	-3.23 (.12)	1.22 (.19)	3.95	.05
White Married	0.26 (.67)	0.63 (.06)	0.30	.58
Nonkin				
Black Single	-0.46 (.85)	-0.50 (.59)	0.00	.99
Black Married	-1.22 (.61)	-1.09 (.67)	0.00	.97
White Single	0.65 (.59)	0.16 (.74)	0.15	.70
White Married	0.62 (.36)	0.26 (.69)	0.14	.71

It is immediately obvious from the table that while no overall effect of network change on self as parent was stimulated by involvement with the Family Matters program, such a link does seem to emerge for white, unmarried parents. This relationship was also found for change in primary nonkin, but only with those who were new to the network at follow-up. (Table 7.3b, full report).

In each instance, a strong negative regression coefficient for the control subsample (larger network associated with lower self perception), is replaced in the program group by a moderately positive one. It appears, then, that closer relations with certain relatives and nonkin accomplished with no loss in parental self-perception by those unmarried, white mothers involved with the program, while for those in the control group such social change is accompanied by a lowered parental perception of self.

Social Networks and Mother-Child Activities

Three of the the joint activities categories discussed in Chapter 2 and again at the beginning of this chapter -- companionship, talk, and the combined total frequency of joint activities -- are included here for consideration of ways in which they might be related to the social ties maintained by the mothers in the sample. The pattern of findings reported below was consistent across all three of these summary variables. For ease of presentation, therefore, we include only the first of the variables, companionship activities.

The set of four social network variables used here is the same as that used in the previous section. It consists of change (increase) in primary kin and nonkin, and the addition of "new" kin and nonkin to the primary network.

Findings relating primary network changes to joint mother-child activities as a function of program assignment are presented in Table 12. The primary network variables are listed down the left margin, and are further subdivided by race and marital status. The types of data are organized as in Table 11. The data in Table 12 pertain specifically to the outcome variable called companionship activities, but they show patterns that accurately reflect those in the broader set of activity variables.

The primary finding contained in Table 12 is that involvement with the Family Matters program seems to have produced a link between increases in primary network membership and parent-child activities for Black families and not for their white counterparts. This finding is strongest for Black married mothers, where it extends to both kin and nonkin. It can also be seen with new primary membership (See Table 7.2 in full report). Looking more closely at the regression coefficients reveals that for the Black married subgroup the comparison is quite consistently between a control sample regression with a very negative slope and a program sample regression only modestly positive. The impression given by these data is that involvement with the program prevents a ^gative relationship between increases in the primary network and parent-child activities, rather than producing a positive one.

Why is it that increases in primary network membership should be related to parent-child activities for Black but not for white families? In Chapter 2 we documented the fact that Black mothers were more involved in general with their kin than were white mothers. This was especially true for unmarried Black women, but carried over to the married case as well. Now data are introduced that link these kin with parent-child activities, generating an increase for the children of unmarried Black mothers and preventing a decrease in the case of married women. What are the processes at work involving these

Table 12
Change in Primary Network and Mother-Child Companionship Activities

	Regression Coefficients (Prob.)		Test of Equality of Regressions	
	Control	Program	F	Prob.
Kin				
Black Single	-0.30 (.41)	1.60 (.03)	5.34	.02
Black Married	-1.17 (.06)	0.58 (.26)	4.84	.03
White Single	0.96 (.17)	0.56 (.07)	0.28	.60
White Married	-0.24 (.25)	-0.06 (.59)	0.57	.45
Nonkin				
Black Single	0.43 (.62)	0.01 (.98)	0.21	.65
Black Married	-1.05 (.20)	0.82 (.35)	2.41	.12
White Single	-0.10 (.81)	0.11 (.49)	0.22	.64
White Married	-0.19 (.43)	-0.14 (.53)	0.02	.89

close kin that might lead to more mother-child activities? Perhaps kinship in Black families translates more easily into the myriad of assisting acts that provide the parent with more time and energy for the child. Or possibly the special interest of these relatives in the child in turn spurs the parent on to greater involvement.

Personal Social Networks and School Outcomes

The school outcomes and social network variables disussed here are those described at the beginning of the chapter. The model is as described earlier.

Several findings of "no difference" can serve to simplify our consideration of these data considerably. There were no significant patterns of program-control difference for married mothers in the relationships between changes in number of primary kin or nonkin and school outcomes; the link between changes in the primary network and school outcomes emerged only for single mothers. The second lack of difference between groups can be seen in the comparison of school and program of unmarried mothers. The relationships between changes in numbers of relatives and school outcomes do not differ significantly for these groups. Therefore, this presentation can be confined to unmarried mothers' reports of changes in the number of nonrelatives included at the primary level of the network. Table 13 provides data related to change in primary nonkin.

Looking at the findings, it is the positive association between increase in primary nonkin network membership and more positive school outcome scores that distinguishes program from control families. This finding is limited largely to Black families. For control families in that subgroup the relationship is reversed: larger increases in nonkin primary membership are associated with lower school-outcome scores. It is interesting to observe that the control-program differences are most pronounced for teachers' reports of personal adjustment and social relations. Differences along the more cognitively oriented dimensions are of lesser magnitude.

Table 13
Relationships between Increases in Primary Nonkin and School Outcomes (one-Parent Families)

		Regression Coefficients (Prob.)		Test of Equality of Regressions	
		Control	Program	F	Prob.
Personal Adjustment:	Black	-2.16 (.25)	1.24 (.10)	2.84	.09
	White	-1.27 (.11)	-0.12 (.64)	1.88	.17
Interpersonal Relations:	Black	-2.44 (.08)	1.29 (.02)	6.25	.01
	White	-0.79 (.18)	-0.13 (.49)	1.13	.29
Relations with Teacher:	Black	-4.33 (.02)	1.37 (.06)	8.37	.00
	White	-0.99 (.20)	-0.01 (.96)	1.42	.23
Cognitive Motivation:	Black	-1.91 (.17)	0.86 (.12)	3.51	.06
	White	-0.93 (.11)	-0.14 (.48)	1.64	.20
Avg. Report Card:	Black	-1.06 (.47)	0.57 (.32)	1.08	.30
	White	-0.07 (.91)	0.19 (.34)	0.17	.68

We also examined a more restricted portion of the Time 2 primary network: those members who had been nowhere present in the network at baseline. As in Table 13 above, the most dramatic differences between control and program subgroups were for personal and social school outcomes by children from Black, one-parent families. There was also a significant difference between the white, one-parent program and control subgroups in the relationship between "new" primary nonkin and the noncognitive school outcomes, but the difference was between no relationship (program) and one in which increases in the network were associated with decreased child performance (control).

One interesting aspect of all the data linking network change to school outcomes is that the contrast for Black families is between negative regressions in the control-group and positive ones in the program group, while for whites negative control group regressions simply become considerably less negative (not positive) in the program instance (see Table 13). It is as if involvement in the program turned negative into positive potential for Black families headed by an unmarried woman, while for whites program involvement served a more preventive function, reducing the probability of negative

contributions by nonrelatives. Or perhaps these women actively engaged in reducing relationships deemed as of negative value for the child, and so increased their own positive power and that of others in the network. Better understanding of how these key nonrelatives might have operated to affect teachers' perceptions of the children in these families awaits a more detailed, qualitative examination of their personal and exchange characteristics.

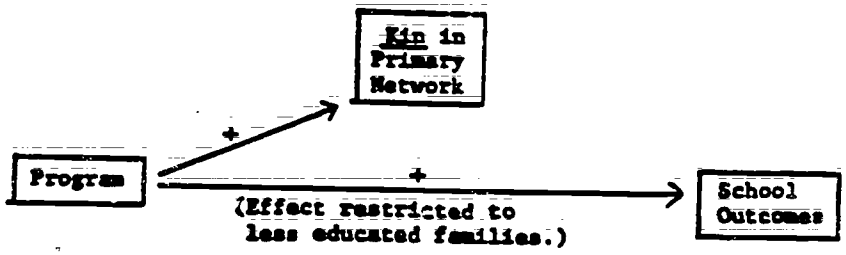
Discussion

The evidence provided by these data is clear cut: the relationship between increases in nonkin at the primary network level and school outcomes is positive or neutral for program families headed by an unmarried parent, and negative for their control counterparts. Combining these findings with those involving the primary network presented in Chapter 2 produces the schematic picture shown in Figure 5. The composites suggest that program involvement had a direct and positive effect upon school outcomes for children in families containing two parents, and that this effect was indirect for children in families headed by a single mother, mediated by or contingent upon increases in the number of nonrelatives included at the primary network level. This "indirect route" was the one posited at the end of Chapter 2, based on the

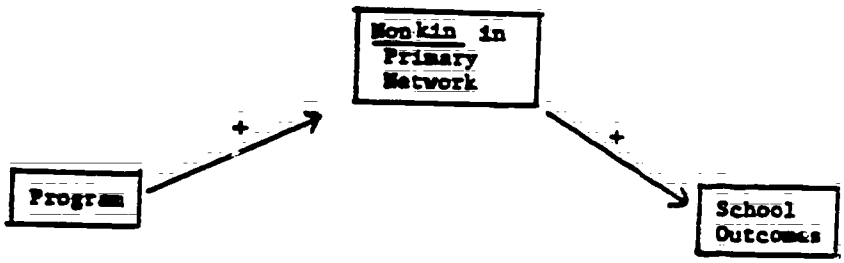
FIGURE 5

NETWORKS AND SCHOOL OUTCOMES

A. Families Containing a Married Couple.



B. Families Headed by Unmarried Mother.



(The program also increased the Primary Network Kin in the Black, single-parent families.)

strength of the link between program and increase in nonkin reported there for unmarried mothers.

