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ABSTRACT

This report, a continuation of "Families That Work: Children in a Changing World," presents six papers which examine the effects of working parents on the socialization and intellectual development of children. Data were obtained from approximately 75 sources which met the following criteria: information from two or more relevant domains (government policies, the workforce, the family, etc.), large sample size, data on varied or special populations, sample drawn from more than one political jurisdiction or geographic region, longitudinal or cross-cohort designs, and machine-readable data. Because of lack of data on fathers' employment, many analyses are limited to the consequences of maternal employment. The six papers analyze peer relationship in children of working parents; work status, television exposure, and educational outcomes; parental employment and the family-school relationship; children's access to support and services outside the school; and the effects of mothers' employment on adolescent and early adult outcomes. The general conclusion is that parental employment is not a uniform condition with consistent effects on all children in all families. Income, race, and family structure as well as the special characteristics of the child and the supportive services available to the family seem to be far more important than whether their mothers work in determining how children develop. Specific research needs and a compendium of existing data sources are included. (KC)

Children of Working Parents:
Experiences and Outcomes

Cheryl D. Hayes and Sheila B. Kamerman, *Editors*

Panel on Work, Family, and Community
Committee on Child Development Research and Public Policy
Commission on Behavioral and Social Sciences and Education
National Research Council

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This report has been reviewed by a group other than the authors, according to procedures approved by a Report Review Committee consisting of members of the National Academy of Sciences, the National Academy of Engineering, and the Institute of Medicine.

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Preface

The Panel on Work, Family, and Community was established in 1980 by the Committee on Child Development Research and Public Policy, with support from the National Institute of Education, U.S. Department of Education. Our charge was to carry out a scholarly review of what is known about the outcomes for children of changes in parental employment, as they affect children directly or as they affect them indirectly, through their interactions with other changes in families and in related institutions. Our task was to learn more about what is happening, to identify what problems or benefits seem to be emerging for children as a consequence, and to determine how and why they occur. Of particular concern was how these developments affect the ways in which children are socialized and educated and what the outcomes are likely to be.

The focus of our first report, *Families That Work: Children in a Changing World*, was on the responses of families, employers, and community institutions to these changes and the consequences for both school-age and preschool children. We undertook no special review of the effects of different types of child care services on preschool children, since two recent and excellent reviews already exist;[1] their conclusions were integrated into our report.

[1] J. Belsky and L. Steinberg (1975), "The Effects of Day Care. A Critical Review," *Child Development* 49.929 949. L. Silverstein (1981). ' A Critical Review of Current Research on Infant Day Care," in S. B. Kamerman and A. J. Kahn, eds., *Child Care, Family Benefits and Working Parents*. New York: Columbia University Press.

Our general conclusion was that the phenomenon itself is far too complex to permit identification of any simple causal nexus between parental employment and effects on children. Work by itself is not a uniform condition experienced in the same way by adults who are parents. All parents are not the same; nor are their children; nor are the communities in which children live, the schools they attend, their neighbors, or their friends.

For this second phase of our study, we began with a focus on the outcomes for children, in particular, school-age children. Could we identify the role played by changes in parental employment patterns, especially the increase in maternal employment, in shaping children's growth and development?

At the urging of our sponsor, the National Institute of Education, we employed a broad definition of education outcomes: They encompass not only achievement and level of educational attainment but also indicators of social, emotional, and cognitive development, including educational and occupational attitudes, aspirations, and accomplishments, as well as attitudes toward and expectations of family formation. In addition to our earlier attention to children's outcomes in school and their views of the world, we addressed the issues of how children's peer relationships and patterns of television watching affect their growth and development and how these in turn are influenced by whether their mothers are in the labor force. We also addressed how school and school/home/child relationships are affected by maternal employment, as well as the consequences for children's after-school activities. Finally, we reexamined existing longitudinal data in order to assess the long-term consequences of maternal employment for the sons and daughters of mothers who worked in the 1950s and early 1960s.

Maternal employment continues to be a subject that arouses intense emotional responses for many people. Considerable numbers do not care about research findings because they are already firmly convinced of the results. Others seek knowledge and the results of research but may dispute facts, findings, or interpretations. Among those who have observed the growth in the numbers and percentage of mothers in the labor force and who have been concerned about the consequences for children, some view the development as indicating an inevitable change in family life and a new reality for children; their focus is on acquiring more knowledge to aid parents as well as policy makers in ensuring that children develop well. Others view the development as reversible and reject the normative position, since such acceptance may encourage more women to work (or discourage those with some choice who may wish to remain at home). After assessing existing demographic and labor force data, trends, and

forecasts, the panel took the first position. Although the rate of growth may decline, the basic phenomenon of maternal employment is here to stay, at least for the foreseeable future. Thus the issue for this panel from its very inception was to learn whatever could be learned about the impact, both direct and indirect, of maternal employment (and, more broadly, of parental employment), with all its variations, on children's development. Our immediate goal was to direct researchers concerned about children and their development toward more fruitful efforts. Our ultimate goal is to inform parents as well as policy makers of the possible choices they might make and of the consequences for children and their development.

Our basic conclusions are the same as those of our first report. Parental employment—by mothers, fathers, or both parents—is not a uniform condition with consistent effects on all children in all families. Existing research offers no evidence that maternal employment by itself is either good or bad for children, or indeed has any distinctive effect. To the extent that changing patterns of parental employment have had any significant effect on families thus far, apart from the effects on family income and family time (which we discussed in our first report), it is the family system itself that has made the greatest adaptation. Mothers in particular have adjusted to and sometimes compensated for the loss of at-home time. Our knowledge about family adaptation and the consequences for children, however, is still limited.

It is not yet clear whether it is because of the diversity of the phenomenon, or because the effects of maternal employment are so interwoven with other factors having a more significant effect on the development of children that the effect cannot be isolated, or because maternal employment is now so pervasive that it has become an integrated part of most children's experience—and, indeed, of the life experience of those children whose mothers are not working. Regardless of the reason, we found that the experiences of children with working mothers, in particular school-age children, are not significantly different from those of children whose mothers are not in the labor force. Moreover, even when the experiences are different, their development and educational outcomes do not seem to be. Income, race, and family structure as well as the special characteristics of the child (e.g., age, sex, handicapping condition) and the supportive services available to the family seem to be far more important factors than whether their mothers work in determining how children develop. Therefore, for those concerned with the well-being of children, we would urge that attention be appropriately and effectively directed toward providing a daily living experience that will enhance their development, regardless of the employment pattern of their parents.

I would stress two respects in which our work is incomplete, one because

the phenomenon is so recent and the other because it was outside our mandate.

First are the consequences for very young children, under age three, when their mothers work. Between 1976, when these data first became available, and 1981, the proportion of very young children with working mothers rose from 32 percent to 42 percent, an increase of almost one third in just five years. Not only are women increasingly likely to work when they have very young children, but they are also leaving work for briefer periods of time following childbirth. Close to 40 percent are at work by the time their child is one year old.[2] We know very little about how these infants are cared for during the day while their mothers work or what alternative care arrangements are available.

Second are the consequences of the unemployment of either parent (or both parents) in families in which that parent had been working and in which family income is predicated on his or her earnings. For this problem, too, one would want to address not only the consequences for children of parents' unemployment status, but also the consequences as they are influenced by the significant variables already identified: income, race, family structure, the specific characteristics of the child, and the availability of various supportive services for the family.

This volume represents the culmination of two years of work by the panel, its staff, and consultants. Each of these individuals has contributed in a significant way to the report. In particular, I give special acknowledgement to the efforts of a few.

Cheryl D. Hayes, study director for our panel and executive officer for the parent Committee on Child Development Research and Public Policy, has continued to play a central role in the panel's work, as she has from its beginning. The issue we have addressed remains one of great personal as well as professional significance to her. Perhaps, in part, because the issue is so salient, her commitment to the work of the panel has been unusual. The other panel members and I are grateful and appreciative for her efforts in managing the study, working with the authors, and drafting the introductory and concluding chapters of this report.

Sally Bloom-Feshbach has continued to serve as research associate/consultant for the study. During the past year she assumed primary responsibility for developing the survey and compendium of existing data sources and for preparing a background paper on issues in the use of existing data for research on the consequences of work. That background

[2] S. B. Kamerman, A. J. Kahn, and P. W. Kingston (forthcoming). *Maternity Policies and Working Women*. New York. Columbia University Press.

paper provided the basis for the panel's conclusions and recommendations on the topic. In addition, her assistance throughout the study has been invaluable.

Suzanne S. Magnetti, research associate/consultant for the parent Committee on Child Development Research and Public Policy, deserves special thanks for her assistance in assembling the survey and compendium of existing data sources. Her persistence and attention to detail will be of significant benefit to future researchers.

Ginny Peterson, staff assistant to the Committee on Child Development Research and Public Policy, has continued to assume major responsibility for the myriad administrative details associated with the panel's work and supervised the production of this report. Irene Martinez typed and retyped the several versions of the document. Their roles have been essential to the successful completion of this study, and we are grateful to them for their time, energy, and attention to every detail.

Thanks are also due to David Goslin, executive director of the Commission on Behavioral and Social Sciences and Education, for his support and encouragement throughout the study, and to Christine McShane, who edited the manuscript.

Finally, special acknowledgement is owed to our sponsors at the National Institute of Education for their support since the panel began work. Marc Tucker, former assistant director for educational policy and organization, was initially responsible for the establishment of the panel. His serious concern for how America's children are educated both inside and outside schools provided the driving force for this study. Thomas Schultz, project officer during the past year, has continued to support and encourage us in our efforts and has himself made important intellectual contributions to the study at several points.

SHEILA B. KAMERMAN, *Chair*
Panel on Work, Family, and Community

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1
Introduction

Children's growth and development are inevitably shaped by their everyday experiences—by the places they go, the things they do, and the people with whom they interact. There has been increasing recognition among researchers, practitioners, and parents in recent years that socialization and education take place at home, at school, on the play field, in the neighborhood, and in every other context in which children spend time during the course of a day or a week. Behavior and performance in one setting are significantly affected by behavior and performance in all others. Educational outcomes among children are the result of their total experience and circumstances at home, at school, and in the community.[1]

Both the popular media and the relevant social science literature have drawn attention to the fact that the experience of growing up in the 1980s is likely to be very different from that of a decade or two ago. The most recent data on labor force participation and family structure highlight the steadily declining number and proportion of children who live in a traditional two-parent family, in which the father is the breadwinner and the mother is the homemaker (see Table 1-1). In 1982 only about 37 percent of all U.S. children lived in such families (Bureau of Labor Statistics,

[1] We define educational outcomes broadly to mean not only achievement and level of educational attainment but also indicators of the complete range of social, emotional, and cognitive development, including educational and occupational attitudes, aspirations, and accomplishments, as well as attitudes toward and expectations for family formation.

TABLE 1-1 Children by Age, Family Type, Labor Force Status of Mother, and Race and Hispanic Origin, March 1982 (Numbers in Thousands)

Type of Family and Labor Force Status of Mother	All Children[a]		White		Black		Hispanic	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Total children under 18 years[b]	58,312	100.0	48,777	100.0	7,767	100.0	4,927	100.0
Mother in labor force	32,008	54.9	26,459	54.2	4,535	58.4	2,224	45.1
Mother not in labor force	25,254	43.3	21,460	44.0	3,079	39.6	2,631	53.4
Married-couple families	46,293	100.0	40,858	100.0	3,939	100.0	3,654	100.0
Mother in labor force	25,130	54.3	21,699	53.1	2,556	64.9	1,688	46.2
Mother not in labor force	21,163	45.7	19,159	46.9	1,383	35.1	1,966	53.8
Families maintained by women[c]	10,968	100.0	7,061	100.0	3,675	100.0	1,201	100.0
Mother in labor force	6,878	62.7	4,760	67.4	1,979	53.8	536	44.6
Mother not in labor force	4,090	37.3	2,300	32.6	1,695	46.2	665	55.4
Families maintained by men[c]	1,050	100.0	859	100.0	153	100.0	72	100.0
Total children 6–17 years[c]	39,820	100.0	33,241	100.0	5,395	100.0	3,216	100.0
Mother in labor force	23,534	59.1	19,505	58.7	3,280	60.8	1,526	47.4
Mother not in labor force	15,466	38.8	13,050	39.3	2,002	37.1	1,631	50.7
Married-couple families	30,908	100.0	27,258	100.0	2,684	100.0	2,315	100.0
Mother in labor force	18,130	58.6	15,715	57.6	1,785	66.5	1,125	48.6
Mother not in labor force	12,778	41.4	11,543	42.4	898	33.4	1,190	51.4
Families maintained by women[c]	8,093	100.0	5,306	100.0	2,599	100.0	843	100.0
Mother in labor force	5,405	66.8	3,789	71.4	1,495	57.5	400	47.4
Mother not in labor force	2,688	33.2	1,517	28.6	1,104	42.5	443	52.6
aintained by men[c]	819	100.0	677	100.0	113	100.0	58	100.0

Total children under 6 years[b]	18,492	100.0	15,536	100.0	2,371	100.0	1,711	100.0
Mother in labor force	8,473	45.8	6,954	44.8	1,255	52.9	698	40.8
Mother not in labor force	9,787	52.9	8,400	54.0	1,077	45.4	999	58.3
Married-couple families	15,385	100.0	13,600	100.0	1,256	100.0	1,339	100.0
Mother in labor force	7,000	45.5	5,983	44.0	771	61.4	563	42.0
Mother not in labor force	8,385	54.5	7,617	56.0	485	38.6	776	58.0
Families maintained by women[c]	2,876	100.0	1,755	100.0	1,076	100.0	358	100.0
Mother in labor force	1,473	51.2	971	55.3	485	45.0	135	37.7
Mother not in labor force	1,402	48.8	784	44.7	592	55.0	223	62.3
Families maintained by men[c]	235	100.0	182	100.0	39	100.0	14	100.0

NOTE Children are defined as own children of the family. Included are never-married daughters, sons, stepchildren, and adopted children. Excluded are other related children, such as grandchildren, nieces and nephews, and unrelated children.

[a]The number of "all children" is less than the sum of the numbers of white, black, and Hispanic children because some Hispanic children are also counted as whites, and because some children of mixed racial heritage are counted in more than one racial category.

[b]Total children includes those with mothers in the labor force, those with mothers not in the labor force, and those in families with no mothers present (families maintained by men) Accordingly, the percentages of children with mothers in the labor force and children with mothers not in the labor force do not total 100 percent.

[c]Families maintained by women and by men include only divorced, separated (married, spouse absent), widowed, and never-married family heads.