Several further qualifications are needed to complete the story. For families headed by an unmarried parent the effects were stronger with Black than with white children. And the pertinent school outcomes varied for children with married and unmarried parents -- primarily report card scores for the former and mostly learning readiness (personal adjustment, relationship with teacher) for the latter.

What is it about the married-couple situation that translates program involvement directly into school performance, and could it involve functions that might be performed in single-parent families by key nonkin? The parental commodities most useful to first graders, beyond interest and commitment, are probably time and energy. In general, a couple can provide more time and energy in organizing and monitoring the child's first-grade experience than can the single parent, who alone must simultaneously provide for the material needs of the family. It is possible that a few key friends could substitute somewhat for a spouse in this regard. The data presented here suggest just such a hypothesis.

The link between primary nonkin and school outcomes is stronger for Black than for white families headed by an unmarried mother. What might explain this difference? Subgroup sample sizes are large enough to make unlikely an artifactual result. We are inclined toward a line of thinking that carries over from Chapter 2. Findings reported in the previous chapter indicated that Black unmarried parents had retained closer ties with their kinfolk than had their white counterparts. This more cohesive maintenance of the extended family may carry over to unrelated friends, with these friends being thought of, and thinking of themselves, as more "like kin" in the Afro-American than in the Caucasian context.

Face to face "reinforcement of schooling" time may also contribute to the children of married couples being linked more to cognitive outcomes while those of unmarried mothers perform better on personal adjustment, interpersonal relations, and relationship to the teacher. The stresses relieved by network support may translate into a more secure and consistent mother-child relationship, and therefore a more confident and socially competent child (Crockenberg, 1981; Homel and Burns, 1981), without involving much initial increase in actual involvement with the cognitive tasks of first grade. Thus perhaps we are seeing early evidence of what House (1980) calls the "convoy of social support," which may prepare the child developmentally for school learning without providing the learning itself. If true, this suggests that cognitive advantage may accrue to such children only as the school has <u>time</u> to take advantage of the opportunity provided by the supportive convoy. This issue is pursued further in Chapter 4.

The results presented above need to be understood in the context of what has already been learned about the <u>direct</u> effects of program involvement on perception of parenting (Chapter 2). Those findings are shown in Figure 6 as lines connecting the program with self as parent. Also shown in the figure are any previously reported relationships apparently operating directly between program and primary networks.

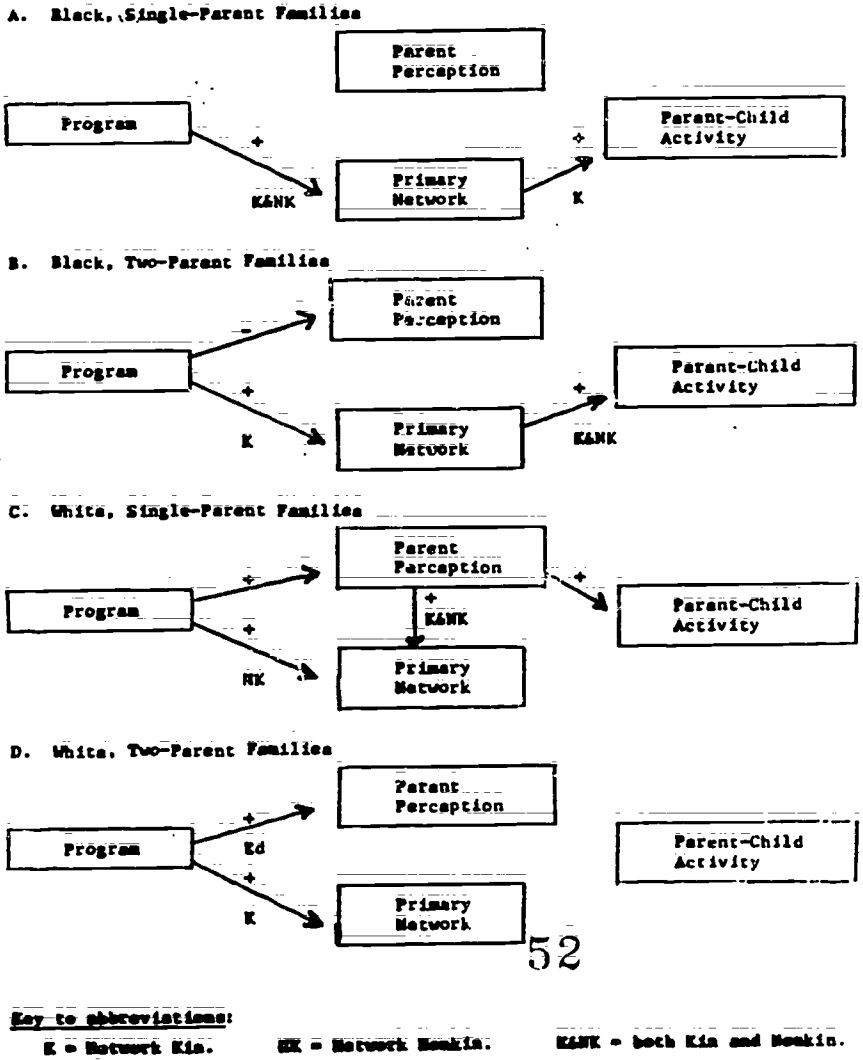
Results presented in Chapter 2 indicated that program involvement was strongly associated with higher perceptions of parenting only for unmarried white mothers, (control mean = 131; program mean = 148). There was also a positive relationship between program assignment and increase in the nonkin portion of the network for this subgroup. Because of the direct, positive links between program involvement and these two domains, one would expect the domains themselves to be positively related through nonkin. While this appears to be the case, our findings are no more than trends and cannot be considered at all conclusive.

The presence of a positive link between number of primary kinfolk and self perception for unmarried, white mothers in the program is interesting because of the absence of its analogue in a direct connection between program assignment and networks (see Figure 6). We remarked in Chapter 2 upon indications that unmarried whites differed from their Black counterparts in the greater distance between themselves and their relatives. Assuming that this distance is caused by some ambivalence toward these mothers by their own

FIGURE 6

PERCEPTIONS OF PARENTING

NETWORKS, AND PARENT-CHILD ACTIVITIES



Key to abbreviations:

K = Network Kin. NK = Network Nonkin. K&NK = both Kin and Nonkin.

family members, it becomes reasonable to suggest that considerable gains in self-confidence would be needed before the young mother might attempt to reconcile the disagreements in favor of a closer relationship. This positive change in self-regard is evident in the data, and so it becomes plausible to suggest as a hypothesis that these more positive feelings about self as parent led to closer relations with relatives, rather than the reverse.

The other interesting set of links seen in Figure 6 involves Black families, regardless of marital status, and connects key network additions with higher levels of parent-child activity. Not surprisingly, given earlier findings, kinfolk appear to play a central role in this pathway.

Parental Self-perceptions and Home-School Communications

We know, from our own experience with Syracuse parents and from the writings of others (Lightfoot, 1978), that some parents are easily intimidated by schools and school personnel. Such feelings of insecurity and lack of confidence might be counteracted by participation in a program that promoted confidence in self as parent. We examined such a possibility by comparing the program group regressions of home-school contacts on self as parent with those of the control group, again controlling for mothers' levels of education. The home-school contact variables are the same as those presented in Chapter 2: conferences, notes, and telephone calls as initiated by parents and teachers. The analyses were conducted with the subsample that had also proved most illuminating in Chapter 2 -- those 80 families whose children were considered by teachers and parents to be in academic difficulty.

Data pertaining to the possible link between parental perceptions of self and home-school contacts are shown in Table 14.

Table 14

Mother's Perception of Self as Parent and Home-School Communications*

	Black					White				
	Single		Married			Single		Married		
	Program	Control	Program	Control		Program	Control	Program	Control	
Conferences										
At Parent Request (P)										
At Parent Request (T)	.025 (.07)	.000 (.98)	.16							
At Teacher Request (P)										
At Teacher Request (T)										
Telephone Calls										
Parent Called (P)	.07 (.01)	.01 (.69)	.10	-.14 (.06)	.20 (.06)	.01	.07 (.02)	-.06 (.23)	.02	
Teacher Received Call (T)				-.15 (.00)	.25 (.46)	.02	.03 (.14)	-.05 (.05)	.01	
Parent Received Call (P)										
Teacher Called (T)				-.09 (.27)	.13 (.29)	.13	.04 (.22)	-.06 (.10)	.04	
Notes										
Parent Sent Note (P)				-.11 (.19)	.20 (.10)	.06				
Teacher Received Note (T)				-.14 (.06)	.07 (.50)	.11	.03 (.35)	-.06 (.09)	.06	-.01 (.50) .05 (.18) .14
Parent Received Note (P)							.02 (.53)	-.08 (.05)	.06	
Teacher Sent Note (T)				-.08 (.33)	.11 (.36)	.19	.09 (.14)	-.08 (.05)	.13	

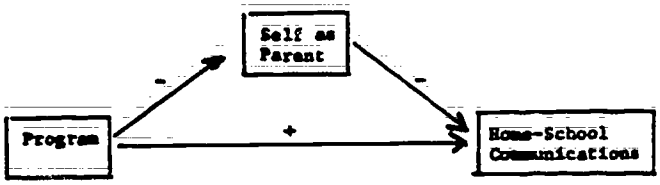
*Data presented for those comparisons in which the test for homogeneity of regressions (program vs. control) showed a probability ≤ .20. Table entries are estimated regression coefficients with probabilities in parentheses.

Two major findings are evident in Table 14, and they are related to the two sample subgroups also identified in Chapter 2 as most involved with home-school communications. Higher perceptions of self as parent were associated with more home-school communications (notes and calls) for unmarried white mothers in the program, while the reverse was true for their counterparts in the control group. This relationship was reversed for married Black mothers. Decreasing perceptions of self as parent were associated with increasing amounts of telephone and written contact with the school for program families while the control subsample showed the opposite pattern.

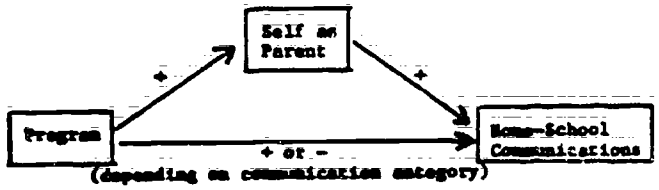
These two findings can be combined with the data summarized earlier in this chapter to produce the composites shown in Figure 7. The reader can see that the tendency for program involvement to be associated for Black married mothers with somewhat lower perceptions of themselves as parents carries over to school contacts, where the lowered perceptions are accompanied by increased contact. These findings are congruent with the direct positive effect of the program on the school contacts of this subgroup, also shown in Figure 7, which was reported in Chapter 2. The fact that somewhat lowered perceptions of self as parent are associated with action directed at the school on behalf of the child reinforces the tentative assertion made in Chapter 2, that when one's self-perception is already quite positive a reappraisal and some readjustment can have positive consequences for the child.

FIGURE 7
SELF PERCEPTIONS AND HOME-SCHOOL COMMUNICATIONS

Married Black Mothers.



Unmarried White Mothers.



The picture emerging for the white, unmarried mother is also consistent. Program involvement was directly and strongly associated with more positive perception of self as parent, as contrasted with a control subsample that had a mean perception score well below that of any other subgroup in the study

(program or control).[11] Associated with the more positive self-perception was more contact with the school. These home-school communication effects, which we can now hypothesize as indirectly associated with program involvement, showed up less consistently as directly associated with participation in the program. The earlier examination of home-school contacts as a simple function of program assignment found higher levels of telephone communication by program mothers combined with lower levels of participation in parent-teacher conferences.

Summary and Discussion

The examination of possible links between the components in our ecological model is now complete. While the analytic procedures employed do not permit definitive statements about the relative influence of the components involved in the empowerment process, it is appropriate to examine the various identified relationships in a single diagram for each of the subgroups of families and give some consideration to the meaning of emergent patterns. Composites drawn from the findings reported in this chapter and in Chapter 2 are shown in Figure 8.

The pictures provided for the single-parent subgroups suggest as a hypothesis that the impacts of the empowerment program upon children's school performance are heavily mediated by changes occuring within and around their parents. In the case of the Black one-parent family, increases in the number of relatives included in the mother's primary network were associated with reports of more joint activity with the child. Joint activity involving household chores was linked in turn with higher performance in school. And expansion of nonkin membership in the primary networks of those mothers was linked with their children's school outcomes, especially when those outcomes involved school readiness (personal adjustment, interpersonal relations, relations with the teacher). White single mothers' perceptions of themselves as parents appeared to be a key determinant in whether positive performance was seen in the more distant reaches of their ecological fields. Higher parental perceptions are associated, for these mothers, with expansion of their primary networks, the activities they reported engaging in with the child, their level of communication with the child's teacher, and the teacher's report of the child's progress in first grade. There is evidence that the nonkin sector of the primary network may also play a positive role in its own right, with increase in nonkin linked to better school outcomes, again primarily in the area of school readiness. Certainly these patterns are consistent enough to permit the generation of specific hypotheses about the processes through which a parental empowerment program operates to sustain, and to some extent enhance, the performance of six-year-olds in school. Those hypotheses are included in Chapter 4.

The pictures in Figure 8 are more ambiguous for married mothers and their children. A somewhat lower self-perception as parent by Black married mothers in the program seemed to be tied to greater communication with the teacher in

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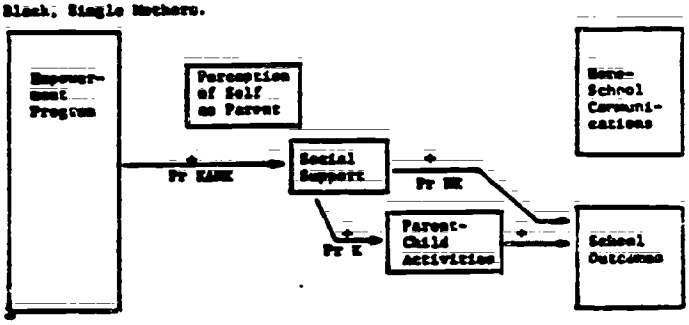
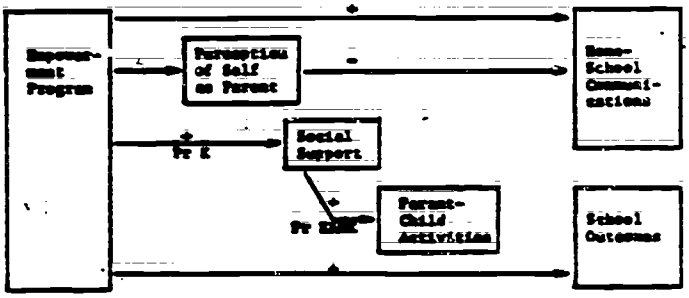
[11] The perceptions of the control and program families in this subgroup did not differ at baseline.

FIGURE 8
PROGRAM IMPACTS: LINKS BETWEEN MODEL COMPONENTS

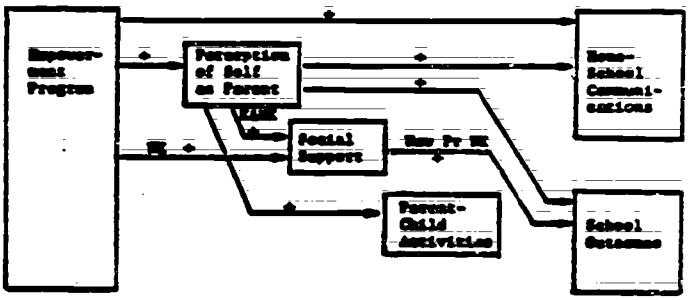
Black, Single Mothers.



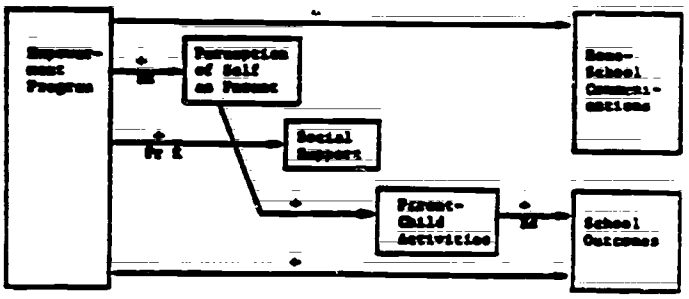
Black, Married Mothers.