SOURCE: Unpublished data, Bureau of Labor Statistics, March 1982.

1982). Among low-income black children, the proportion was significantly smaller—18 percent.

In contrast, 59 percent of school-age children—including more than 58 percent of those living in two-parent families and nearly 67 percent of those in single-mother families—have working mothers; more than 71 percent of these mothers worked full time in 1982. And 46 percent of children under age 6—45.5 percent of those in two-parent families and 51 percent of those in single-mother families—have working mothers; almost two thirds worked full time in 1982.

The growing number of single-parent families and mothers in the paid labor force both full time and part time suggests that the nature of home life for many children is changing. Nearly one of every five children now lives in a family with only one parent, usually a mother. Whether or not there is a father present, the majority of children now have mothers who are working or looking for work outside the home—approximately 55 percent of all children under 18 in 1982 and a record 46 percent of children under 6 (Bureau of Labor Statistics, 1982). Among black children, these trends are even more pronounced. More than one of every two black children lives in a single-mother family; approximately 54 percent have mothers in the labor force (Bureau of Labor Statistics, 1982:41-43). Hispanic children are also to be found in single-mother families in higher proportions than are all children nationwide, although their mothers are somewhat less likely to be in the paid labor force. Approximately one of every four Hispanic children lives in a female-headed family; more than 44 percent have working mothers (Bureau of Labor Statistics, 1982). Among all children living in female-headed families, a disproportionate number are poor. Among minority children in such families, the poverty rate is especially high (Bureau of Labor Statistics, 1981, Table 5).

Changes in work roles and family life have become a significant topic of concern and debate. The consequences of these changes remain highly controversial, in part because any assessment of available evidence is inevitably colored by conflicting value orientations. Indeed, some people are convinced of the consequences (good or bad) before reviewing any evidence. Others are prepared to accept new knowledge but seek a level of assurance and certainty beyond what social science may be able to provide. The relationship between social change and child outcomes is still not clearly understood.

What difference does it make for a child to have a working mother? Some would argue that children benefit from contact with a mother who possesses the sense of competence and independence, as well as from the increased income that results from employment. Others would argue that children suffer a lack of personal attention from mothers who are struggling

to integrate outside employment with household responsibilities; they would argue further that such children are even more adversely affected in families in which the father is absent. All of this may be true. What then can be said to policy makers as well as parents concerned with children's opportunities for development?

BACKGROUND OF THE PANEL'S STUDY

The panel has explored what is known about the relationship between parents' changing work patterns and work status and children's social, emotional, and cognitive development. Our report, *Families That Work: Children in a Changing World* (Kamerman and Hayes, 1982), presents the results of a broad review of the relevant social science research on this topic. The primary conclusion of that study is that parents' work itself is not necessarily either good or bad for children. The direct and indirect consequences of changing patterns of labor force participation—by mothers, fathers, and both parents—depend largely on a variety of associated, interactive factors that are complex and frequently difficult to disentangle. These include, among other things, family income, family structure, characteristics of the individual child, mother's reasons for and attitudes toward work, mother's job and hours worked, and the availability of and access to quality care arrangements. The panel concludes (p. 6):

> Evidence suggests that children of different ages in families of different types living in different locations and circumstances may fare differently. Some may be better off, some worse off, and some may not be influenced at all. How children are affected depends on the ways in which other social, cultural, ideological, and economic factors mediate these changes [in parents' work patterns and work status]. It also depends on the extent to which other institutions in our society provide needed supports to children and their families.

In its first report the panel began by describing the dimensions of change in society and identifying the relevant domains in which adaptation to changing patterns of labor force participation might occur—e.g., the family, the workplace, and community institutions including the schools, the marketplace, and government policies (see Table 1-2). The panel systematically reviewed the relevant social science research to discover what adaptations are being made in these domains, what relationships exist among them, and what difference if any they make in terms of children's social, emotional, and cognitive development. Topics covered in the first report include the impact of parents' work on the family as a socialization system and as an economic system, adaptations to a changing work force by employers in firms of different sizes and organizations of different

TABLE 1-2 Conceptual Framework—Work, Family, and Community

Government Policies	Workplace Policies and Practices	Community Institutions	The Family System	Child Outcomes in Different Settings
Characteristics:	Characteristics:[a]	Characteristics:[a]	Characteristics:[a]	Settings:
Types of actions; level of grant (federal, state, and local); legislation; regulations; guidelines; administative practices, etc.	Type of employment, nature of job and employer industry; size; extent of unionization; proportion of women in labor force, etc.	Formal and informal, public and private; not for profit and for profit.	Of family and of children	Family and home; school; child care and preschool; peer group; neighborhood; workplace.
Relevant Policies:	Relevant Policies.	Relevant Institutions:	Relevant Relationships:	Relevant Outcome:
Tax; income transfer, employment; housing and community development, health; education, personal and social services, child care; transportation.	Organization of work, structure of work, work conditions, work hours, fringe benefits including released time with pay, time without pay, services, etc.	Workplace and employment policies and practices (including fringe benefits), school and other educational institutions, public and private social service agencies; churches; social and recreational organizations; child care facilities; other formal resources; neighborhood associations; kin networks; other informal resources; marketplace goods and services.	Husband-wife relationships, parent-child relationships; child-sibling relationships; (all examined in terms of time spent together/apart, activities, attitudes, etc.).	Physical and mental health; cognitive development; personality characteristics; attitudes and values; vocational aspirations and outcomes; educational level; fertility; deviant behavior; types of activities (play and tasks).

[a]Characteristics specified are a partial listing only, provided for illustrative purposes.

types, and the relationship between parents' employment and child outcomes, including achievement and attainment in school settings and children's perceptions of themselves and the world in which they live. Efforts to develop reviews of research on adaptations by schools and other formal and informal community institutions (e.g., churches, social service agencies, and neighborhood groups) produced unsatisfactory results. Efforts to assemble information on the nature, extent, and consequences of institutional responses were impeded by two factors: the lack of conceptualization by researchers of the relationship between changing work patterns and the roles of organizations and the lack of relevant data.

As *Families That Work* suggests, the panel found that much of the existing research has failed effectively to distinguish the work variable in order to examine the relationship between employment conditions and the experiences of families in different circumstances. For example, whether a mother or father is a single wage earner or one of two wage earners in a family appears to be significant. Also significant are whether a single parent or both parents work full time or part time; whether they work on simultaneous, overlapping, or staggered work schedules, whether either or both have continuous or discontinuous work histories, their reasons for working and attitudes about work and housework, and whether either or both are or have been unemployed for some period of time. Much of the existing research fails to distinguish among the diversity of family and child variables—for example, single-parent versus two-parent status; the age, sex, and special characteristics of the child, family size and the ages of siblings; and race, ethnicity, and income level Existing studies frequently fail to take account of the role of other intervening variables, such as the role of caretakers and the quality of care, as they influence child outcomes. Moreover, many studies were completed before recent trends in maternal employment, labor force attachment, and attitudes toward work outside the home were fully realized.

The panel found few adaptations to changing work patterns occurring outside the family and virtually no definitive effects—either positive or negative—on children. The major adjustments in attitudes, roles, and routines apparently are being made within households and family units. The only notable exceptions are some initiatives by large employers to introduce benefit packages and policies on work schedules and leave that facilitate employees' fulfillment of their responsibilities as parents and some initiatives in the marketplace to introduce convenience products and commercial child care.

Except for adding to family income, which generally benefits children, the panel found little indication that the consequences of parents' employment are either significantly harmful or helpful. Although the amount

of family time (parents and children together) is generally decreased, the effects vary significantly depending on the attitudes, needs, and characteristics of parents and children as well as the nature of substitute care. A major question that emerges from these conclusions is the extent to which this paucity of positive or negative findings actually reflects a lack of response among institutions in our society or a lack of discriminating attention by researchers studying the effects of social change, or both.

In the second phase of work the panel began to test the approach suggested in our earlier report. Continuing to explore the question of what difference it makes for children to have a single working parent or two parents in the labor force, we employed a complementary approach. Instead of examining institutional adaptations in response to social change and searching for consequences, we began by focusing on the nature of children's experiences, in particular the experiences of school-age children as they affect social and intellectual development.

We then worked backward to discover the effects of family roles and relationships as well as those of other institutions (most notably the schools) as they in turn are or are not influenced by the work patterns and work status of parents. The questions became: If we examine indicators of children's social, emotional, and cognitive development, can any systematic differences be attributed to differences in parents' employment (and/or unemployment)? Are the children of working parents in fact spending their time in different contexts, doing different things, with different people than are their counterparts with mothers who stay at home? If so, what are the attributable differences in their outcomes?

To address these questions the panel commissioned several papers to expand on the findings of the first year, which covered what is known about children's outcomes in school and about how their perceptions are affected by their parents' employment status. Our new focus is on how the contexts in which children spend time, the people with whom they interact, and the activities that they engage in vary according to their parents' work patterns and work status. In addition, we were interested in exploring the consequences for children's social, emotional, and cognitive development.

The first of these papers examines the nature of children's peer relationships, in particular the formation of friendships. The second examines children's exposure to television and the nature of their viewing habits and behavior. The third focuses on the nature of home-school relationships as they vary among working and nonworking families. And the fourth addresses questions concerning children's activities outside school, in particular their access to and use of neighborhood resources. In each case the author was asked to suggest the significance of these activities for

children's socialization and education, to identify variations in children's behavior that can be attributed directly to parent's work patterns and work status, and to hypothesize the effects of these variations on children's educational outcomes. To the extent that relevant data and research findings bear on these questions, they are reviewed in the papers; to the extent that existing research has not addressed these questions, they are proposed as topics for future study.

We have been concerned from the outset not only with the implications and effects of mothers' work but also with the direct and indirect consequences of employment by mothers, fathers, and both parents. Nevertheless, because of the lack of relevant research on the effects of fathers' employment on how children form friendships, on their TV viewing habits, on how they spend their out-of-school time, and on the nature of home-school relationships, we have at many points in this volume limited the discussion to the consequences of maternal employment.

DATA SOURCES

A major problem in our study was the availability of existing data. We therefore undertook a survey of existing data sources to assess their potential for analysis or reanalysis along relevant lines, reviewing the hundreds of data sets generated by researchers from several disciplinary perspectives. From among these we have selected approximately 75 data sources that are especially relevant to researchers interested in studying the relationship between work and family life. Detailed information concerning these selected data sources appears in the Appendix.

The data sources selected meet at least two of the following criteria:

- *Information from two or more relevant domains: government policies, the workplace, community institutions, and the family, including parental employment status and child outcomes in different settings.* In order to explore the relationships between child outcomes and policies and practices in the relevant domains of children's lives, data sources pertaining to more than one domain were included.
- *Large sample size.* Data sources with relatively large samples facilitate the possibility of reformulating the variables of interest. Although ethnographies, laboratory experiments, and other small sample studies may well provide insight into the questions the panel has addressed, evaluating these numerous data sets was beyond our scope.
- *Data on varied or special populations.* It is important to emphasize data from special groups, such as poor families, minorities, handicapped

children, and adolescents, since these populations have received scant research attention.

- *Sample drawn from more than one political jurisdiction or geographic location.* Such data permit comparisons between locales, which may differ in policies as well as in economic conditions and mores. Such comparative data also facilitate assessment of the generalizability of results and conclusions based on more restricted samples.
- *Longitudinal or cross-cohort designs.* Longitudinal data (study of the same sample over a number of years) and cross-cohort data (repeated cross-sectional study of similar populations) yield information about stability and change. They can also help disentangle the effects of variables and identify sleeper effects (outcomes that do not become evident immediately). For example, a longitudinal design could answer questions about the effects of employer-provided benefits on employee attrition or questions about how having an employed mother since early childhood affects adolescents' vocational choices.
- *Machine-readable data.* Such data would be more readily accessible for reanalysis.

It is important to note that a measure of data quality has not been included among our selection criteria. Such evaluations would have required considerable familiarity with each data set reviewed. Studies with obvious flaws generally have been excluded. By and large, the data sources selected appear to be methodologically sound and meet conventional standards of data collection.

The Appendix, a compendium of the data sources, was designed to highlight the commonalities among them as a reference for researchers. Each data source is described in terms of the following information: design, methodology, data level (individual versus aggregated), sample size, special population, respondents/subjects (age group, role, sex, socioeconomic status, ethnicity), and geographic range. The presence or absence of specific relevant information is also noted. Major categories of variables include work, family, education/school, community, personal characteristics, attitudes, and health. Each of the categories is subdivided into relevant variables, which may or may not be included in each data source. In the work domain, for example, variables include occupation, income, work schedule, benefits, and job satisfaction.

We also conducted two secondary analyses to explore the feasibility of using existing data to address the types of questions raised in both the first and second phases of our study. These analyses are included in this report. Chapter 6 concerns the effects on children's long-term educational and occupational outcomes of their mother's employment, and Chapter 5

deals with the effects on children's educational outcomes of their access to and use of neighborhood resources, as they are in turn affected by parents' employment. These secondary analyses not only provide specific findings concerning the relationships between educational outcomes among children, parent's work, and other intervening variables (e.g., family income, family structure, and age and sex of the child), but also serve as examples of how existing data can be used to answer questions other than those for which they were originally collected.

The data sources selected for reanalysis represent contrasting types of data sets. The first, the Children's Time Study, is a relatively small, cross-sectional survey of 764 students 11 and 12 years old and their mothers in Oakland, California. The survey contains information on how children of the same age living in the same community, but coming from families of differing race, social composition, economic status, and educational background, allocate their out-of-school time.

The second, the National Longitudinal Survey of Work Experience, is a large-scale, national longitudinal survey that includes samples of adult women and adolescent men and women. A subset of the survey contains information on matched mother-daughter and mother-son pairs who were first interviewed in 1966 and 1967, when the daughters and sons were ages 14-17, then were reinterviewed each year for 10 years, by which time the daughters and sons were ages 24-27. Because this part of the survey contains information on the daughters' and sons' attitudes toward education, occupation, and family formation as well as their aspirations and accomplishments over a 10-year period, it provides an opportunity to examine the influence of mothers' work-related attitudes and behavior during children's adolescent years on their children's subsequent transition from education to work.

ORGANIZATION OF THE REPORT

The remaining chapters of this report present the outcome of phase two of the panel's study. Chapters 2, 3, and 4 focus on particular children's activities (i.e., peer relationships, television viewing, and home-school relationships) as they affect educational outcomes, with special attention to variations that are attributable to differences in parents' work patterns and work status. Chapters 5 and 6 present analyses of existing data concerning children's out-of-school access to and use of neighborhood resources and the long-term effects of mothers' work on children's educational outcomes and career choices. Chapter 7 presents the panel's conclusions and recommendations concerning the relationship between children's educational outcomes and changing patterns of parents' work, as well as the

use of existing data to address these issues. The Appendix to this report presents the panel's compendium of relevant existing data sources.