White, Single Mothers.



White, Two-Parent Mothers.



Key to abbreviations:

Pr E - Primary caregiver Education
Pr HE - Primary caregiver Health
Pr EAHE - Primary caregiver Education and Health
HE - Household Health
EAHE - Education and Health
Pr E - Primary caregiver Education
Home Pr HE - Home Primary caregiver Employment
Ed - Effect was observed only for mothers with education beyond high school.

those instances where the child is perceived as having difficulty in school. There was also a direct positive link between program involvement and increased home-school communication. For these same mothers, increased involvement with kinfolk was related to greater amounts of mother-child activity. However, none of these hypothetical chains led to better performance of the child in school. School performance was tied directly to program involvement, without any intermediate links to other ecological fields.

One set of possible mediating links does emerge for white married mothers, if those mothers have schooling beyond high school. The proposed sequence involves increased perception of self as parent, more mother-child activities, and better performance by the child in school. Again, the reader is reminded that in Chapter 2 we reported a direct link between program involvement and school performance for the children in this subgroup. Thus, there are alternative paths to school-related outcomes shown for both married subgroups, one directly to the school and the other via self-perceptions, social supports, or both mechanisms. These alternative routes can be tested in models specifying simultaneous equations, which will be a next step in our analysis of these data. Another step in probing for mediating factors in the worlds of these two-parent families will be to examine the involvement of the fathers to see whether some aspect of that involvement helps to determine how the children perform in school.

Another other aspect of the results reported in this chapter deserves mention both as a link to some of the results reported earlier in the report and a prelude to discussion in the final chapter. Repeatedly, as we compared the slopes of the regressions of one ecological subsystem on another for the program and control groups, we found a moderately positive regression line for program families being contrasted with a rather more sharply negative slope for control families. Put in terms of program impact, these contrasts strongly suggest that this empowerment program has prevented more than it has enhanced; the somewhat positive relationships seen for program families become much more significant when compared with the negative relationships visible in the data collected from the control families. These findings have real implications for how family support programs are conceptualized and the expectations associated with them. These and other integrative themes are discussed in Chapter 4.

CHAPTER 4

BETWEEN CAUSE AND EFFECT: THE RANGE AND COMPLEXITY OF PROGRAM IMPACTS

Moncrieff Cochran

When the Family Matters program was first formulated in 1976, it had several interlocking goals. One was to develop and implement a program of family supports for parents and their young children based upon the assumption of strengths rather than deficits, which would give positive recognition to the parenting role; exchange information with parents about children, neighborhood, and community; reinforce and encourage parent-child activities; encourage mobilization of informal social supports; and facilitate concerted action by program participants on behalf of their children. Another had a more general aim: to understand better what constitutes "resources" to adults responsible for raising their own children. Finally, we were interested in the program as a way of nudging the social and psychological adaptations made by parents to their particular life circumstances, in the hope that responses to such a stimulus might cast in sharper relief the key features of family ecologies and contribute to our scientific understanding of family life.

The evaluation of the Family Matters program presented in this final report to the National Institute of Education has focused more on the scientific than the program development and implementation goals established by its originators.[12] It has been guided by three main questions, which provided the framework for the NIE contract renewal proposal (Cochran, 1980). First, has the parental empowerment program influenced the natural ecologies of families so as to affect the behavior of children? Second, where effects can be detected, what are the causal links between program inputs and child outcomes? Finally, how do identified effects and processes vary for different family types? In this concluding chapter we begin by providing answers to these questions. Attention then shifts to a number of themes flowing out of the answers. How did the program have its effects? By providing an advantage to participants, or protecting them against slippage? Was inclusion of so many "process" variables worth the research effort, or could we have learned as much without them? What leverage was gained by our unusual investment in the mapping of social supports? Do the data provide any insight regarding the concept of empowerment as a process? What about the program itself: do our findings serve to underscore any particular aspect of its design or operation? We close the chapter and the report by considering two questions especially pertinent to the National Institute of Education. Where do the educational attainments of parents fit into the picture, and what can educational institutions learn from this time-consuming and expensive research and demonstration effort?

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[12] Evaluation of program processes has been carried out by Dr. Burton Mindick, with support from the Carnegie Corporation. For more information please write to Dr. Mindick at the Cornell Institute for Social and Economic Research.

Did the Parental Empowerment Program Affect Children by Influencing the Natural Ecologies of their Families?

This question requires an answer in two parts. The first pertains to whether the behavior of children was affected at all by their families' inclusion in the empowerment program, regardless of how those effects were accomplished. The child behaviors for which there is information consist of school performance as reported by elementary school teachers. Our analyses indicate that involvement with the program did indeed have a positive effect upon children's school performance, but that it was limited to certain kinds of families. A direct, positive relationship was found for the children of married couples whose parents had a high school education or less. For the children of unmarried mothers the effect was less direct; program involvement was related to growth in the nonkin sector of the mothers' primary social network, a more positive view of herself as parent, or more parent-child activities, and these changes were in turn associated with better school performance by the six-year-olds in those families. (These findings are shown in Figure 8.)

One feature common to all of the subgroups for which positive school effects were found is their less advantageous position in the social structure. Single mothers almost invariably have fewer educational and monetary resources than do married mothers, and our particular sample fits this general pattern. Positive school outcomes were associated with the children of less educated parents, whether from two-parent or one-parent families. This finding held for both Caucasian and Afro-American children.

While there is satisfaction in knowing that a program designed to build family strengths can translate into improved school performance for some children, these findings are, in themselves, hardly a ringing endorsement for the program as a sound financial investment by a community. Other factors being equal, greater impact upon more children could be expected of a program that cost about $800 per child per year over the three years of its involvement with main-study neighborhoods. At the same time, these findings have greater significance if understood within the context of certain constraints faced by the project. First, many of the families in Syracuse, New York, like those elsewhere in the U.S., were experiencing severe economic stress, as implementation of the program (1978-81) coincided with the worst economic downturn since the Great Depression. Second, teacher perceptions of child performance in school represent a limited range of possible child outcomes, and so may not do justice to the program's effects. Third, the actions of program workers regarding school-related subject matter were delimited by the requirements of a major funding source, the National Institute of Education. Workers were permitted to address parents and children directly on school-related matters, but were not allowed to initiate direct contact with the schools. NIE imposed this restriction in order to keep the effects of working with teachers from contaminating those resulting from involvement with parents. However, this one-legged approach meant that while parents and children could be supported in preparing for school, no effort could be made to prepare schools for children and families. Finally, it is important to appreciate the fact that the program ended before the children entered the first grade, and well before data about them were gathered from their teachers. Program activities ended in June, 1981, the

children began first grade that September, and data were not gathered from the teachers until April-May of the following year. Thus effects of the program were still evident almost a year after its termination. Still, it is difficult to justify the investment in terms of these school outcomes alone.

The Comparative Ecology of Human Development/Family Matters Project was much more than simply an attempt to provide family support that would have beneficial effects upon children. Mentioned earlier as scientific goals were the identification of key features of family ecologies and a better understanding of what constitute valued resources to the parents of young children. The second part of the lead question guiding our investigation involved the natural ecologies of families: "Has the program influenced the natural ecologies of families so as to affect the behavior of children?" Addressing this part of the larger question involved a conceptual model that included key aspects of family ecology, and the linking of those ecological domains to the relevant child behaviors as a function of program involvement.

The reader can see in Figure 8 that the family-related ecological variables at issue for the child and included in the model (Chapter 1) were the mother's informal social network and her involvement in parent-child activities (joint activities). As mentioned earlier, greater increases in the number of nonkin includec in the primary networks of unmarried mothers are associated with better performance on the teacher-report variables. This improved performance, while seen on the entire range of school outcome variables, was stronger for those involving personal adjustment and interpersonal relations skills than more cognitive measures (grades in reading, writing, math, etc.). It is equally clear from Figure 8 that greater amounts of joint parent-child activity, at least as measured by us, were less likely to be linked with school outcomes in a manner that distinguished program from control children.

As the lines in the figure also show, for the children of couples there are direct relationships between program assignment and school outcomes, especially the more cognitive ones. In the Black, married subgroup there was no significant association with the "family ecology" or "process" variables in the model. In this case then, we are unable to specify, beyond the difference in family structure, which feature of the ecologies of these families might be influenced by the program in ways that in turn foster improved school outcome scores.

The presence of a second parent in these families may provide a clue to the process involved, but as yet we are unable to specify the meaning of that clue, and must acknowledge either the incompleteness of our model or the inadequacy of our measurement. In future analyses the model will include data gathered by the project about father involvement in the childrearing process, in the hope that this aspect of the family ecology in two-parent families might provide more information about how program involvement translated into improved school outcomes for children in these families.

In assessing the scientific contribution of this research to the understanding of processes involved in the ecology of family functioning, it is important to point out that the mother's view of herself as a parent occupies a rather central position in the pattern of associations summarized in Figure 8, especially for white, single parents. While these perceptions occupy the psychological rather than the ecological field of forces encompassing the mothers who served as respondents, one might think of them as part of the defining characteristics of those mothers from the point of view of the children whose behavior is at issue, and in that sense an important element in these children's ecological fields. Although psychologists and sociologists interested in human ecology certainly recognize the importance of understanding the perceptions of the respondent from her own point of view (Thomas and Thomas, 1928; Mead, 1934; Bronfenbrenner, 1979), those of us involved in conceptualizing this research undertaking did not give self-perceptions any prominence until nudged by one of our Welsh colleagues (David Reynolds). We did not really begin to come to grips with data bearing upon those perceptions until mothers in the Syracuse program began to manifest visible improvement in physical appearance, accompanied by indications that they felt more confident about what they were doing with their children. The findings reported here validate our intuitive impressions of the importance of those changes, and underscore the value of including perception of self as an element of future evaluation studies.

We are able to conclude, taking what has been learned about perceptions of self, parent-child activities, and social networks into account, that there is evidence enough to respond affirmatively to the question, "Did the program affect children's behavior by influencing the ecologies of families?" Using these data it is possible to refine future inquiry considerably by specifying a set of more differentiated hypotheses. Those hypotheses are included in the discussion that follows.

Where Effects on Child Behavior can be Detected, What are the Causal Links?

None of the analyses carried out for this report permit us to make conclusive statements of causality. Most of the data generated by the study are poorly suited to establishing cause and effect with certainty. Because the "target" children were only three years old at the start of the project, we were unable to gather school performance scores at baseline. If the study were to be replicated, the addition of baseline data on the child's level of cognitive and social development would be strongly advised, in order to ascertain that differences in school outcomes observed at follow-up were not simply a continuation of preexisting differences in skill levels. And while

joint parent-child activity levels were measured at both time points, considerable change in the developmental levels of the children over the 3-year period, combined with the later reduction in time available for joint activities due to the children's entry into school, make it difficult to determine the equivalence of the baseline and follow-up activities data. Information pertaining to the mother's estimate of her abilities as a parent was gathered at both time points but with somewhat differing methods. Only the social network data are truly equivalent at both time points, which explains why it was only with those data that change scores could be used with confidence to measure program effects.

Having acknowledged the inadequacy of these data for determining causality, it is comforting to be able to propose that, taken in aggregate, they serve rather well for the purpose of hypothesizing causality, remembering that it was this "scientific discovery" that was specified in the contract with the National Institute of Education (Cochran, 1980). The prominence in our findings of what were originally conceived as "intervening" variables provides fertile ground for hypothesis generation. It is in fulfillment of that promise that we offer the following hypotheses addressing possible causal links between program inputs and school outcomes.

Hypothesis 1a. That the number of "especially important" (primary) adults providing support to the mother expands as a result of involvement with a parental empowerment program.

Hypothesis 1b. That this increase in number of primary adults supportive to the mother contributes to improved performance by her child in school.

Hypothesis 1c. That the causal chain proposed in Hypotheses 1a and 1b operates primarily for single parents.

The differences between control and program groups in growth of the primary network over time are well documented in our data. These changes are not artifacts of the data collection procedure; they exist within the context of overall size reductions in the networks of a number of the sample subgroups. They also persist in the face of control for the influence of socioeconomic variables. Because these changes occurred subsequent to program assignment, it is difficult to sustain an argument for reverse causality, and our efforts to attribute the differences in amount of change to an influence other than the program have thus far proved unsuccessful.

More difficult to make a case for is the second link in the proposed causal sequence -- between increased size of the mother's primary network and improved performance by the child in school. The following argument can be made with the data at hand. The mothers for whom the apparent relationship holds are unmarried, and most are raising their children by themselves. The critical increase in the size of the primary network involves nonrelatives. A look at the content of the relationships with these key friends reveals extra assistance involving emotional support, day-to-day borrowing, and to some extent financial assistance. Such close friends appear, then, to be providing a stabilizing influence for the mother, and our hypothesis suggests that this

stability carries over to provide the basis for improved performance by the child in school. How might this occur? Perhaps it is important to note that the school outcome variables most positively associated with higher numbers of primary nonkin were relationship with teacher, interpersonal relations, and personal adjustment, rather than the more cognitively oriented report card scores (although there was some carryover to these variables as well). The impression is of children with interpersonal skills and confidence in the classroom that stem from consistent and reasonably positive feedback, sensible behavioral limits, and functioning models of interpersonal exchange in the home. Network-related reduction of stress could provide a context for such stability. It will be interesting, when analyzing the children's networks, to see whether these same key adult nonkin appear there as well, and if so, what roles they play for those children.

What alternative hypotheses deserve consideration here? It is always possible that some other extraneous influence is covarying with nonkin primary membership to affect the children's behavior in school. The search for such an influence will continue. Perhaps (looking at Figure 8) the arrow goes the other way, with, for instance, more socially able children at school making friends whose parents then meet and become close friends. Such a possibility cannot be ruled out. It is instructive to note, however, that the direct link to program assignment is with nonkin primary membership rather than with the child's social behavior in school.

Hypothesis 1c serves to limit the prediction to one-parent families. Our data suggest that the network changes of married mothers are not implicated in the school performance of their children (Figure 8). Just what processes might be operating to cause the program-related differences in cognitive school outcomes of children in two-parent families is unclear from the data analyzed to date. (As mentioned earlier, our next step in the search for a clearer explanation of those differences will involve the data collected about the father's involvement in family activities.)

Hypothesis 2a. That the mother's perception of herself as a parent is altered by involvement with the program.

Hypothesis 2b. That mothers experiencing these perceptual shifts become more active beyond the home on behalf of the child.

Hypothesis 2c. That this causal sequence is not limited to mothers of a particular race or marital status.

We view this proposed causal chain as more questionable than that encompassed in Hypothesis 1a because, as shown in Figure 8, the relationship between program assignment and the mother's contact with the school appears to be both direct and mediated by self-perception. The seemingly direct relationship between self-perception and program assignment, with increases for white, single program mothers and decreases for Black, married mothers in the program, could actually be an artifact resulting from a causal chain running directly to experiences with the school, the effects of which were then to enhance (white, single) or dampen (Black, married) self-perceptions. However, because program workers emphasized positive recognition of the

parents' importance to the child from the very beginning of their experiences with families, and only addressed home-school communications in the final six months of operations, it is reasonable to speculate that changes in self-perception occurring earlier in the life of the program led to more active parental involvement in activities given prominence by the program workers later on. The set of relationships shown in Figure 8 for white, unmarried mothers lends some support for this sequence of changes, because it also includes links between self-perception and increases in both kin and nonkin at the primary network level. There is good conceptual reason to expect the mother's feelings about herself to be influenced by changes in these close relationships, and therefore we are inclined to view relationships among program assignment, primary network, and perceptions of self as parent as an interlocking system, producing the extra impetus to become involved with the school in those instances where the child was seen as not making normal progress.

In the case of married, Black mothers, the picture is not as clear. The strongest path of effects would appear to be not via self-perception to home-school contact, but rather directly to the school and then reflected back into perception of self. The logic implied here would suggest that contacts with the school, rather than involvement with the Family Matters program, had a dampening effect upon the self-perceptions of these parents. To shed further light upon this possibility, we examined the parents' responses to a direct question regarding their relationship with the child's teacher: "How do you feel about how ____'s teacher treats you?" The responses indicate that the Black, married mothers in the program did feel somewhat less positive than those in the control group about how they were treated by the teacher ($p = .10$). But their ratings were still well over on the positive side of the scale (4.0 of a possible 5.0), and appear to be more associated with less satisfaction in general by program mothers in two-parent families ($p = .03$) than a disenchantment specific to the Black, two-parent subgroup. Our impression during conduct of the program was that a number of these married parents became quite sophisticated in the skills involved in critically assessing the appropriateness of a given school or classroom for their children. This more critical eye could account for the somewhat lower scores given by them to their treatment by the teachers. All things considered, our hypothesis is that involvement with the program made the Black, married mothers both somewhat more critical of themselves as parents and more eager to make contact with the teacher when the child didn't seem to be making satisfactory progress in school. Both effects are theoretically plausible, and the two need not be thought of as in conflict with one another.

Hypothesis 2 is explicitly not restricted to mothers of a particular race or marital arrangement because the data suggest that the causal chain operates across those differences. One wonders, then, why the self-perceptions of Black single and white married mothers were unaffected by the program. Part of the explanation may lie in the fact that the strong positive direct effect for white single mothers was due to an unusually low mean for that control subgroup rather than a much higher program mean. In other words, program involvement appeared to have prevented what otherwise might had been considerable deterioration in self-regard, at least in comparison with the rest of the sample. Such substantially lower perceptions were not evident for

the Black single and white married control subgroups, leaving the program no room to perform a similar "prevention of loss" function.