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2
Peer Relationships in Children of Working Parents: A Theoretical Analysis and Some Conclusions

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The increase in the labor force participation of mothers with young children has led to increased concern about the effects of maternal employment on children's psychological development. Among the public at large, the assumption that maternal employment has negative effects on children appears to be widely accepted. In one national survey (Yankelovitch, 1977), 82 percent of the adult respondents agreed that mothers of young children should work only if the money is really needed, 69 percent agreed that children would be better off if their mothers did not work. Furthermore, working mothers more often said they worried about not spending enough time with their children than other mothers did. Working mothers less often reported that they felt good about how well they were doing in raising their children.

Reviewers of the research literature have presented a much less negative view of the effects of maternal employment (e.g., see Bronfenbrenner and Crouter, 1982). Many writers have concluded that maternal employment does not in itself have strong or consistent effects on children's development. Other writers have emphasized potential positive consequences of a mother's employment for children's attitudes and behavior (e.g., L. W. Hoffman, 1974, 1980). These reviewers have also noted that conclusions about the effects of maternal employment must be stated

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cautiously because the available evidence is limited or of doubtful validity. Most of the research that has been done to date has not been guided by an explicit theory. Investigators have simply assembled groups of children whose mothers did or did not work, determined the children's scores on one or more measures of psychological development, and speculated about the most likely explanation for the differences obtained. In addition, the measures of children's development that have been used often appear to have been selected without much concern about their theoretical or practical significance.

The major purpose of this paper is to examine critically the relations between maternal employment and various aspects of children's peer relationships. Peer relationships are of special interest because they have important consequences for children's development (see Hartup, 1982). Interactions with peers have a major impact on children's attitudes, opinions, and behavior. Popularity or status in a peer group serves as an indicator of children's social adjustment and as a predictor of their mental health in adolescence and adulthood. Furthermore, experiences with peers who are close friends may contribute greatly to children's altruism, self-esteem, and ability to form intimate relationships with other people.

Because relatively few studies have explored the peer relationships of children with working mothers, this review is intended mainly to raise important issues and to suggest problems for future research. Three issues are given special emphasis because they form a conceptual framework for the review. These issues can be stated in terms of general principles for the understanding and the investigation of maternal employment and peer relationships.

First, attention should be given to the mediating links between a mother's employment and her children's relationships with peers. The primary link is assumed to involve parent-child relationships. Maternal employment may directly affect a mother's relationships with her children. In two-parent families, mothers' employment may have indirect effects on father-child relationships as well. Explanations for the effects of maternal employment are best stated, in this view, in terms of its influence on parent-child relationships. For the same reasons, research on maternal employment is most valuable and convincing when parent-child relationships are assessed directly.

Second, in exploring the effects of maternal employment, greatest attention should be given to processes or constructs that have a central place in current theories of psychological development. For example, warmth and control are regarded in most theories as major dimensions of parent-child relationships. The degree to which children are influenced by peers and the quality of their friendships are regarded as major elements of their

peer relationships. Studies that explore the relationship of maternal employment to parents' warmth or control and its relationship to children's friendships and responsiveness to peer influences are therefore likely to be especially illuminating.

Third, maternal employment should not be assumed to have the same meaning and significance in all families. Furthermore, it should not be regarded as the direct cause of differences between children of working and nonworking mothers. Instead, mother's work outside the home should be viewed as a condition to which families adapt in one way or another. Adaptations differ in their adequacy, and some families seem to adapt more successfully than others. Therefore, all studies of the effects of maternal employment are actually studies of parents' and children's adaptations to it. For simplicity's sake, references to the effects of maternal employment are made in this paper, but the phrasing is only a shorthand for the effects of family adaptations to maternal employment. More careful and more explicit examination of these adaptations should be the subject of future research.

The preceding principles obviously are not specific to studies of peer relationships. They could serve as a basis for research on the relations of maternal employment to various child outcomes. Moreover, by focusing on aspects of parent-child relationships that are important in existing theories, they could help draw research on maternal employment into the mainstream of research on psychological development and family functioning. Studies of maternal employment could then contribute to a general understanding of adaptation and change in families. Conversely, existing theories could be used to suggest more parsimonious explanations of previous results. Although in past research the effects of maternal employment seemed to interact with children's sex and age, the social class of the family, and other variables (see Bronfenbrenner and Crouter, 1982), these findings may be more simply explained by examining the intervening links in parent-child relationships.

New research based on this framework could also result in more useful information for working parents. They could be told about adaptations that contribute to the successful combination of occupational and parental roles. They could be told about methods that other parents have used to foster close, positive relationships with their children. Such information may increase the confidence of working parents about the way they are raising their children.

Finally, the same framework could be applied to research on the relationship between a father's employment and his children's development. The effects of maternal employment are discussed most extensively in this paper because changes in the rate of maternal employment have aroused

the greatest commentary and concern. In addition, there has been more empirical research on the consequences for children of maternal employment than of paternal employment (but see Kohn, 1981). Nevertheless, both phenomena deserve more systematic study, and the similarities and contrasts between them would be clearer if the same conceptual framework were used in both cases.

This paper is divided into two major sections. The first section considers the influence of maternal employment on parent-child relationships and reviews the literature on childrearing practices and socialization techniques in families with working mothers. Because parent-child relationships are assumed to be the mediating factor between maternal employment and child outcomes, this section lays the foundation for the second section, which reviews the literature and discusses peer relationships in families with working mothers. This second section considers evidence on the connections between parent-child and peer relationships and the effects of peer relationships on children's school performance.

MATERNAL EMPLOYMENT AND PARENT-CHILD RELATIONSHIPS

Before examining the data on parent-child relationships in families with working mothers, I briefly summarize current conceptions of the optimal or ideal pattern of parent-child relationships. Consideration of the ideal pattern exposes issues and general hypotheses that merit discussion in the specific case of families in which the mother is employed.

An Ideal View of Parent-Child Relationships

Theories of psychological development have distinguished several facets of the parent-child relationship. Most writers emphasize two major dimensions of childrearing that encompass a great variety of specific behaviors and patterns of interaction. The first dimension contrasts parents who are warm and accepting with those who are cold and rejecting. Warm parents respond sensitively to their children's needs, show their enjoyment in spending time with them, and frequently praise their children for their accomplishments. Not surprisingly their children tend to be securely attached to them, relatively compliant with their demands, high in self-esteem, altruistic, and nonaggressive (Maccoby, 1980; Martin, 1975).

The second dimension refers to the parents' control over their children's behavior and activities. It contrasts parents who are permissive with those who are restrictive. The ideal position on this dimension is somewhere in the middle, rather than at either extreme. For example, children who are treated permissively often become aggressive because their desires to

attack others are not adequately restrained; excessive restrictiveness, however, may also produce an aggressive child (Martin, 1975). Firm control appears to have the most positive outcomes when parents explain the reasons for their rules and show some flexibility when faced with their children's requests. In Baumrind's (1971) terminology, these parents are authoritative rather than authoritarian. Their children tend to be self-confident, independent, and socially responsible.

Along with these general dimensions, researchers have focused on parents' treatment of children when the children have disobeyed them or violated their rules. Early research showed that less severe punishment, particularly the avoidance of physical punishment, was associated with more positive child outcomes (e.g., less aggressive behavior; Feshbach, 1970). More recently, a contrast between power-assertive discipline and inductive discipline has been emphasized (by M. L. Hoffman, 1975, 1977). Power assertion includes physical punishment, deprivation of privileges, or threats of these when they are unaccompanied by any explanation. Inductive discipline includes statements about the effects of a child's actions on the parents or other people, appeals to the child's self-esteem, and other statements that indicate why the actions were unacceptable or harmful to other people. As one would expect, inductive discipline is associated with more positive child outcomes than power assertion. The positive consequences of inductive discipline are especially well documented in research on moral development (M. L. Hoffman, 1977).

In studies of children's cognitive development, other features of parent-child interaction have received the most attention. Children's performances on measures of cognitive development and intelligence seem to improve when their parents spend time in verbal interaction with them, respond to their questions and comments, and actually instruct them about language, reading, or other academic subjects (Carew, 1980; Clarke-Stewart and Apfel, 1979). Parents also seem to foster their children's cognitive development and school performance by providing appropriate resources for them: toys, books, or trips to the library (Bradley et al., 1979; Heyns, 1978).

In summary, the characteristics of warmth and acceptance, firm but not excessive control, disciplinary techniques based on reasoning rather than sheer force, and verbal interaction or instruction designed to stimulate a child's cognitive development are viewed as defining good parent-child relationships in most psychological writings. Some theorists prefer to describe these dimensions or features in different terms or to focus on the childrearing practices that lead to specific outcomes, such as flexible sex-role stereotypes or a high degree of achievement motivation. For the

purposes of this paper the additional specificity is unnecessary because parent-child relationships that have the positive characteristics discussed so far usually have other positive characteristics as well. In short, desirable features of parent-child relationships tend to go together (Martin, 1975).

Working Mothers and Parent-Child Relationships

In most previous research on maternal employment, the central question was whether parent-child relationships differ, on the average, when mothers do and do not work outside the home. That is, researchers have focused on differences between groups of families with working and nonworking mothers, they have tried to determine how adequately families adapt when mothers are and are not employed.

From working mothers' own accounts, it appears that the adaptation to employment outside the home can be difficult because these mothers have major responsibilities as both employees and as parents (see, for example, Kamerman, 1980). Data from large-scale surveys suggest that working mothers regard their lives as more stressful than nonworking mothers, although maternal employment has little effect on fathers' stress (Booth, 1979; Pleck et al., 1980). These data also suggest that conflicts between work and family life can make mothers fatigued and irritable at home. There is also some evidence that satisfaction with life is greater for working mothers than for nonworking mothers (e.g., Gold and Andres, 1978b), perhaps because working women have a more positive opinion of their own competence.

Information regarding the beliefs and attitudes of working mothers is valuable, but the adequacy of the family's adaptation can be assessed only with information on the quality of parent-child relationships: their warmth, the amount of control parents have over their children's behavior, the type of discipline they use, and the time and resources they expend in support of their children's development. There is some evidence, for lower-class families, that the income received by working mothers may reduce their anxiety about family finances and leave them more able to respond positively and consistently to their children (Woods, 1972). This income may also be spent on resources that promote the children's cognitive development (Heyns, 1978). Mothers who are fatigued and irritable when they return home from work, however, are not likely to have positive and harmonious relationships with their children (see Hetherington, 1979).

Conclusive data on parent-child relationships in families with working mothers are not available. Most of the research has used questionnaires, interviews, or other self-report measures that can be affected by various response biases, including the tendency to give socially desirable re-

sponses. There has been little research in which families were studied longitudinally and parent-child interactions were observed directly. In addition, few researchers have paid attention to within-group differences among families with working mothers. A careful analysis of these differences could lead to hypotheses that explain why some families adapt more successfully to the mother's employment than others. Because of these gaps in the literature, a comprehensive review would not be very illuminating. It is more useful to focus on a few examples that both illustrate the state of the art in research on maternal employment and raise important questions for future research.

Full-Time Versus Part-Time Maternal Employment During the 1950s, Douvan (1963) conducted extensive interviews with large, representative samples of adolescent boys and girls. The adolescents were classified on the basis of whether their mother worked full time, part time, or not at all. No information was obtained about how long the mothers had worked. All the information came from the adolescents themselves; their parents were not interviewed. Several questions on the interview involved parent-child relationships, many others concerned the adolescents' own activities and behavior.

Maternal employment appeared to have greater effects on parent-child relationships for girls than for boys. Moreover, among working-class families, the effects of full-time employment contrasted sharply with those of part-time employment. According to Douvan, adolescent girls whose mothers worked full time appeared to be rather neglected. They reported spending less leisure time with their families and more leisure time alone than did girls whose mothers did not work. They were also more likely to describe their mothers' discipline as lenient, suggesting that the mothers were relatively unconcerned with controlling or supervising their behavior. Despite their mothers' lack of concern, the girls seemed emotionally dependent on them. More often than the daughters of nonworking mothers, they chose their mothers as confidantes and as their adult ideal. Additional responses from the girls' interviews suggested that their mothers were so concerned about financial problems that they could not devote much attention to their children. It is surprising, however, that a similar pattern was not found for the working-class girls whose mothers did not work. The total income in these families was probably even lower than in the full-time group, because only the father was employed. It may be that the additional income that mothers received for full-time work did not offset their reduced availability to their daughters.

The working-class girls whose mothers worked part-time seemed to identify with their mothers without being emotionally dependent on them.

Like the full-time group, they chose their mothers as confidantes and as ideals. They did, however, report frequent disagreements with their parents. Many of the disagreements resulted from exchanges of ideas, suggesting to Douvan that these mothers tried to encourage independent thinking in their daughters. The mothers' involvement with their daughters was indicated by the large percentage of girls who reported spending leisure time with their families, and by the girls' reports that their mothers' discipline was "strict but reasonable." Comparable results were found for middle-class girls whose mothers worked full or part time. These girls seemed not to suffer from their mothers' employment. Instead, they viewed their mothers as models of energy who showed concern for them but also fostered their autonomy.

One implication of Douvan's results is that mothers may more easily combine work and family roles if they work part time. In fact, most mothers with young children do work part time or for only a part of the year (Masnick and Barre, 1980). Moreover, although Douvan did not find major advantages of part-time employment in middle-class families, Rapoport and Rapoport (1976) concluded their study of middle-class and upper-class families by suggesting that part-time employment eased the strains of daily life for dual-career families (see also Bronfenbrenner and Crouter, 1982).

Part-time employment is not a viable option for many women from single-parent and two-parent families who need the income of a full-time job to maintain an adequate standard of living. In addition, women with a strong commitment to a career may reject the option of working part time or find it is impossible in their chosen field. As Kamerman (1980) noted, employers have so far made few accommodations to working parents. A part-time employee would not even be considered for many jobs.