How Do Effects and Processes Vary for Different Subgroups?

Distinctions by race and family structure proved to be so crucial to understanding our data that differentiation by these subgroups became the primary basis by which to present and explain findings. There is no need to reiterate here the patterns of variation produced by the different family types; those differences are dwelt upon sufficiently in the earlier chapters. Suffice it to say that the stresses and supports being experienced by American families simply cannot be understood without distinguishing cultural groups and marital status. Nor are even these differentiations sufficient: our data indicate that location in the social structure of American society has effects beyond race and family structure. Of course this further distinction by social class proved most salient with the white, two-parent subsample because this group contained enough middle- as well as low-income families to permit statistical comparisons by socioeconomic status. The Afro-American and single-parent families in our sample were concentrated in the lower end of the socioeconomic spectrum, as they are in the population as a whole.

Of the two basic stratifications in our sample, race and marital status, the latter was clearly the more powerful in explaining differences. This power was especially evident in our search for processes related to the transmission of program effects. These data strongly suggest that couples are able to bring their program experiences directly to bear upon the school-related support of their children, while for unmarried (usually single) parents such support seems to be contingent upon the interim building of self-confidence and/or social network supports.

One consequence of distinguishing among subgroups was an indication that involvement with the program actually may have reduced the tendency of some parents -- in this instance white and unmarried -- to become involved with the world outside the immediate family. Might the program designers and workers have been sending messages that suggested alternatives to the expansion of network ties, or to increased communications as appropriate responses to signs that the child was having some difficulty in school? There was, in fact, a major theme running through the Family Matters approach that might have led to reduced "reaching out" behavior, at least in situations of only moderate perceived difficulty. We constantly trumpeted the importance of parents as teachers, urging parents to appreciate their own importance in the development of their children and to spend time in face-to-face activities with them. At the same time, we encouraged parents to get involved with neighborhood clusters and to make contact with their children's schools. But it is reasonable to assume (Sutherland, 1981; Seeley, 1981) that parents in differing life circumstances bring different ideologies to decisions related to "depending on others" and to the education of their children. These differing ideologies may produce different levels of receptivity to the various strategies for strengthening family life offered by Family Matters. Perhaps the parents in these white, one-parent families, where the mother was relatively unlikley to be working outside the home, were especially receptive to a "we can handle this within the family" message, and so responded to

program involvement by making that, rather than outreach, their first strategy of response even when signs indicated that things weren't what they might be for their children at school.

Family Support as Relief from Stress

One distinction that became increasingly salient for us as interpretation of these data proceeded is between family supports as enhancing growth or as preventing deterioration. The traditional expectation associated with an intervention designed to affect outcomes in children has been that the children receiving the special treatment will then perform better than an equivalent control group. Historically the assumption underlying such a model has been that the intervention was compensating for some deficiency in the child's life circumstances that would otherwise limit performance. An alternative to this standard stance is one in which the intervention is thought of as preventing the loss of certain family or environmental functions and therefore making possible the maintainence of child performance at an acceptable level. Here the assumption is not that there is a deficiency that needs correction, but rather that a system capable of functioning adequately deserves protecting. The concept of supporting the family, or family supports, is based on this second model. From this perspective the family is viewed as a system that, if given an opportunity to function in a relatively stress-free environment, can fulfill the basic developmental needs of the children in it. Public policies designed to provide family support aim, through stress reduction, to allow families to function effectively rather than to "correct" their "deficits."

If the purpose of family support is to prevent loss of family functioning, then one would expect there to be instances in which no change in the program group was accompanied by decreases for control families. The first example of this sort was reported in Chapter 3 of the full report for the relationship between reductions in family income and the child's performance in school. For control families, lower incomes were associated with poorer school performance, in all groups except that containing married white families. This income-related decrement did not appear for the program families in these subgroups, suggesting to us that participation in the program buffered those families against the effects of reduced income. This impression was reinforced by indications in the social network data (Chapter 2) that financial support from network members had eroded somewhat less for white, single mothers in the program than for those in the control group. It is underscored yet again in Chapter 3, which shows the relationship of networks with school outcomes, parental perceptions, and home-school communications. Repeatedly, the pattern for white, single mothers involved strong negative regressions for the control group balanced by flat or moderately positive ones for the program group, controlling for mothers' educational level. This suggests, in the case of networks, that the program did more than simply increase the numbers of nonkin in the networks of these mothers: it also seemed to affect how those special nonkin were brought to bear on other aspects of family life. In the control group, increases in primary nonkin were associated with decreases in school outcomes and mothers' perception of self as parent, while in the program subgroup there was no change or a moderately positive increase in the school or self-perception

scores. This same pattern was observed for the link between self-perceptions and home-school contacts. The impression that accumulates from these data is that the strong positive direct associations between program involvement by white, single mothers and both their perceptions of themselves as parents and the support they received from close friends served to buffer the child against problems in school. The dynamics of this buffering process are only conjecture at this point, but a clue may be provided by the indication that when their child showed signs of having difficulty in school those same mothers were also found to be in regular contact with the child's teacher. The general point is that interventions preventing a significant loss in the functioning of family members should be viewed with as much interest as those which produce gains in performance relative to controls. In fact, one might argue that the preventive role is the more important one, if it is accomplished by strengthening the family rather than usurping its role and functions.

This prevention-production continuum can be formalized in terms of a hypothesis:

> Hypothesis 3. That a parental empowerment program consisting of the provision of support through positive verbal recognition, information, referral, and establishment of peer clusters will show its effects over time as much through prevention of negative changes in the development of family members as in the production of positive changes.

Support for this buffering hypothesis is really contingent upon the capacity to show that changes in the outcome of interest are a function of changes in intervening or "process" variables that can be linked to the intervention. We have presented informal supports and parental self-perceptions as processes with buffering potential. One advantage to a program that works through such "processes" is that these mechanisms have the potential for maintaining a certain amount of their power beyond the life of the program. If mothers really are viewing themselves more realistically and in a generally positive vein, and have also strengthened their ties with friends and relatives, then these added personal resources may play a future role in assisting the child through school and other community activities. This is the notion of a "convoy" of social support, originally introduced by House (1980), which we were mindful of when designing the Family Matters program to focus on what we believed to be key process components of family functioning.

The Utility of Process Variables

The inclusion of "process" variables in a conceptual model for evaluating the impact of an intervention complicates matters at virtually every stage in the life of the project. In the case of Family Matters, reams of additional data about self-perceptions, networks, and parent-child activities had to be collected both prior to and following implementation of the program. The costs of gathering, preparing and analyzing these data were substantial. Do the results justify the investment?

One way to answer the usefulness question is to look at Figure 8. Imagine the diagrams as they would look if only containing the direct relationships between the program and school and home-school outcomes. Affected the most by removal of all the links to "process" components would be the single parents in the sample. The impression created would have been that one-parent families had not responded to our parental empowerment approach. Beyond simply missing the fact that certain of the children in single-parent families had shown improvements in school behavior that could be associated with program involvement, the removal of the "process" variables from the model virtually eliminates any opportunity to learn what it was about the program that seemed to make a difference to those involved with it. For instance, we invested a great deal of effort in discovering ways to give positive recognition to parents for the vitally important roles they were playing in the lives of their children. The supposition was that parents needed to feel confident about themselves as parents before they could be expected to become actively involved in the more "executive" aspects of the parenting role. The summary of findings represented by Figure 8 certainly suggests that for two of the four subgroups represented in the sample, perception of self as as parent plays an active role in determining whether parents become involved with their child's teacher when there is indication that the child is having school difficulty. While the nature of the data permits only the generation of hypotheses, the findings are nevertheless intriguing. They are also not of the simple "more is better" variety, as indicated by the fact that for married Afro-American mothers more school involvement was accompanied by a drop in regard for self as parent. The point is that the findings can be translated into policy at the program level. They clearly imply that white, single parents will only become actively involved with the teachers of their children if they feel reasonably good about themselves as parents, and suggest that programs can be designed to stimulate positive changes in such self-regard. The same kind of argument can be made for social networks and school outcomes, again especially for mothers and children in single-parent families. Such reference to specific aspects of the content of the program would not have been possible in the absence of data about "process."

Social Supports as Measures of Program Impact

The foregoing discussion of ecological processes is not new conceptually, in the light of recent work in the areas of stress and coping by Pearlin and others (Pearlin et al., 1981; Pearlin and Schooler, 1978). When this research was first funded as a proposal in 1976, however, the idea of including informal social networks as a concept embodying the general notion of informal support systems had not been introduced to the social science community. Even more unusual was the investment in operationalizing the concept as a dimension of family and community life amenable to change as a function of involvement with a community-based program of family support, in this instance Family Matters. We have been unable to uncover a single published instance in which changes in informal social ties were postulated in advance as an impact of an intervention in their own right. Family Matters not only proposed changes in informal networks as a program effect, but also gave them a prominent place in the conceptual scheme of things, as evidenced by the fact that "networking" was a key feature of the empowerment program. Was this a wise scientific

investment? Should others include the concept in their program development and evaluation efforts?

Networks and the Unmarried Mother

One answer to these questions is contained in the earlier discussion and reflected in Figure 8. The addition of key nonrelatives to the mother's network is associated with improved performance in school for the children of unmarried mothers, most of whom were single parents. This finding holds across races. It provides insight into the needs of a family type already of significant size in the United States, which over the past 10 years has grown considerably as a proportion of all the families with young children in our country. While work remains to be carried out in an effort to describe more fully the key additions to these mothers' networks, the indications given by our analyses to date are of some women who do not passively accept social relationships offered them through the good offices of the program, but rather are encouraged by involvement with the program to redouble efforts already under way (to some degree) to marshal social resources for the many demanding tasks at hand, one of which is raising a young child. And success in recruiting such assistance seems to have payoff both for parent (self-regard) and child (school performance). One implication of these findings is that the concept of social support for the childrearing process should be expanded beyond the traditional spousal relationship to include, as an alternative, a network of friends and relatives. The findings also underscore the importance of better understanding of what forces might enhance or impede the process of mobilizing those resources.

Kinship and the Afro-American Family

Lest there be a tendency by the reader to equate social supports primarily with social ties beyond kinship, we hasten to correct any misconception by referring again to Chapter 2, where the data indicated that three of the four subgroups (defined by marital status and race) showed increases in primary kin ties associated with program involvement. An important characteristic accompanying this relationship was the race of the mother. Afro-American mothers were significantly more likely than Caucasian mothers to increase their involvement with primary kin if included in the program, and this carried over to unmarried women. It would be easy to dismiss this finding as an inevitable result of minority status, racism, and poverty, saying that such women are forced to rely on close relatives because of limited access to social relationships with members of the white majority and the cost of maintaining social ties with nonkin. Such a view, while seeming to fit the data, is deficit driven and incomplete. More productive for all concerned is the view that Afro-American families provide one of many models for carrying out the rearing of the young in our culture, and that kinship in general plays a larger role in those families than is the case for American Caucasians. This view implies that any model should be evaluated on its particular merits, and in this case some of those merits can be identified in our data. There was the indication in Chapter 2 that Black, unmarried mothers in the program received financial assistance from greater numbers of relatives over time, despite the sharp recession, while the reverse was true for the white, unmarried subgroup. And the findings reported in Chapter 3

indicate that, in both Black program subgroups, increases in the number of primary kin reported over time were associated with larger amounts of parent-child activity. No signs of negative impact associated with kin ties surfaced to counterbalance these positive indications, leaving us to conclude that these families have lost nothing, and may well have benefited, from growth in their relationships with relatives.

Network Changes: A Good Thing?

The full report to the National Institute of Education (Cochran and Henderson, 1985) raised the question of whether a program of social support like Family Matters makes a positive contribution by speeding the movement of mothers and their families toward patterns of informal social relations that they might otherwise realize more slowly, and perhaps less fully. This research has addressed that question through an examination of links between program-related network increases and other process and outcome variables, as portrayed in Figure 8. The question can now be answered more or less definitively, depending upon the subgroup of interest. The network appears to be a key transmission center for white, unmarried mothers, primarily through the nonkin sector, the growth of which is positively associated with perception of self as parent and the child's performance in school. Black unmarried mothers involved in the program also showed substantial growth in the network, with kin linked to increases in parent-child activities and nonkin to improved performance by the child in school. Less can be said about the impact of expanded primary kin networks for program mothers in the married subgroups, where the only link was with parent-child activities for the Afro-American portion of the sample. On balance, there is little in our data to indicate that the expansion of the primary network associated with participation in the Family Matters program has deleterious consequences, and considerable indication of positive contribution, especially for unmarried mothers. A different set of outcome measures might have led to an alternative conclusion, of course, but our data leave us cautiously optimistic about the consequences for mothers and children of facilitating network-building activities.

Caution often characterized the Family Matters program, especially as related to social networks. Because there was concern about disrupting or changing the social ties of families participating in the Family Matters program, the program was never advertised as designed especially for network-building purposes, nor did any impetus develop to become especially activist in that regard. Neighborhood cluster-building was an avowed goal, but espoused much more in the interest of collective action on behalf of child, family, and neighborhood than to provide parents with material and emotional support. The kinship potential in the networks was virtually ignored; we made no effort, for instance, to encourage parents to invite relatives to home visits or cluster group meetings, although kinfolk did attend some of those occasions in the normal course of events. So it is fair to say that our networking initiatives were quite passive. Many of these findings might be expected, therefore, to be associated with any type of facilitating program of family support. This also implies that greater change in network ties might be accomplished with more systematic attention to and publicity for network-building as a goal. This more aggressive strategy could

also lead to unanticipated negative consequences, and so should be approached carefully and with the full knowledge of participants.

Networks as Convoy

One of the exciting aspects of social supports as program outcomes is their potential for the development of the individual in the future as well as the present. House (1980) uses the convoy analogy, mentioned earlier, which we also find useful. Such an analogy clearly implies that network changes associated with the program might be as strongly linked to subsequent developments in the child as they are to more immediate ones. The findings reported here begin to provide outlines for the forms of transport making up such convoys. One vehicle is likely to be composed of close friends and relatives committed to the welfare of both parent and child. Another is parental self-confidence. A third vehicle, and perhaps the one to be heading the convoy, is the parent's level of formal education. Contained in these conveyances are resources essential to sustaining the child throughout the developmental journey: human energy, time, material goods, information, skills, emotional support. This evaluation of the Family Matters program provides evidence to bolster the contention that some environments are more likely than others to produce and maintain such supports in transaction with parents, and that steps can be taken at the community level to change environments in ways that facilitate family functioning.

Now we can return to the questions raised in the beginning of this section. Was it wise to invest so much time and money in understanding informal networks as sources of social support? We are convinced that it was, and that the data bear this out, although a more impartial judgment of the matter is needed. Should others include the network concept in their program development and evaluation efforts? We believe, yes, if they wish to build strong communities and understand how program inputs are transmitted into the social fabric surrounding families and transformed into messages affecting the attitudes and behaviors of family members.

The Empowerment Process: Fact or Figment?

In his most recent writings, Cochran (1985) has postulated the existence of an empowerment process consisting of a series of stages. He proposes that positive changes in self-perception (Stage I) permit the alteration of relations with members of the household or immediate family (Stage II), which is followed by the establishment and maintenance of new relations with more distant relatives and friends (Stage III). Stage IV is seen as information-gathering related to broader community involvement, followed in Stage V by change-oriented community action. MacDonough (1984) has shown that parents can be located at different points along such an empowerment continuum, and that for the first four stages a high score on a later stage is related with high scores on previous ones. She is also able to identify a subgroup of parents, relatively less educated than the sample as a whole, who involve themselves in efforts at community change without much prior investment in studying the issue and the situation, indicating that Stage V (community action) is not dependent upon Stage IV (information-gathering). Through this evaluation we have mapped out a rather complex set of direct and

indirect relations in an effort to assess the impacts of an intervention designed to empower parents on behalf of their children and themselves (although the empowerment terminology emerged from, rather than anticipated, the intervention). Do these findings support the notion of empowerment as a process with a series of stages?

In examining the implications of this question, one quickly realizes that it makes data demands that our study is not able to meet at this time. First, fully comparable measures of perception of self as parent at baseline and follow-up are required to determine both where mothers were at baseline in relation to Stage I and whether program involvement had changed this status in ways not reflected in the control group. A second shortcoming involves the absence of any measure for the information-gathering (Stage IV). Again, data are available elsewhere in the study, but they are limited primarily to information about elementary schools gathered only at follow-up. A third weakness involves our current measures of Stages II (relations with household members) and V (community action). Relationships with household members involve more than parent-child activities, and community action more than activities related to the child's school. In both instances our data base can provide information with which to expand understanding of those processes (with wife-husband relations for Stage II and other community institutions for Stage V), but such elaborations are beyond the scope of this evaluation. It can it can be said, however, that what has been learned to date about the effects of the Family Matters program does not contradict the general concept of empowerment as a process including changes in self-perception and relationship with others both immediate to and more distant from the changing person. The findings do point to the possibility that constructive change in perception of self may not necessarily be in the direction of more positive feelings, depending upon the perceptual point of departure at the beginning point of the intervention. Thus, within certain limits, the change in perception itself, regardless of valence, may stimulate other action. And, for certain of the families in our sample, this change shows solid evidence of being associated with variables like parent-child activities, primary network changes, and contacts with the school postulated to occur later in the empowerment process. As already mentioned, the temporal aspect of the hypothesized relations cannot be tested with these data. Future efforts using simultaneous equations may throw more light upon possible pathways through the data, but much will be left to speculation nevertheless. In any event, our experience with conceptualizing and then implementing a program explicitly designed to counter the deficit model, and then in examining what data we can bring to bear upon associated psychological and ecological processes, has led to a hypothesized set of relations that can now be examined more systematically in future evaluations.