These realities of the workplace affect the interpretation of research findings. It is difficult to draw firm conclusions about the effects of part-time and full-time employment because mothers cannot be randomly assigned to these two groups. Some women may work part time because they could not get or keep a full-time job. In other words, women working part time may in certain circumstances be less well adjusted than women who can manage a full-time job. Consequently, differences in psychological adjustment may be confounded with the variable of part-time or full-time employment (see Woods, 1972). The importance of this confounding could be assessed in future studies by obtaining measures of adjustment and detailed information about mothers' work histories. It seems intuitively obvious that mothers who can, without penalty, reduce the number of hours they work per day or per week will be more able to fulfill their roles as parents. A shorter work week could be beneficial to

fathers as well. Until these assertions have been supported more strongly by research, however, employers and policy makers may be unwilling to change these or other conditions of employment.

Parental Reports on Childrearing Both currently and in the past, the effects of maternal employment on parent-child relationships have usually been assessed from parents' statements in standardized interviews or their responses on standardized questionnaires. This method was adopted in a recent series of studies by Gold and Andres (1978a, 1978b, 1978c, 1980) and Gold et al. (1979). Mothers and fathers completed questionnaires that were designed to assess their rejection, overprotection, and achievement pressure.

Responses to the questionnaires differed greatly across studies. In one study (Gold and Andres, 1978c), mothers who were employed full time reported less overprotection of their four-year-old sons than nonemployed mothers, but comparable effects were not found for mothers' reports about their daughters or fathers' reports about children of either sex. No effects of maternal employment on parents' questionnaire responses were found in a second study with 10-year-old children (Gold and Andres, 1978b). These two studies included only middle-class families. In a third study with adolescents from middle-class and working-class families (Gold and Andres, 1978a), maternal employment did not affect the responses of middle-class parents. Working-class mothers and fathers reported less rejection and less achievement pressure if the mother was employed. Fathers reported more overprotection in this case, but this was not true for mothers.

This pattern of results defies interpretation, casts doubt on the reliability of the measures, and raises questions about their validity Questions about validity seem particularly significant because clear and consistent correlations between the parents' responses and data on their children were not found in any of the studies. Previous research suggests that the parents' scores on rejection, for example, should have been correlated with measures of their children's behavior and adjustment.

Gold and Andres asked both parents to estimate the amount of time that fathers spent in childrearing. In most studies these estimates did not vary significantly for the groups of working and nonworking mothers. Other research also suggests that fathers do not dramatically change their involvement in childrearing if mothers are employed (Hofferth and Moore, 1979), but some differences between husbands with employed and nonemployed wives would be expected (Kamerman, 1980). Furthermore, the frequency of father-child interaction would be expected to influence a child's behavior and performance in families with employed or nonem-

ployed mothers. Although significant effects were found in some instances (Gold and Andres, 1978b), null results were more common (Gold and Andres, 1978a, 1978c, 1980). These findings create additional uncertainty about the validity of the parents' self-reports.

Direct observations of parent-child interactions require a much greater investment of researchers' time and resources than questionnaire or interview measures. Nevertheless, there is no fully satisfactory alternative. Interviews that reveal the feelings and perceptions of family members can be valuable supplements to direct observations, but they cannot be regarded as adequate substitutes. Observations of parent-child interactions, preferably in both the home setting and a standard laboratory setting, should be a high priority for future research.

Parents' Time With Children As mentioned earlier, working mothers frequently express their concern about not spending enough time with their children. Research findings on this issue are complex. In several early studies, mothers often reported that they tried to compensate for their time at work by planning special activities for their children or setting aside time to be with them (see L. W. Hoffman, 1974). Parents' records of how they actually spent their time presented a different picture. Working mothers seemed to spend significantly less time with their children than nonworking mothers (see Moore and Hofferth, 1979). Findings from the time-budget surveys were criticized for various reasons. For example, they often failed to distinguish between time spent in custodial care of children or in housework and time spent in one-to-one interaction with children.

The most recent large-scale time-use study appears to explain why the earlier data were confusing (Hill and Stafford, 1979). This study included a national probability sample of several hundred parents who were interviewed in 1975-1976. They were asked about their activities on four separate occasions that covered both weekdays and weekends. A specific set of activities was defined as child care, including feeding, dressing, and medical care, helping or teaching children to fix and make things, reading to them or conversing with them, and playing with them indoors or outdoors.

The most striking feature of the results was the apparent attempt by college-educated working mothers to cut down on other activities rather than on direct interaction with their children. Women with one or more years of college did spend less time with their infants or preschool children if they worked more than 20 hours per week, but they reduced the time spent on child care far less than they reduced their own leisure time or sleep. In contrast, women with only a high school education who were

employed spent much less time on child care than did those who were not employed. These data suggest that the more educated women did try to compensate for child care time lost during the working day. They further suggest that when highly educated women constitute a large proportion of a research sample, the difference in child care time for working and nonworking mothers is likely to be small. When the sample of working mothers is more representative of the general population, greater decreases in child care time due to maternal employment should be apparent.

Hill and Stafford also found that the amount of time all parents spent with their children decreased as the children grew older. Parents spent several hours a day with each infant or preschool child. They seemed to spend only an hour or two each week with adolescent sons or daughters. Because of this overall reduction in the amount of interaction, the differences between working and nonworking mothers were smaller for older children. Consistent with these data, few effects of maternal employment on parents' involvement with their children were found in another study of sixth graders (see Rubin, in this volume).

In contrast, Douvan (1963) suggested that lower-class mothers spend less time with their adolescent daughters if they have a full-time job than if they are not employed or they are working part time. Of course, Douvan did not directly measure the amount of time mothers and daughters spent together. Moreover, relations between maternal employment and time use by parents and adolescents may have changed since her study was done. The apparent discrepancy in results may have another explanation, however. The responses by the girls in Douvan's sample may reflect not merely the amount of time mothers and daughters spent together, but what they did during this time. In other words, the critical question regarding parent-child relationships may not be how often parents and children interact, but how much of this time contributes to children's development—for example, by facilitating their peer relationships. In the future, researchers should more carefully evaluate whether parents and children spend their time together in ways that contribute to this general goal.

PARENT-CHILD AND PEER RELATIONSHIPS: THREE PERSPECTIVES

Three general views concerning children's relationships to parents and peers can be found in the psychological literature. The most common view opposes parents and peers: Children are described as oriented toward parents or toward peers; children who are more influenced by parents are assumed to be less influenced by peers. The second view focuses not on social influence but on social adjustment in general. It assumes consistency in children's adjustment to parents and to peers. Children who have good

relationships with their parents are expected to be popular or well accepted in their peer groups. The third view emphasizes the independent effects of parent-child and peer relationships. Children's closest peer relationships, their best friendships, are assumed to have positive effects on their development that cannot be duplicated by parent-child relationships. In addition, even children who have poor relationships with their parents are assumed to be capable of developing good friendships.

To a considerable degree, each of the three perspectives has developed its own theoretical and research literature. Consequently it is useful to consider each on its own, before examining the relations among peer influence, peer acceptance or popularity, and friendships. Furthermore, it is useful to examine the general literature before turning to the question of peer relationships among children with working mothers.

Research on the Three Perspectives: The General Case

Parents Versus Peers Psychologists and popular writers frequently suggest that children and adolescents develop an orientation either toward parents and other adults or toward peers. Most children achieve a balance between the two, but ties to parents still are regarded as conflicting with ties to peers. In this view, children's orientation also affects their responsiveness to social influence. Children who are more influenced by peers should be less influenced by parents.

The opposition between parents' and peers' influence was most forcefully described by Bronfenbrenner (1967, 1970). He argued that peers can exert pressure on children and adolescents to engage in socially undesirable behaviors, such as cheating in school, lying to adults, and destroying property. He also argued that the negative effects of peer influence are strongest for children who are alienated from their parents and other adult authorities. Finally, he proposed that children are not so much drawn to peers as pushed away from parents. The children most responsive to negative peer influence see their parents as lacking in support or warmth, as unfair, and as unwilling to spend time with them (see Bixenstine et al., 1976; Condry and Siman, 1974).

On one hand, Bronfenbrenner's statements probably exaggerate the opposition of parents and peers and the negative influence of peers on children's behavior. Peers can have a positive influence on children's behavior as well as a negative one. In various ways, peer relationships can favorably affect children's academic achievement, educational aspirations, and prosocial behavior (Berndt, 1979; Ide et al., 1981; Kandel, 1978). Moreover, children's peers and parents often accept the same norms and standards for behavior. The size of the generation gap has often been

overrated (Hartup, 1982; Hill, 1980). Finally, the techniques used to measure peer influence may also lead to an overestimate of its strength. For example, when children seem to be conforming to peer pressure, they may simply be behaving as they would have in the absence of peers (Berndt, 1979; Bixenstine et al., 1976). They may in fact want to do what the peers suggest, rather than feeling pressured to do so.

On the other hand, a great deal of evidence supports Bronfenbrenner's hypothesis that poor parent-child relationships are associated with negative peer influence. Adolescents who frequently perform delinquent behaviors report less identification with parents and poorer communication with them. They also report that their parents less often supervise their activities, that is, the parents less often know where they are and whom they are with (Hirschi, 1969). In a longitudinal study (West and Farrington, 1973), children were more likely to be delinquent adolescents if, at age eight or nine, their parents were rated by home observers as cruel, passive, or neglectful, as using discipline that was very strict or erratic and harsh; as uninterested in their child's education; and as poor supervisors of their child's activities.

Many other studies have shown a connection between poor parent-child relationships and negative peer influence. The connection seems to involve at least three steps. First, children develop negative attitudes toward parents and other adults when their parents are rejecting, uninvolved with them, and generally permissive but prone to severe punishment at irregular intervals. Second, these children seek friends who have similar attitudes. Third, the friends mutually influence and reinforce each other's antisocial behavior (Kandel, 1978).

Without special intervention, the negative cycle is likely to be self-perpetuating. The children's antisocial behavior creates further conflict with parents, because even if the parents are tolerant of the behavior itself, they dislike the notoriety to which it leads. They accuse their children's friends of causing the problem, while overlooking their own role in its origin. The final situation is one of opposition between parents and peers, but the parents bear a major responsibility for it.

Continuities in Parent and Peer Relationships The second perspective on parent-child and peer relationships concentrates, not on social influence, but on the overall quality of these relationships. A major theme in this theoretical perspective is continuity in development (see, e.g., Sroufe, 1979). Children who have good relationships with their parents early in life should also have good relationships with their peers as they grow older.

This perspective on development has been most extensively discussed

with reference to parent-child attachments. There is evidence, for example, that preschool children with more secure attachments to their mothers show less negative behavior toward their peers, they also engage in more reciprocal interactions with peers (Lieberman, 1977). Children who are securely attached to their mothers at age 15 months appear to be more competent with peers at age 42 months (Waters et al., 1979). The securely attached children are, as preschoolers, more involved in peer interaction, more often leaders of activities, more sympathetic to their peers' distress, and more often chosen as companions by other children.

Most of the research with older children has focused on one measure of peer relationships—a child's popularity or acceptance by peers. Popularity usually is measured by how many other children like a child and want to do things with him or her. During childhood and adolescence, popularity appears to represent neither a superficial nor an ephemeral characteristic of individuals. Popular children are sociable and outgoing in positive and helpful ways, relatively unaggressive, well adjusted as judged by teachers and by scores on personality tests, above average in IQ and in school achievement, and generally compliant with school routines (Hartup, 1982). Unpopular children tend to be less successful and less socially competent adolescents and adults. They more often drop out of school, have poorer records of military service, and show greater mental illness in adulthood (Asher and Renshaw, 1981). Not all the correlations of popularity with other variables are strong—most are moderate—but they do confirm the significance of childhood popularity.

The data on the parent-child relationships of popular children are consistent with the general hypothesis regarding continuity in development (Hartup, 1982). Their parents are affectionate, supportive, and proud of their children's accomplishments. They discourage aggressive and other antisocial behaviors, but they avoid severe physical punishment. Consequently their families are cohesive and lacking in tension. In short, throughout childhood and adolescence, warm and secure relationships with parents who promote socially desirable behaviors seem to contribute to popularity with peers.

Parent-Child Relationships and Friendships A few theorists have emphasized the differences between children's relationships with their parents and their relationships with close friends. In his early work on moral development, Piaget (1932) presented this perspective on parent and peer relationships most dramatically. He argued that the relations between parents and children are inherently unequal. For example, parents make rules for the children's behavior, but children do not make rules for their

parents. In contrast, relations with peers are fundamentally egalitarian. Because no child can claim authority over another, all rules or decisions must be made by mutual agreement. As they struggle to reach agreements with peers, children gradually develop a rational and autonomous morality that is based on the principle of justice.

Somewhat later, Sullivan (1953) proposed that peer relationships and, in particular, close friendships have unique effects on children's social and personality development. According to Sullivan, children and adolescents who have an intimate friendship with another child are able to learn about other people and about themselves, to become more sure of their own worth because they are valued by the friend, and to sacrifice their own self-interest in order to help the friend. Eventually their altruism toward the friend generalizes to other people as well. Furthermore, Sullivan suggested that the development of intimate friendships is not strongly dependent on children's relationships to their parents. In fact, he suggested that children whose parents had prepared them poorly for social life with peers might be set on the right track again when they formed a close and intimate friendship.

Piaget's and Sullivan's ideas about friendships and peer relationships have been revived in recent years, although there are still relatively few tests of their hypotheses (but see Berndt, 1982; Mannarino, 1980; Youniss, 1980). There is little doubt that parent-child and peer relationships differ in the ways they suggested, although they probably exaggerated the magnitude of these differences. The hypothesis concerning the independence of parent-child and peer relationships is more problematic. Can friendships be a corrective for difficulties created by inadequate parenting? The question is important because an affirmative answer would be contradictory to theories that emphasize continuities in the development of interpersonal relationships. At the present time there is little information about the parent-child relationships of children who do and do not have intimate and egalitarian friendships, but a partial answer is suggested by research on the associations between peer influence, popularity, and friendships.

Comparisons of the Three Perspectives As discussed earlier, there is evidence that deficiencies in parent-child relationships are associated with responsiveness to negative peer influence and unpopularity with peers. If these two aspects of peer relationships are correlated with the quality of a child's friendships, then the ability to form good friendships probably is affected by parent-child relationships as well.

Both conceptually and empirically, having good friendships seems to be related to a child's overall popularity with peers. The same qualities

that promote good friendships also increase a child's popularity. Children prefer friends who help and share with them and who do not fight with them. They want friends they can admire and who are usually available to play with them (Berndt, 1981; Bigelow and La Gaipa, 1980). These and other characteristics that children value in their friends contribute to a child's popularity. This conclusion is supported not only by the research cited earlier, but also by a recent study of preschool children (Masters and Furman, 1981). The children who were most popular with their classmates behaved in a friendly or positive way toward many other children It is not surprising, therefore, that popular children have many mutual or reciprocal friendships throughout childhood and adolescence (Berndt and Hoyle, 1982). Conversely, children who are unpopular with peers do not have many friends and seem not to respond very positively to them (Putallaz and Gottman, 1981).

The link between children's responsiveness to negative influence and the quality of their friendships is more controversial. Some researchers have argued that children and adolescents who frequently engage in antisocial or delinquent behaviors with peers are socially skillful and have good relationships with each other; they simply reject the norms and values of the larger society (Sherif and Sherif, 1964). Other researchers have concluded that delinquents are neither strongly attached to their close friends nor have much respect for them, even though they choose them as companions in delinquent activity (Hirschi, 1969). There are probably individuals and groups of delinquents who fit each description, but most of the data suggest that children who join their peers in antisocial behaviors do not really admire them or have close relationships with them (Johnson, 1979; West and Farrington, 1973).

A final comparison can be made between peer influence and popularity Generally speaking, popular children do not comply with peers' suggestions to engage in antisocial or delinquent behavior. They are generally obedient to teachers and other adults, and they have positive attitudes toward them (Bixenstine et al., 1976; Hartup, 1982). Popular children less often become delinquent adolescents (Asher and Renshaw, 1981). The correlation between popularity and nondelinquent behavior, however, is not always significant (West and Farrington, 1973). In some school settings, popular children actually lead groups that are antagonistic to adult authority. These groups most often form when a large segment of the school population (e.g., students from lower-income families) believe they are treated unfairly by adults or discrimated against (Ball, 1981). This situation seems not to occur very often, however. In most settings, children who willingly participate in socially undesirable behaviors are not popular with their peers.

Maternal Employment and Peer Relationships

Evidence on peer relationships in families with working mothers is scarce. In some cases it is possible to make inferences about peer relationships from data on other variables. Of course, in such cases the discussion should be viewed primarily for the purpose of identifying issues for future research rather than for drawing firm conclusions.

Peer Orientation and Influence Children whose mothers are not available to them during the working day might be expected to develop a stronger orientation toward peers than toward parents or other adults. Schachter (1981) reported data on children ages two and three that are consistent with this hypothesis. A group of 32 children whose mothers either worked full time or attended professional or doctoral programs on a full-time basis was compared with a group of 38 children whose mothers were not employed. The two groups were comparable on the age, sex, and birth order of the children; the age, race, and religious background of the mothers; and the size, social class, and intact status of their families. The employed mothers did have more years of education, however. Children in both groups attended a day care center for two mornings a week, where their social behavior was observed. The teachers in the center rated each child's personality; the children were given the Stanford-Binet IQ test.

The children with employed mothers more often approached their peers; they were rated by teachers as more self-sufficient and less jealous (apparently, of adults' attention). Girls with employed mothers less often talked to the teacher than other girls, but no difference was found for boys. Taken together, the findings suggest that the children with employed mothers were more peer-oriented and less adult-oriented than the other children.

The children of employed mothers also had lower IQ scores than the other children. The relations between maternal employment, peer orientation, and low IQ scores cannot be attributed to greater interactions with peers in the group with working mothers, because none of these children were in group day care. When their mothers were working, the toddlers were cared for in their own homes by an adult baby-sitter. Schachter speculated that the toddlers became more independent of adults when their mothers were employed but, as a result, they spent less time in the intellectually mature adult environment. In other words, when their mothers were unavailable, they spent more time alone or more time with people who were not very successful in fostering their intellectual development.

Among older children and adolescents, there is less evidence on peer orientation and greater concern about potential peer influence. Two studies

published in the early 1960s showed greater delinquency among middle-class children of employed mothers, but comparable effects were not found for working-class children (see L. W. Hoffman, 1974). More recent data present a mixed picture. In a Swedish sample (Magnusson et al., 1975), delinquency in boys and antisocial behavior in girls were associated with full-time maternal employment. However, full-time maternal employment was also associated with other factors that correlated with problem behaviors in children, including low income and poor parental supervision. No analyses controlling for these other factors were reported.

In a British longitudinal study (West and Farrington, 1973), the sons of working mothers were less involved in delinquent activity than the sons of nonworking mothers. In this case, families with working mothers had greater income and were smaller than families with nonworking mothers. Both these factors reduced the likelihood that a child would become delinquent. The sample in this study was predominantly lower-class families, so the results are not directly relevant to the earlier data on delinquency in middle-class families. The inconsistencies in the research literature do suggest that any correlations obtained between maternal employment and delinquency must be explained by factors besides maternal employment itself. Three factors seem especially important.

First, parents who supervise their children's activities are likely to reduce the children's participation in delinquent behavior with peers. Close supervision may be more difficult to achieve when the mother is employed outside the home. In one survey (Yankelovitch, 1977), children of employed mothers gave responses suggesting that they were less adequately supervised. More often than other children, they said they knew children who played hookey, had been in trouble with the police, ran away from home, or tried marijuana. When mothers work, supervision may be least adequate in middle-class families, because working-class families more often arrange for child care by relatives (Angrist et al., 1976; Kamerman, 1980).

Second, a great number of studies have shown a connection between weak or unsatisfactory parent-child relationships and delinquency (Johnson, 1979). Relationships between parents and children in families with working mothers have not been adequately investigated, but these relationships are likely to influence a child's delinquent activity whether or not the mother is employed.

Third, children are more likely to select delinquent friends when they have experienced failure in other life settings, most notably in school (Johnson, 1979). In at least five studies, middle-class boys with working mothers showed poorer academic achievement than boys with nonworking mothers (see L. W. Hoffman, 1980). The relations between maternal

employment and boys' achievement are certainly due to a combination of factors, but the time parents devote to instruction or active encouragement of their children's intellectual development may be especially important (Carew, 1980; Heyns, 1978). Any evidence of low achievement in boys with working mothers is a source of concern because these boys may look for success and self-esteem in antischool or delinquent activities. They may also join a group of peers with similar goals.

Peer Acceptance and Popularity Apparently, measures of popularity have not been obtained for comparable samples of children of employed and nonemployed mothers. Because children's popularity with peers is related to their social adjustment, inferences about popularity can be drawn from evidence on the association between maternal employment and adjustment as rated by teachers or as judged by children's self-reports on personality inventories.

Maternal employment was unrelated to teachers' ratings of adjustments in Schachter's (1981) study of toddlers. Preschool children with working mothers received higher ratings on adjustment or on positive peer interaction in samples of French- and English-speaking Canadian children (Gold and Andres, 1978c; Gold et al., 1979), but significant differences were obtained only for a few items or subscales.

Adjustment in older children usually has been measured by their responses on standard personality inventories. Higher scores on the school-relations subscale of the California Test of Personality were found for middle-class boys with working mothers in one study of English-speaking 10-year-olds (Gold and Andres, 1978b). Surprisingly, this group of boys also had lower achievement test scores than other boys, suggesting that they may have devoted their energies to fostering peer relationships rather than doing well academically.

In a comparable study with English-speaking adolescents (Gold and Andres, 1978a), boys with employed mothers again received higher scores on the subscale for school relations. Boys and girls with working mothers had higher scores on other subscales as well, including a subscale for family relations. Maternal employment did not affect adolescents' reports on their school grades, and standard achievement test scores were not available for this sample.

The final study in this series included French-speaking 10-year-olds (Gold and Andres, 1980). No effects of maternal employment were found for personality test scores or self-reported grades. The authors suggested that maternal employment has fewer effects in French-Canadian samples because the fathers in these families generally interact more with their children than fathers in English-speaking families, whether or not their

wives are employed. However, it is difficult to understand why greater father-child interaction would lead to the disappearance of positive correlations between maternal employment and children's adjustment. More frequent father-child interaction might alleviate negative effects of maternal employment, it should, if anything, augment the positive effects of the mother's working.

One study with a lower-class black sample should be mentioned briefly (Woods, 1972). Children whose mothers were employed full time rather than part time had higher scores on one subscale of the California Test of Personality, that for school relations, and higher scores on standardized achievement tests. Woods suggested that in this sample, full-time employment was an indication of a mother's psychological adjustment, and the mother's adjustment may contribute directly to her children's adjustment and achievement. In other words, these data do not necessarily illustrate the effects of maternal employment, but they do support the hypothesis regarding continuity in parent-child and peer relationships.

The overall picture regarding the social adjustment of children with working mothers is mixed. There is no evidence that maternal employment is associated with poorer social adjustment; it may contribute to better adjustment, particularly in interactions with peers and classmates. There are hints, however, that middle-class boys may choose success in peer relationships over success in academic pursuits (e.g., Gold and Andres, 1978b). This possible exception to the usual pattern deserves more systematic examination in future research. In addition, the connections between maternal employment and children's popularity should be investigated directly. General measures of popularity are useful, but measures that distinguish between different forms of unpopularity would be even more useful. Some children are relatively isolated from their peer group and are not chosen by any of their classmates; other children are actively rejected by their peers (see Peery, 1979). The separation of isolated and rejected children is particularly important because the latter group has a poorer long-term prognosis (Schwartz-Gould et al., 1980). In addition, research that assesses children's social skills or competence in peer relationships would be valuable (Kent and Rolf, 1979; Rubin and Ross, 1982).

Friendships Apparently the only investigator who carefully explored the friendships of children with working mothers was Douvan (1963). As was discussed earlier, she found sharply contrasting patterns of parent-child relationships for working-class girls whose mothers worked full time, part

time, or not at all. There were comparable differences in the girls' peer relationships.

The friendships of girls whose mothers worked full time seemed to suffer from the girls' emotional dependence on their mothers. These girls belonged to fewer clubs or organized groups than the daughters of nonworking mothers. In addition, they less often said that ties to friends could be as close as ties to family, less often chose friends as confidantes, and less often stressed mutuality and intimacy in friendship. In contrast, they dated more frequently and more often had a steady boyfriend than the daughters of nonworking mothers.

Working-class girls whose mothers worked part time (and both groups of middle-class girls with employed mothers) seemed to identify with their mothers as much as the girls in the full-time group, but they appeared to have closer and more emotionally significant friendships. They belonged to more clubs and groups than daughters of nonemployed mothers, they more often said friends could be as close as family, they more often stressed mutuality and intimacy in friendship. Although they dated more than the nonworking group, they were not more likely to go steady until age 17 or 18. Thus they seemed to have close relationships with parents and with friends of the same sex, and they were only slightly advanced in the development of heterosexual relationships.

According to Douvan, these results illustrate the mother's role in encouraging her children's peer relationships. Parents often are asked to participate in adolescents' groups (e.g., providing transportation, attending special events, etc.). Working-class mothers apparently were more able or more willing to support a daughter's activities with her peer group if they were employed part time rather than full-time. Conversely, daughters of full-time working mothers chose leisure activities, such as dating, that placed minimal demands on their parents. Although many writers focus on the parents' role in facilitating the peer relationships of preschool children (e.g., Rubin and Sloman, in press), parental involvement in the development of good peer relationships also seems to be important during adolescence.

CONCLUSIONS

The central theme of this paper is that parent-child relationships constitute the mediating link between maternal employment and children's peer relationships. The features of parent-child relationships that seem most theoretically and practically significant are the parents' warmth and control, the extent to which their discipline is based on reasoning rather than

force, and the amount of stimulation they provide for their children's cognitive development. These features of parent-child relationships appear to have stronger and more consistent effects on children's development than maternal employment per se. Moreover, they are indicators of the success with which a family has adapted to the mother's employment. Both research and common sense suggest that maternal employment is not a direct cause of variations in children's development. These variations depend on how families adapt to the mother's work outside the home.

Parent-child and peer relationships in families with working mothers rarely have been studied systematically. In many cases, inferences about these relationships can be drawn from research on other correlates of maternal employment or from the larger literature on children's development, however, because such an inferential step is necessary, it is most appropriate to summarize the findings of previous research in terms of general hypotheses rather than definite conclusions. Suggestions for future research to test the hypotheses can be presented at the same time.

Four Hypotheses Regarding Maternal Employment

1. There is substantial continuity between parent-child and peer relationships. Children who have good relationships with their parents usually have good relationships with peers as well. In good parent-child relationships, the parents express their warmth and affection for their children, exercise firm but not excessive control over their behavior, use relatively mild punishments and explain the reasons for them, and devote substantial time and resources to facilitating their children's cognitive development. Their children, in turn, tend to be popular with their classmates and involved in intimate and mutual friendships, but they are unresponsive to peers' suggestions that they join in antisocial or delinquent behavior.

Continuity in parent-child and peer relationships has also been documented in research on maternal employment. In one study (Douvan, 1963), adolescent girls whose mothers worked part time not only seemed to identify emotionally with their mothers but also seemed to have several important and satisfying friendships. Similarly, lower-class children with working mothers showed the best social adjustment and the highest academic achievement when they had a positive relationship with mothers who provided high-quality care (Woods, 1972).

Further research on the continuity hypothesis is still needed because in previous studies the measures of children's relationships often were incomplete or indirect. Interactions between parents and children in families with working mothers should be observed in standardized and natural settings. Additional evidence on all aspects of peer relationships should

be obtained. Moreover, investigators should adopt a more differentiated view of maternal employment itself. A mother's work outside the home has several distinct consequences for family functioning and children's development. The other three hypotheses illustrate the most probable consequences.

2. Because working mothers are at their jobs for much of the day and have housework to do when they return home, they may find it difficult to spend much time with their children. Although these mothers may have warm relationships with their children, they may be less able than nonworking mothers actively to encourage their children's cognitive development and peer relationships. For example, they may have less time to arrange social contacts for their children and less time to advise children who are having problems with friends (see Rubin and Sloman, in press).

Decreases in the amount of time that mothers spend with their children may have different effects on boys and girls. Girls may still regard their mothers as advisers and models, but their peer relationships may be limited in number and in intimacy (Douvan, 1963). In some circumstances, boys may develop better relationships with their classmates when their (working) mothers are less available (Gold and Andres, 1978b). If this effect is replicated in future research, it would be an important exception to the continuity hypothesis. It would suggest that these boys have more success with peers when their mothers are less involved with them and, perhaps, more strongly encourage their independence.

By contrast, in several studies middle-class boys with employed mothers had lower scores on academic achievement than boys with nonemployed mothers. The best explanation for these findings is not yet clear, but they may indicate that working mothers cannot devote much time to fostering their sons' educational progress. Consequently the boys do less well at school and attempt to find success in social life with peers. Because popularity normally is correlated with academic achievement, the boys' attempts may fail. They may have a stronger peer orientation without having closer or more satisfying relationships. To understand the real situation, additional research is required. In particular, the connection between maternal employment, children's popularity, and the features of children's friendships should be investigated.