Families and Formal Schooling: Some Future Challenges

The program of family support described and assessed in this report had a direct bearing upon formal schooling only to the extent that it advocated communications between home and school and affected families in ways that were manifested in the school performance of the children in those families. Some readers from the educational establishment might, therefore, be tempted at

this point to conclude that, while interesting, the findings presented here have no significance for their attitudes and behavior. Such a conclusion would be false. Three new directions for educational policy emerging from this project are presented below as challenges to all of us involved with education and committed to the strengthening of family and community life.

Preventive Home-School Communications

Public schooling is touted by some in the United States as a kind of "universal entitlement," equally accessible to all segments of the population and prepared to embrace all children with equal enthusiasm. Yet our data on home-school communications indicate that most communications from teacher to family are deficit oriented. Often the first "personal" communication received by the parents from the school is triggered by teacher perceptions of inadequacy in the child. Such a negative message, uncushioned by any more supportive prior communication, is likely to stimulate a fearful and defensive response from parents, especially when the teacher or other school official implies in future exchanges that the real "problem" is parental lack of involvement with or commitment to the child. The challenge becomes, then, to reverse this downward spiral in home-school communications by starting the process off on a positive note, and creating an atmosphere of trust and supportiveness between teacher and parent within which difficulties can be discussed in a climate of mutuality and respect. Staff members with the Family Matters Project at Cornell University have recently been testing a three-pronged strategy for fostering prevention-oriented home-school partnerships. Called Cooperative Communication between Home and School (Dean, 1983), the approach is aimed in equal measure at teachers, parents, and school administrators. It includes a six-workshop series for parents and a two-day in-service training program for teachers and principals, as well as a special monograph for principals, school superintendents, school board members, and others involved with the school system.[13] The parent workshop series is a modified version of what we used with Syracuse parents as part of the original Family Matters program. The teacher materials have now been tested in a number of different school systems, and in every instance we are struck by two realities. First, most teachers have a very narrow conception of what the wide variety of American families looks like and needs, and second, every school system contains built-in barriers to effective home-school communications that can be altered without weakening the educational program. A comprehensive, systems-oriented approach like the one developed at Cornell could, if made available to all the constituencies involved with a particular school, dramatically increase positive, cooperative communications, and in so doing create a climate supportive of whatever problem-solving needed to take place.[14]

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[13] Available as a single module, at a cost of $30.00, by writing to Cornell University, Distribution Center, 7 Reserarch Park, Ithaca, New York 14853.

[14] And the introduction of such an approach should not be undertaken in a vacuum. Good baseline documentation of preexisting types and levels of home-school communication should be undertaken in advance, to provide a starting point against which future progress can be measured.

The School as Support for Family Life

The establishment of positive, mutually supportive communications between home and school is, however challenging, only one step in the process of designing a school environment that is truly supportive of family life. The second challenge issued by the findings of this research involves identifying and implementing a full-scale plan for supporting the efforts of families on behalf of their children's education. Presumptuous as that may at first sound, the process need not be very disruptive either to schools or to families, and the clues to its implementation can be found right in the model components included in Figure 8. The model shown there is not static. We conceive of it as a process through which parents move in their own development, which in turn has consequences for the development of their children. Our own data have led us to hypothesize with growing confidence that parents with positive and realistic views of their capacities as parents are likely to make good use of available social supports and place high priority on activities with their children. This combination of positive forces seems to manifest itself generally in more success by the children in school, or at least to protect the children somewhat from the negative effects of high environmental stress on school performance. The challenge becomes to find more ways in our local communities through which to stimulate this "empowering" process in parents. We believe that the primary school can be a facilitating force in this regard without major alteration of its basic educational mission. Specific attention to four components in Figure 8 provides some helpful reference points. First, school personnel can strengthen parents' appreciation for the importance of the parenting role by referring to that role in positive terms at every opportunity. We have already addressed at length the importance of establishing communication patterns that are positive and preventive rather than negative and remedial. Second, individual primary schools can facilitate the strengthening of informal social supports to parents by acknowledging the fact that parents from different families meet and become friends with each other partly because their children meet in school and become friends. Simple things can make this process easier: a clearly written list of the children's names, addresses, and telephone numbers sent home to each family at the beginning of the year; a time early in the fall when parents are invited to meet the teacher and each other over refreshments (possibly sponsored by the PTO). These are examples of ways in which friendships can be formed, and supports built, with just a little help from the school. A third way to stimulate the parental empowerment process is by providing parents with information, and possibly even materials, that help them engage in the kinds of activities with their children at home that complement and reinforce what is being taught at school. A "parent-child workbook" could become a real source of pride for both parent(s) and child while underscoring the educational goals of the teacher. Empowerment will only result, however, from acknowledging and making clear to the parents that they are valuable allies in the educational process, with a great deal to offer it. A full-scale plan for supporting the efforts of families, then, is one that helps parents attach more importance to their parental roles, contributes to the process of introducing families to each other through their children, and actively promotes constructive parent-child activities. Such a plan is feasible, requires very few additional resources, and would generate a solid base of parental support for schools implementing it.

Higher Education as Support for Families

Earlier in the chapter, evidence was presented to indicate that the status of parents was enhanced along a number of our empowerment dimensions simply by remaining in the educational mainstream beyond high school. Mothers with more than a high school education reported more positive feelings about themselves and their children, involvement with a larger and more diversified social network, and participation in more activities with their children. Our data also indicate that their children perform with greater success in first grade. Thus public policies that lead to the involvement of greater numbers of prospective parents (and those already parents) in postsecondary educational experiences would also appear to have high potential for strengthening family life.

Why should this be the case? What is it about continuing in school beyond the 12th grade that could lead to positive consequences for various aspects of the parenting role? While there is currently no definitive answer to such a question, we are able to provide some informed judgment on the matter. Beginning with what we view as the starting-point in the empowerment process, it is reasonable to assume that additional educational increases a person's belief in his or her personal capacities and skills. Status is conferred upon those with higher education, and with it personal strength emanating from public recognition. Along with recognition, and the associated personal efficacy, comes increased eligibility for higher paying, more interesting jobs. Higher pay means greater access to material supports for family life, like decent housing, adequate food and clothing, and reliable transportation.

The years spent in college or other advanced training after high school take the young adult beyond the circle of friends and relatives defined by kinship and the local community, to meet and become friends with people who may be "different" along a number of dimensions: ethnic, religious, racial, political, regional, cultural. Our own data and those of other network researchers (Fischer, 1982) indicate that personal networks grow as a consequence of this exposure. Such growth can translate into added support for the parenting role. One advantage to such support is the diversity in membership it is likely to provide. Friends from different backgrounds can provide a broader range of strategies for childrearing and family relations than could come from relatives or more "local" friends. Such friends also represent links to opportunities located beyond the experience of relatives and the local community: housing opportunities and jobs as well as information and ideas (Granovetter, 1973).

Higher education is likely to demand and provide opportunities for more independent use of available resources and the development of more sophisticated managerial skills than did primary or secondary school. Increasingly, parents are required by their environs to find resources, make choices, and exercise independent judgments for and on behalf of their children (Keniston, 1977; Grubb and Lazerson, 1982). So, again, skills emphasized in higher education prove transferable to family life. Finally, there is good reason to believe that educational achievements beyond high school generate in parents a set of raised aspirations for their children. Such aspirations are in part "education-specific"; they translate into energy devoted to ensuring that the child take schooling seriously and perform

successfully in the classroom. This energy may be reflected in extra attention at home to the child's school work, or to involvement with school practices and policies, or to the provision of special educational opportunities through the private sector. All such efforts are the product of the empowerment process. They have their analogues in the workplace and in the politics of participatory democracy. The message to the education establishment is this: educational experiences beyond high school provide young adults with skills and opportunities that benefit family life in many positive ways. Thus we close with a challenge that the search for the testing and implementation of ways to make higher education available to greater numbers of Americans be intensified. The results of such an effort ripple rewardingly throughout society, not least through families.

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