Of course, working mothers are well aware of the problem of limited time, and they choose various ways of dealing with it. One option is part-time employment. Another option, which seems to be selected by many college-educated women (Hill and Stafford, 1979), is to cut down on their own sleep, leisure time, and housework in order to interact more with their children. It is important to state explicitly, however, that the crucial issue is not the sheer amount of time that parents and children spend

together, but what they do during this time. Are the parents available to support and directly contribute to their children's school achievement? Are they available to promote their children's peer relationships, for example, by helping their children get to school events or to the homes of friends (Rubin and Sloman, in press)? These questions refer to uses of parents' time that are valuable not only for young children but also for adolescents.

3. Attempting to fulfill the obligations of work and family can be stressful for women who are employed. The stress on the mother may lead to tension and conflict within the family. This negative pattern does characterize families during and after parental divorce. Shortly after a divorce, parents are more rejecting and more permissive, but they are also more punitive when they do attend to their children's behavior (Hetherington, 1979; Wallerstein and Kelly, 1980). The stresses associated with maternal employment are likely to be less extreme than those due to divorce, they also may be different in kind. In addition, there is considerable stress on families with young children even when the mother is not employed (Piotrkowski, 1979). Some evidence suggests that the stress on fathers does not increase when mothers work outside the home, but the stress on mothers is greater in this case (Pleck et al., 1980).

The consequences of family stress for children's peer relationships have not been carefully investigated. If stress contributes to a decrease in parents' affection for their children and an increase in their punitiveness, the children may develop negative attitudes toward them and toward other adults. They may select friends who have similar attitudes and act on them. In other words, when stress leads to a deterioration in parent-child relationships, the likelihood that children will join a delinquent peer group increases (Johnson, 1979; West and Farrington, 1973).

Combining the roles of employee and parent certainly leads to more stress for some women than for others. The variability in reactions to working may explain why strong and consistent relationships between maternal employment and children's delinquency have not been found. Current evidence is incomplete, yet the inconsistencies in the data do not justify ignoring the problem of work-family conflicts and stress. Further research on variables that are likely to alleviate conflicts and stress is needed. For example, the father's participation in child care, housework, and other activities traditionally assigned to the mother could be explored (e.g., Kamerman, 1980). Fathers who take a larger role in family life should reduce the stress on working mothers. In the same way, employers who make accommodations for working mothers (e.g., allowing them to use sick days to stay home with a sick child) may reduce stress on families. Systematic exploration of these possibilities would be desirable.

4. The income women receive for working may reduce the financial stress on their families and, in turn, contribute to better relationships between parents and children and between children and their peers. Thus far the strongest support for this hypothesis has been found in research on lower-class samples (see Heyns, 1978). The increase in family income may also result in the family's moving to a "better" house in a "better" neighborhood. Children may then attend a school that has a higher level of achievement. In addition, these children may form friendships with more talented peers who positively influence their school attitudes and performance (Kandel, 1978). Hypotheses of this type illustrate that maternal employment can have significant benefits for children's development in general and their peer relationships in particular. Of course, the final balance of benefits and costs will vary in different families, as each family adapts in its own ways to the conditions and consequences of the mother's work.

A Final Appraisal of the Conceptual Framework

Many writers have discussed indirect consequences of maternal employment that are not part of the conceptual framework presented in this paper. For example, working mothers provide a different kind of model for their children, especially their daughters, than nonworking mothers. The daughters of working mothers may more often plan to work themselves and may have higher educational and occupational aspirations than the daughters of nonworking women (L. W. Hoffman, 1980). These effects were not considered earlier because they are not directly relevant to children's peer relationships. Furthermore, like other effects of maternal employment, they should be mediated by parent-child relationships. A mother is most likely to be effective as a role model if she has a warm relationship with her daughter and explicitly encourages her daughter to achieve in school and later life.

Other writers have focused on a mother's satisfaction with what she is doing, whether or not she is employed outside the home. Again, if a mother's satisfaction is associated with positive outcomes for children, these outcomes should be mediated by parent-child relationships. Current evidence on the effects of mothers' satisfaction is equivocal, however. The results from a few early studies may be partly due to a response bias (Siegel and Haas, 1963). Mothers who felt negative about any subject, including their place at home or in the labor force, may have given more negative responses about their children as well. Problems of interpretation also arise in more recent studies (e.g., Farel, 1980). When their children are doing poorly, mothers may be more likely to express dissatisfaction

with their current role. That is, the child's performance may influence the mother's attitudes, rather than vice versa. Moreover, there is evidence that divorced parents sometimes maintain a schedule of activities that is enjoyable for them but costly to their children (Hetherington, 1979; Wallerstein and Kelly, 1980). A woman who is satisfied with her own role may normally be a better mother, but this is not always true. The central question is whether her satisfaction positively affects her interactions with her children.

One serious omission from the conceptual framework is an analysis of the child care arrangements of working mothers. Mothers report that difficulties in finding adequate, affordable child care pose the greatest obstacle to employment (Kamerman, 1980). In defense of the current framework, one could argue that parent-child relationships are of primary importance in children's lives, even when other adults care for children during part of the day. Although this conclusion is partly supported by recent research on group day care (Belsky and Steinberg, 1978), it underestimates the significance of child care arrangements.

Consider, for example, the contrast between child care by a mature woman who has successfully raised her own children and child care by a teenager who is mainly interested in watching television. These two care arrangements must have vastly different effects on children. There is a substantial literature on the effects of different forms of care for infants and preschool children (Zigler and Gordon, 1982). For example, group care can lead to a stronger peer orientation but also to more aggressive behavior, if aggression is tolerated in the group care setting (Belsky and Steinberg, 1978). Much less is known about either the types of child care or the consequences of this care for school-age children. There are a few descriptions of programs for after-school care set up in collaboration with public schools (Levine, 1978; School Age Child Care Project, 1982), but there is little evidence on their effects. Child care arrangements are likely to have especially important consequences for children's peer relationships because these arrangements normally structure children's opportunities for interactions with peers—either limiting or increasing them. Research on these arrangements and their effects is greatly needed.

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3
Work Status, Television Exposure, and Educational Outcomes

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In two-parent and one-parent families in which all resident parents are employed full time outside the home, it seems reasonable to assume that their children may be using television differently from the way they would if one parent remained at home. One possible difference—perhaps the most obvious one—is that these children may be spending more time with television as a result of being under less frequent parental supervision. There are other, more complicated and less obvious possibilities as well. If parental work status does indeed make a difference to children's use of television, what are the educational implications of this difference? This is the central concern of this paper, and we address it by breaking down the question into two parts: What are the educational consequences of children's recreational use of television? How does parental work status affect this use?

Our examination of these two questions is organized into four sections. The first section is an overview of possible educational consequences of children's television viewing. We begin with a review of some findings and some speculation about ways in which television might affect how children do in school. Then we consider television's implications for education in a broader sense, less strictly related to school performance. Our review of the existing evidence does not turn up much solid support for any of the possibilities we discuss. However, given the methodological limitations of much of the research, as well as the lack of any research in some areas, we may conclude that we still know little about the educational consequences of television use.

Each of the next three sections of the paper examines a relatively distinct way in which parental work status may affect the links between television and education. In the second section we consider what is probably the simplest possibility—that parental work status may affect the amount of time children spend watching television. The bulk of this section is devoted to an analysis of four different data sets. The outcome of this analysis does not support the assumption that children's time spent watching television is affected by their parents' work status.

The less obvious possibility examined in the third section is that parents' work status may affect the kinds of television programs children watch. In examining this possibility we looked at two kinds of data: first, the extent to which parents in general (regardless of work status) are likely to exercise any direct control over their children's program choices; second, the relationship between parental work status and this kind of guidance of children's viewing. Although the findings are not as clear as one would wish, they are, if anything, supportive of the assumption that working parents may be somewhat less likely to guide their children's program choices in an "educational" direction. We then briefly consider other ways in which parental work status might affect program choices (e.g., children's modeling of parent's behavior), although for these other possibilities there is no available evidence.

The fourth and longest section of the paper examines a possibility that is considerably more complex than the others suggested: Parental work status may affect the environment of the child's viewing—specifically, the extent and nature of parent-child coviewing. Such an effect, if any, may in turn have certain educational consequences. We begin this section with a general discussion of the nature of parent-child coviewing: how often it occurs, what it involves in the way of parent-child discussion, etc. Then we examine three specific ways in which parent-child interactions during coviewing might influence a child's mental development. Evidence on each of these possibilities is weak but supportive. Next we look at some data on the relationship between coviewing (as well as associated discussions about television) and parents' work status, and here we do not find any support. We conclude this section with a brief discussion of some possibilities that these data may not be telling us about.

The paper ends with a summary of its main findings and, as an afterword, a brief consideration of how expected future trends in video technology may change the picture we have examined here.

EDUCATIONAL CONSEQUENCES OF TELEVISION VIEWING

This discussion of ways in which television may affect a child's education is divided into two parts. First we consider education in a narrow sense,

corresponding to formal schooling. This is the primary focus of this paper as a whole. We rely heavily on a recent paper entitled "Out-of-School Television and Schooling. Hypotheses and Methods" (Hornik, 1981). We begin by discussing some overall findings on the relationship between television viewing and school performance, then we briefly discuss several specific ways in which it has been claimed that television affects how children do in school. In the second part of this section we consider television's implications for education in a somewhat broader sense, less directly related to formal schooling.

Consequences for Formal Schooling

There are dozens of studies that establish a negative bivariate association between time spent watching television and school performance in such areas as mathematics (see, for example, California State Department of Education, 1980) and reading (see, for example, Morgan and Gross, 1980). However, when variables known to be associated both with television viewing and with school performance (particularly social class and IQ) are controlled, the bivariate associations tend to wash out (Childers and Ross, 1973; Morgan and Gross, 1980; Thompson, 1964).

As Hornik (1981.199) summarizes (ignoring the caveats scattered throughout):

> What then do all of these studies seem to say? Regardless of the approach no researcher has established a believable relation between television exposure and achievement in any specific subject but reading skills. Once researchers control for what the student brings to school in IQ, social background and other characteristics, the correlation between television exposure and achievement in mathematics, or in any other subject that has been measured (including sciences, social studies and others) is invariably zero or close to it.

As this quotation suggests, there is an exception to this no-effects conclusion when one turns to reading skills. Two recent studies (Hornik, 1978, in El Salvador, Williams et al., 1977, in Canada) found clear negative effects on reading skills among children with recently acquired access to television. Williams found that children in a community that had recently acquired access to television fell back in reading skills to the level of children in matched communities over whom they had previously held an advantage. Hornik found that children with newly acquired televisions in their homes showed less growth in reading skills over two subsequent years than did children without television sets at home. This occurred despite the fact that television owners came from homes of relative economic advantage.

Relying inevitably on less persuasive designs—with no choice but to accept universal television access as a research given—two recent U.S. studies have produced converging results. Morgan and Gross (1980) found that when they introduced control variables into the association between television exposure and reading, the link disappeared for all but the high-IQ students, for whom it remained pronounced and negative. Complementary results come from the recently reported California Assessment Program (California State Department of Education, 1980). Researchers in that program also found that a negative association between television exposure and reading was pronounced among the children of well-educated parents. Since parents' education and child's IQ are known to be correlated, this result may be seen to support the Morgan and Gross result, although the lack of a direct IQ measure would make the study suspect if it stood on its own.

Aside from measuring the direct relationship between television viewing and school performance, several investigators have also looked into some mechanisms that may link the two. Much of the writing in this area is speculative, however, and we deal with each of these possibilities only briefly below.

- *Learning of school-equivalent content.* Television is full of science, news of the world, reading opportunities, and programs designed to teach. Much of this parallels the objectives of school curricula (although one could argue that more time goes into detailing the facts and describing the wonders than into developing powers of inference and analytical skill, which are closer to the purpose of schooling). Does anyone learn either fact or analytical skill from television? The evidence is thin. Once again, we quote from Hornik (1981:204):

> Sesame Street taught some children some skills under some conditions, but if Cook and his colleagues (1975) are correct those conditions do not duplicate the conditions under which most children watch the program. Himmelweit and her colleagues (1958) could not find much evidence that viewing of programs produced learning of any but trivial content. Despite the flow of news, children and adolescents are rarely in the audience and if they are, like much of the rest of the population, they may not pick up much of the detail. . . . When one moves from the level of fact to the level of skill . . . evidence is even harder to find.

- *Stimulation of interest in school-related topics.* Television is said by some to stimulate children's interest in topics that are later developed elsewhere. It is suggested that children bring their television-whetted interest to the classroom and to the library for fulfillment. There is little evidence regarding interest stimulation in the classroom, and there is

contrary evidence regarding stimulation of book use. While some channeling of book choice may take place, there is no reason to believe that amount of reading or quality of reading is affected by television-stimulated interests.

- *Development of intolerance for pace of schooling*. From kindergarten teachers up through the ranks, suggestions have been made regularly that children's attention spans are shorter than ever before, largely as the result of thousands of hours of television-conditioned expectations. As intriguing as these hypotheses may be, there is no evidence other than anecdotal report to support them.
- *Learning of new cognitive skills*. Among the more intriguing hypotheses under recent investigation is one that relates television exposure to the development of cognitive skills. The most developed research program has been that of Salomon (1979). In the laboratory he has been able to show some improvement in ability to read and organize visual material as the result of practice with visual media. An investigation of exposure to television under normal conditions, however, has been less supportive of the existence of this kind of effect. Only relatively television-naive children showed any influence of television exposure on cognitive skills.
- *Learning of instrumental information*. There has been some speculation about whether children learn information from television that would be instrumental with regard to their conduct in school. While one can argue that 30 hours per week in the classroom gives a child ample opportunity to understand how a school operates and what is reasonable to expect in that environment, there is a possibility that television exposure might condition some expectations with regard to marginal areas. As examples, small children go to school for the first time after two years of "Romper Room" and "Captain Kangaroo," and black and white adolescents meet for the first time in an integrated classroom with news stories about busing and "Welcome Back Kotter" as informational and emotional baggage. Unfortunately, the speculation about such instrumental learning has not been turned into research.
- *Learning of new aspirations*. The only area of school-relevant expectations that has been examined in any detail is occupational aspirations (which, it has been argued, may influence how children do in school). There are some data suggesting that children have better knowledge of the occupations portrayed on television (DeFleur and DeFleur, 1967); there is mixed evidence about the direction and power of television's influence on aspirations from Morgan and Gross (1980); and there is a clear indication of a positive effect of television access on aspirations in El Salvador (Hornik, 1977). None of these studies, however, establishes a link between

changes in expectations caused by television and actions in school, such as course choice or motivation to achieve.

Broader Consequences

Broadening the focus somewhat, we now consider certain possible consequences of television viewing that are not directly related to formal schooling but have to do with education in a broader sense. In particular we examine three possibilities: first, that television may be one of the sources on which children draw in forming a sense of their society's structure and of their own place in that structure, second, that television may provide models for children's social behavior; and third, that television may play a role (perhaps a very important one) in the development of children's aesthetic sensibilities. The first two of these consequences have received considerable scholarly attention, and it is possible to be somewhat less than totally speculative in discussing them. The third, however, is as yet almost untouched as far as academic scholarship is concerned.

The notion that television teaches its viewers—young and old—how their society is organized and where they themselves fit into things (both as children and in their later lives) is present, explicitly or implicitly, in much writing on mass communication. Most of this writing has been concerned with television's portrayal of various demographic groups and with the consequences of these images for the belief systems of viewers—both those who belong to a particular demographic group and those who do not. The dominant assumption in this research is that those social strata that are relatively weaker in the real world are presented unfavorably on television and that viewers' perceptions of how things are—and should be—in reality are molded by these presentations, so that the weak come to acquiesce to their lack of power, while the position of the strong is reinforced. The most prominent instances of the application of this assumption have been the many studies concerning portrayals of sex roles (see Busby, 1975, and Tuchman et al., 1978, for reviews), older people (e.g., Gerbner et al., 1980), and ethnic minorities (e.g., Hartmann and Husband, 1974, Tan and Tan, 1979). Researchers working in this tradition have repeatedly found associations between amount of television viewing and adherence to some of the negative stereotypes that television is charged with perpetuating. For example, several unrelated studies have found that the more television girls watch, the less career-oriented their aspirations are likely to be (e.g., Beuf, 1974; Gross and Jeffries-Fox, 1978). These findings do not tell us anything about the direction of causality operating

here, but, in the absence of other data, they do lend empirical support to the more general assumption from which each particular study was derived In other words, the notion that television teaches children about social structure does have some support. It also should be evident that education of this kind may well have implications for schooling more narrowly conceived, since a child's sense of what his or her aspirations should be may presumably have some effect on the path he or she chooses to take in school.

A conception of television as a potential educator in a broad sense is present in much of the research on the medium's capacity to provide models for a viewer's behavior. This is the case with both of the directions this research has taken with regard to children: the investigation of the effects of television violence and the investigation of so-called prosocial effects (i.e., the encouragement of sharing, helping, and other forms of friendly cooperation). In both areas, investigators have amassed experimental and survey-based evidence of associations between television exposure and children's behavior (see Murray, 1980:29-39, 44-45, for a brief synopsis of this literature). On the basis of these findings, it is now widely assumed that the role of television in shaping children's real-life conduct has been demonstrated convincingly. We remain somewhat skeptical on the particulars. In our view the problem of disentangling real-life cause and effect from even complementary experimental and survey data remains substantially unresolved. That, however, is an issue for another essay.

The final, necessarily brief item on our list of ways in which television might contribute to children's education is that of aesthetic cultivation—in other words, the development of a capacity to enjoy the exercise or the display of artistic skill (see Gross, 1973). This area remains almost completely unexamined in scholarly writing on television (but see Thomas, 1982), although it seems indisputable that, for vast numbers of children and adults, this medium is the primary occasion for exposure to skills of visual composition, acting, narrative construction, and even music (although this last is unlikely to be the case for adolescents).

THE EFFECTS OF PARENTAL WORK STATUS ON CHILDREN'S TELEVISION USE

Having examined some ways in which television viewing might have educational consequences for children, we now turn our attention to another question. How might parental work status affect the link (if there is any) between television and the various educational consequences discussed above? In examining this issue we first consider the possibility that parental work status may affect the amount of television that children

watch. Second, we discuss possible effects of parental work status on the kinds of programs that children watch. Finally, we examine various ways in which children's experience while viewing may be affected by parental work status.

The assumption that parental work status may affect the amount of children's television use makes a great deal of sense: The absence of parents means absence of parental control over television viewing, which in turn may well mean more television viewing. Reasonable the assumption may be; accurate is another matter. The data from three local studies and a recent national survey show that the amount of viewing is more or less the same for children whether or not all resident parents are in the labor force. This result seems to hold for children from both one-parent and two-parent homes—although children in single-parent homes watch a good deal more television than do children from two-parent homes, overall.

The first local study was carried out among New Jersey adolescents by M. Morgan (personal communication) in the mid-1970s: 253 adolescents (ages 11-15) who had working fathers but not working mothers watched an average of 4.2 hours per day; 336 adolescents in the same sample with both parents working reported an average of 4.36 hours of daily viewing. The difference was not significant.

A second local study (Messaris et al., 1982) included middle- and working-class children ages 6-11 drawn from four schools in the Philadelphia metropolitan area. Once again, there was no significant difference, by parental work status, in the amount of viewing that parents reported for their children. Mothers with outside employment reported that their children watched about 2.25 hours per day. Mothers who were not in the labor force reported that their children watched 2.4 hours per day. Controls for social class and age of child in no way changed this pattern.

A third local study by Medrich et al. (1981) makes use of a largely black sample of sixth graders in Oakland, California. The basic result was the same as those of the Morgan and Messaris studies: 203 of the black children in the sample came from homes in which the mother worked full time, and 44 percent of them reported heavy viewing. Of the 85 children drawn from two-parent black families in which the mother was not in the labor force, 49 percent reported heavy viewing. Once again this represented no statistically significant difference. The small sample of white children also showed no differences associated with parental work status.

The richest data come from a recent national survey of parents and children completed in 1981 (F. Furstenberg and N. Zill, personal communication). Table 3-1 summarizes the data for overall viewing. Again, there are no statistically significant differences associated with parental work status, although there is a slight trend in the direction of the hy-

TABLE 3-1 Parents' Work Status and Children's Television Viewing Time (in Minutes)

	Two-Parent Homes		One-Parent Homes	
Children's Television Viewing	Only Father Works	Both Work	Mother Does Not Work	Mother Works
Daily	251.50	262.82	291.95	292.33
Standard deviation	(137.01)	(140.28)	(157.92)	(143.62)
Sample size	(353)	(363)	(134)	(160)
Morning	11.95	9.78	13.95	11.15
Afternoon	100.40	106.40	120.70	126.40
Evening	139.50	146.60	157.30	154.70

pothesis. To examine the issue with more precision, three regression equations were estimated. Only children whose parents' work status fell into one of the four categories in Table 3-1 were included in the sample for the regression analyses.

Each equation uses television viewing (total minutes, minutes in the afternoon, minutes at night) as the dependent variable. Four predictor variables (child's age, sex, educational level of the more educated parent, one-parent versus two-parent home) were entered into each equation: Together they account for 3 to 6 percent of the variance in the viewing variables. Once these four were entered, adding mother's work status to the equation added 0.2 to 0.3 percent to the variance accounted for, a negligible amount. The full equations are displayed in Table 3-2. Overall, the unstandardized coefficients suggest that children with working mothers watch about 15 minutes more altogether, about 9 minutes more in the afternoon, and 7 minutes more at night. Once again, such results should be taken quite lightly, since all three estimates include zero minutes difference in their confidence intervals.

The evidence from the four studies, and in particular from the national study, seems to converge: For all practical purposes, we can assume that children watch about the same amount of television regardless of parental work status. What are we to make of this? Does parental presence in the home really make no difference at all? It seems that we can explain the result in many ways.

Some parents who cannot be at home in the afternoon make sure that their children are engaged in away-from-home, after-school activities, perhaps to a greater degree than parents who know that one of them will be at home. If these children who are more likely to be away from home are combined with the children of working parents who are at home and thus have greater opportunity to watch, their average viewing time might look more or less like that of children who have a parent at home.

TABLE 3-2 Children's Television Viewing and Parents' Work Status: Regression Results

Dependent Variables	Education	Age	Sex	Number Parents	Working Mother
Total TV minutes					
Unstandardized coefficient	−9.96	−8.88	−20.39	−12.40	14.79
Standard error	1.58	2.82	8.75	10.31	8.82
(N = 1006; R Square = .058; Constant = 551.28)					
Afternoon minutes					
Unstandardized coefficient	−4.09	−6.09	−2.00	−11.18	8.94
Standard error	0.90	1.60	4.97	5.85	5.01
(N = 1006; R Square = .042; Constant = 253.56)					
Evening minutes					
Unstandardized coefficient	−4.71	−.44	−12.51	−1.87	7.44
Standard error	0.94	1.68	5.22	6.15	5.26
(N = 1006; R Square = .030; Constant = 229.48)					

SCORING. Education in years, age in years, sex = male (1) female (2); number of parents = one parent (1) two parents (2); mother working = no (0) yes (1).

Children who spend time at home alone (they are assumed to be more numerous among children of working parents) may watch more television than other children but may be less likely to admit it on questionnaires, since they may be under parental instruction not to watch.

It may be that, if only we did another study or looked more carefully at the interactions in the studies we do have, the expected differences would appear.

Or, most parsimoniously, we may conclude that adult supervision of the amount of television watched is in fact unaffected by parental work status, either because children of working parents are as likely to be under adult supervision as are other children or, conversely, because adults do not constrain children's television viewing anyway, and their presence or absence from the home is irrelevant. And if the 4.5 to 5.0 hours of television watched each day (reported by Furstenberg and Zill) is in fact the mean for all children, this latter conclusion seems most likely.

If current data are in fact faulty in one of the ways just described, is there be a better way to gather the data? Perhaps a natural experiment would be useful. In a situation of rapidly expanding female employment, if one or more regions of the country with particularly sharp acceleration in the rate at which mothers are joining the work force could be identified, then surveys of children's television viewing before and after the women enter the work force should prove informative. Data gathered at several points in time would be particularly helpful. To be honest, however, we

do not expect that such data would lead us to any different conclusions from the one already expressed.

PARENTAL WORK STATUS AND GUIDANCE OF CHILDREN S PROGRAM CHOICES

In this section we examine whether parental work status may have some effect on the kinds of programs children watch—and hence on the kinds of information they are exposed to. By ensuring the parent's absence from the home during what may be a good portion of a child's daily TV viewing hours, outside employment may make parents less able to monitor and guide their children's TV program selections. If working parents do in fact exercise less control over their children's viewing because of this difficulty and if the absence of parental guidance makes children less likely to watch programs with an educational component (i.e., programs that may provide information about or stimulate interest in topics also covered in school), then children's performance in school may conceivably be affected by this set of circumstances. But how plausible is each of the components of this chain of possibilities?

First, how much sense does it make to ask whether differences in amount of parental guidance influence a child's viewing patterns? Is there any evidence that parents in general do exert any appreciable amount of control over children's program selections, or are most parents so lax in this area that differences among them mean very little?

The most detailed data on this question come from a study by Mohr (1979), based on a probability sample (from Sedgwick County, Kansas) of some 2,500 children in grades 4-9, both of whose parents were also asked to fill out questionnaires. Parents and children were asked to indicate on a 5-point scale (ranging from "must watch" through "no advice" to "must not watch") the degree of parental guidance on each of some 70 prime-time and Saturday morning network programs. The major finding of this study was that guidance, as measured in the study, was generally very low. For almost every one of the 11 categories into which Mohr classified the programs, fewer than 10 percent of the parents reported any degree of negative guidance, and the percentages for "positive guidance" were even lower. But there were two exceptions to these trends. First, about a quarter of the parents said they exercised negative guidance regarding adult dramas. Second—and this is the exception that concerns us here—23.7 percent of the parents said that they exercised positive guidance with regard to news and information programs. (The only demographic variable that made any appreciable difference in these figures was "race". The percentages for blacks were higher than those for whites.)

This set of findings indicates that the notion of parental guidance of

children's television viewing is not entirely fictional—or, at least, that it is not our fiction—and that the direction of this guidance may be toward more educational TV fare. There is also a suggestion in Mohr's data that children are unlikely to watch such programs without parental pressure: Mohr found very strong negative correlations between the degree of positive parental guidance and the extent to which children said they liked the programs on which such guidance was exercised (Mohr, 1979:220). Having found some grounds for believing this much, and despite certain reservations that we shall examine presently, we can go on to ask about the relationship between parental work status and the kind of guidance we have examined above.

Unfortunately, the Mohr study does not provide any useful information; nor do two other, less detailed studies include parental work status as an independent variable (Greenberg et al., 1972; Rossiter and Robertson, 1975). Crude data on the question we are interested in are available, however, from the Messaris study mentioned earlier (based on a nonprobability local sample of some 300 mothers). Three relevant questions were asked in this study: (1) "How often do you encourage (name of child) to watch a particular program on television?" (2) "How often do you forbid or try to prevent (name of child) from watching a particular TV program or watching TV at a particular time?" (3) "How often do you have arguments with (name of child) about his/her TV watching?" The mothers answered by means of a 4-point scale: "never," "rarely," "sometimes," "often." The study found that mothers with either full-time or part-time employment outside the home (no distinction was made between the two) report slightly less positive guidance as measured here: 66 percent of nonworking mothers and 58 percent of working mothers exercised such guidance sometimes or often. No significant differences were noted for either of the other two questions. These data are obviously not to be taken as the last word on the subject, but they are mildly consistent with the belief that parental work status does affect the degree to which children receive encouragement to watch educational programs.

Thus there is at least some evidence that working mothers are less likely to report giving children guidance on program choice and that parental guidance, when given, does recommend educational programs. Both inferences rely on parental self-reports of their behavior, always a worrisome procedure when the behavior reported is positively valued. The Mohr study finds that parental and child reports of supervision were substantially correlated, however, somewhat easing our concern. But there is no evidence that parental guidance about program choice has any effect on actual program choices by children. And that, along with the questionable assumption that enhanced viewing of educational programs leads to changed

school-relevant outcomes, is the crucial issue. At this point the guidance hypothesis can only be considered mildly intriguing. Before we leave this issue, however, one more speculative consideration is worth examination.

One problem with using participants' accounts as evidence for the kinds of phenomena of interest here is that this method restricts inquiry to those kinds of behavior that are relatively deliberate, within awareness, and accessible to retrospection. But why should we assume that behavior that meets these criteria is the only way—or even the most important way—in which parents influence thei children's program selections? There are data that suggest less obvious links between parental behavior and children's program choices and preferences (see Moles, 1981:6-7, for a useful review). One possibility is that children may model their parents' program choices (or, less directly, aspects of parental behavior with some implication for program choices). Another possibility is that parents' general socialization styles may influence children's viewing behavior regardless of whether parents also attempt to exercise explicit guidance of viewing. Support for both assumptions has been found in several studies by Chaffee, McLeod, and their associates (e.g., Chaffee et al., 1971; McLeod et al., 1972a, 1972b). However, as the authors indicate, the findings with regard to the first of these assumptions are subject to an alternative interpretation: that parents model children's viewing patterns. In any case, their findings regarding the second assumption are more obviously relevant for our purposes. Parental encouragement of open expression and diversity of opinion is associated with an information-seeking orientation to television on children's part. Since this aspect of a parent's socialization style may well be affected by the nature of his or her work experience (Kohn, 1977), the possibility exists that we have here an indirect mechanism through which parental work status may affect the educational character of children's television viewing—although the overall distinction between mere presence and absence of outside employment does not seem likely to be the critical variable in this case. At any rate, in the absence of any data directly relevant to this point, all we can do is mention the possibility and leave it open. The same must be said about the possibility that parental work status may influence children's program choices through some form of modeling. While it can certainly be argued that parental work status influences children's educational aspirations and hence the way they approach television (although this may be stretching things), there is no way to check the latter part of this assumption with existing data. Once again, a simple working/not working dichotomy may be too crude a conceptualization of what aspect of work status makes a difference here (but see Chapter 6).

PARENTAL WORK STATUS, FREQUENCY OF PARENT-CHILD COVIEWING, AND CHILDREN'S MENTAL PROCESSING OF TELEVISION CONTENT

Aside from making it physically impossible for parents to supervise their children's viewing at certain times, employment outside the home also makes it impossible for them to join their children at the set and/or to talk to them about what they are watching. Does this fact have any consequences for children's ways of dealing with what they see on television and, furthermore, do any such consequences have educational implications? As a prelude to dealing with these issues, it may be useful to discuss certain more general questions about parent-child coviewing: How often does it occur? What is it likely to involve? What antecedent variables are likely to influence its shape? Tentative answers to these questions will provide us with the necessary background for examining the more specific topic of this section.

Parent-Child Coviewing: An Overview

How often does coviewing happen in the average household? Available data on this point suggest that it is indeed a likely occurrence for most families. The clearest indication of this comes from Bower's (1973) national survey of viewing behavior. One of Bower's questions had to do with the likelihood of some joint viewing, on the "average day," in families with at least one child. As one might expect, the figures varied according to the number of sets in the household, but in all cases they were high: 94 percent in single-set homes (N = 1,036); 80 percent in two-set homes (N = 543); and 66 percent in three-set homes (N = 160). As for the number of hours spent watching together on the average day, mothers interviewed in the Messaris study cited earlier gave a mean estimate of 1.3 hours (standard deviation. 1.0) of daily coviewing with their children of elementary school age (compared with an estimate of 2.5 hours for their own total daily viewing). These figures reassure us, then, that it makes some sense to proceed with an examination of what goes on when parents and children watch together. The obvious next question is whether there is likely to be any kind of interaction between parents and children at such times.

Data on what happens during coviewing are less clear than the figures we have examined above. As a result of some early findings of little interaction among family members in front of the television set (e.g., Maccoby, 1951, Steiner, 1963:101-103), it is often assumed in current writing on the subject that parent-child discussion while coviewing is a

rare phenomenon. More recent data, however (e.g., Barcus, 1969; Lyle and Hoffman, 1972), do not support this notion. One possible explanation of this trend is that, with the passage of time, television has increasingly come to be treated as part of the normal background of family life, so that people talk and do other things while it is on, whereas in the past it was accorded more focused attention. Such a conclusion is certainly consistent with the findings of a handful of studies involving direct observation of families' viewing behavior (e.g., Bechtel et al., 1972; Lull, 1980), most of which describe an overwhelming variety of things going on in front of the set, among which watching is not necessarily the most frequent. Assuming that such findings are not misleading about the likelihood that parents and children do actually interact in some way while the television set is on, we can go on to ask what form these interactions are likely to take.

When parent-child coviewing is discussed in the popular press (e.g., the advice columns of the Singers in *TV Guide*), what people are usually concerned with is to encourage active intervention by parents in their children's uses of and reactions to television. Our concern, however, is not what could be (or should be) but what is. What evidence we have indicates that deliberate involvement by parents in their children's viewing is not something that occurs often enough for us to want to predicate the rest of this section on its existence. Admittedly, the data are not systematic on this point, but we can draw unambiguous provisional conclusions from two kinds of related findings. First, as we have already seen in our discussion of Mohr's (1979) study, parental guidance of children's program selections, which may be taken as one indication of how much deliberate involvement there is, is generally very low. Second, an exploratory study by Messaris, involving open-ended interviews with 120 Philadelphia-area mothers about television-related interactions in their families, turned up very few examples of planned, deliberately instructional maternal comments about television. Our assumption is therefore that most parent-child discussion about television is likely to be casual and fleeting. As to the topics of such discussions, possibilities are suggested by Messaris's exploratory study and by other descriptive work on television and the family (e.g., Anderson et al., 1979; Lull, 1980; Messaris and Thomas, 1981). We emphasize strongly that this discussion is very tentative and in many respects based more on speculation than on strict induction from the data.

As a general rule, parent-child discussions about television appear to be initiated by the child rather than the parent. Among the kinds of occurrences that can precipitate such discussions, three general types stand out. first, a child's incomprehension of some point in a program or of a parent's response to that point, second, a child's distress at some disturbing

element in a program, and, third, a parent's disapproval of a child's response to some aspect of a program or, very often, a commercial message. The particular form that discussions are likely to take in each of these categories varies strongly with the age of the child. For our purposes we distinguish very roughly between younger children (through the first few years of elementary school) and older children (through the early years of adolescence).

From the point of view of this paper, the most important of the three categories of parent-child discussion mentioned above is the first. With younger children, incomprehension of television programming is not only a matter of lack of background information but also in many cases a result of incomplete familiarity with the "language" of television. Parents (or, in fact, any adult viewers available) are thus occasionally called on to explain some aspect of narrative construction (e.g., a transition to a dream sequence) or plot structure (e.g., the relationship between what happened before the commercial and what the child is seeing now). These explanations, usually extremely casual and offhand, may play an important part in children's growing mastery of the medium; they may also have other consequences, which we shall examine below, in relation to schooling. Aside from this kind of explanation, parents are also called on to supply background information that a child does not have, and this kind of explanation (also a casual occurrence) seems to happen quite often, not only with younger children but also with older ones. While much of what a parent may have to explain on such occasions may be unrelated to education in the stricter sense (e.g., sexual innuendo in a joke), there also seem to be many instances, especially with older children, in which the topic of the child's question does have a fairly obvious bearing on educational matters (e.g., vocabulary or the historical background of a movie seen on TV). We discuss this sort of parent-child talk in further detail below.

Although less directly related to our present concerns, the second type of parent-child discussion (occasioned by various kinds of distress on a child's part) may be the most significant of the three, in terms of a child's overall development. With younger children this kind of discussion seems to be a typical occurrence, brought about by children's fear of monsters and other imaginary creatures seen on television (e.g., the wicked witch in *The Wizard of Oz*, whom many mothers describe as having terrified their children). The parent's solution to this kind of problem, of course, is to teach the child about the nature of fantasy and fiction. With older children, however, discussions of this general type do not admit of so simple a solution, because the cause of distress is often realistic or real (e.g., scenes of torture or other forms of cruelty, both in fictional programs

and in the news). In such cases, the parent is charged with accounting for the existence of evil and suffering—and it should not surprise us, perhaps, that many parents report that the only thing they can do in these situations is to confirm the fact that the world outside the home is often a nasty place (see Messaris and Thomas, 1981).

The third category of parent-child discussion is occasioned by a parent's reaction to something a child does in response to television. This kind of situation seems to happen primarily with younger children, who often have to be cautioned not to imitate certain things they see on television (e.g., trying to fly like Superman, or poking one's brother or sister in the eye in imitation of the Three Stooges), but there are also other ways in which a child's reactions to television may lead a parent to intervene. For example, the mothers interviewed in the Messaris study often mentioned having to educate their children about the mendacity of commercials after being pestered with continuous requests for expensive or harmful products (see Robertson, 1979). Discussions of this general type (i.e., disapproval of a child's reaction to television) have been examined in experimental settings, and the results are encouraging about the prospects of real-life parental comments of this kind.

As we have indicated above, an important antecedent variable influencing the form of the parent-child discussions we have looked at is the child's age. In comparison with age, none of the other variables that we have been able to examine in this connection seems to play a major role here. Two studies by Messaris and his colleagues (Messaris and Thomas, 1981, Messaris et al., 1982) do indicate that social class (especially its educational component) and overall family socialization style make some difference, but the differences are not substantial enough to require discussion in a preliminary treatment such as this one. We reserve discussion of the one variable that is of greatest importance to this paper—parental work status—for the appropriate place below. To conclude this review of coviewing and associated discussion, we briefly raise the issue of whether there is any evidence that it does influence children's behavior in any way.

As it happens, there is at least one area in which there is substantial support for the notion that parental commentary can make a difference to children's responses to television, the relationship between television violence and real-life aggressiveness (see, for example, Dominick and Greenberg, 1972, Grusec, 1973; Hicks, 1968; Korzenny et al., 1979; McLeod et al., 1972a, 1972b). There are also several general arguments in favor of the proposition that children's responses to any aspect of television are likely to be conditioned in important ways by family viewing context, assuming there is one (Chaffee, 1972; Leifer et al., 1974; Messaris and

Sarett, 1981). In principle, therefore, we do have some basis on which to proceed with our investigation of specifically (or narrowly) educational consequences of coviewing—and, of course, with the additional question of whether parental work status makes a difference in these matters.

We shall examine three partly related assumptions about ways in which coviewing might have an educational influence on children. The first assumption is that parental coviewing may inhibit the development of short attention spans, incoherent information processing, and other deleterious mental habits that television is often charged with fostering. The second assumption is that parental coviewing may contribute to children's mastery of television's visual syntax and, consequently, of the cognitive skills that this mastery has been said to entail. The third assumption is that parents' informational commentary about a program may contribute to children's knowledge about topics related to the formal educational curriculum. There is some evidence—not much and not entirely satisfying—in favor of these assumptions. After examining each of the assumptions and the associated evidence, we talk about the likelihood that parental work status may affect these processes.

Coviewing and Children's Attention Spans

The first assumption we consider is that parental coviewing may affect the degree to which children pay sustained attention to what they see on television and the degree to which they construe programs as overall structures (as opposed to unrelated fragments). The implicit link to school performance should be evident here, since it appears frequently in public denunciations of television. Attentiveness and coherence of interpretation in the presence of television may conceivably be related to a child's attentiveness to and awareness of the logical structure of material encountered in class (Hornik, 1981:202-203). However little support there may be for the latter part of this overall assumption, is there any reason to believe that parental coviewing makes a difference? Although the question has not been dealt with directly, there are in fact some findings that are, if anything, supportive of such a belief. To begin with, a useful experimental study by Collins et al. (1981) indicates that appropriate commentary by an adult can indeed increase a child's ability to deal with a television program in terms of structural interconnections among its parts. In this study, children were shown a dramatic television program in the presence of an adult who, at three points in the program, made one of two kinds of comments, either a facilitating comment, which made explicit a plot connection that the program did not show directly, or a neutral comment, which merely put into words the action on the screen.

The children were then tested on their ability to make various inferential connections among parts of the program. Those who had heard the facilitative commentary did better, not only on those questions directly related to the comments but also—and this is the more important finding—on questions about other aspects of the plot structure (Collins et al., 1981:161). This study gives us some reason to believe that commentary of this kind can lead to "better" viewing habits (in the limited sense we are considering here). But is there any reason to believe that parents do in fact make such comments to their children while watching television with them?

On this question the only data are from the exploratory study by Messaris, in which mothers were asked to give examples of the kinds of television-related discussions that typically occurred in their families. Relevent data came from the following question. "Do your children ever ask you to explain your response to something on television?" More than 50 percent (55.7 percent of an opportunity sample of 120) of the mothers gave specific examples of such discussions. While some of these involved explanations of background material needed to understand some aspect of the content of a program, many others involved explanations of (or, very often, merely emphasizing or pointing to) relationships among parts of a program that a child had already seen. Since this study required respondents to give actual examples (rather than simply estimating the frequency of such situations), it is probably safe to treat this evidence as support for keeping alive the assumption that parental commentary may in fact have something to do in real life with the interpretational tendencies that children develop in response to television. In any case, this is the only evidence we have on this specific part of the assumption.

Coviewing and New Cognitive Skills

The second assumption is closely related to the first and can be dealt with very briefly. The starting point for this assumption is the McLuhanesque hypothesis that the most important intellectual consequences of exposure to television stem from the types of mental operations that one develops in dealing with the medium's most typical modes of organizing and presenting information. One form of this more general hypothesis has been formulated and tested, with considerable success, by Salomon (1979), whose work has led to much speculation about possible implications for formal schooling (Hornik, 1981:204-206). To what extent is this aspect of children's dealings with television influenced by their parents' ability to coview and discuss things with them?

Systematic data directly relevant to this point are nonexistent. To some

extent, however, what we have already said about the first assumption may have some bearing here, too. The crux of this connection is the possibility that a child's handling of the syntactic devices discussed by Salomon and others (i.e., modes of temporal and spatial juxtaposition within and across shots) may be affected considerably by commentary that explicates the syntax before it has been fully mastered. (In fact, one could argue that such direct "tuition" is a prerequisite for mastery of this visual syntax, although even in the case of language proper such arguments are controversial.) In other words, very much the same order of parental involvement discussed in the previous section could also make a difference in this case. For instance, one mother in the Messaris study gave the following account of her daughter's experience with a standard device, the flashback. In an episode of "The Incredible Hulk," a young woman whom the Hulk saves from drowning remembers, in flashback, the death by drowning of her sister. On first seeing this episode, the child did not understand the correct sequence of events and wanted to know why the Hulk has allowed the second sister to drown after saving the first one. By supplying the correct interpretation at that point, the mother presumably contributed to her daughter's eventual mastery of this particular syntactic device.

Coviewing and Information-Giving

We have been considering the possibility that the commentary of coviewing parents may contribute to the development of certain cognitive tendencies or skills that may be carried over from television to a child's in-school behavior. But there is also another, more obvious contribution that parents' television-related comments may make to children's educational progress. Commentary of this sort might simply provide children with background information on a variety of topics of some relevance to the formal educational curriculum (for example, history or government) This possibility has occurred to several investigators, and there are consequently some systematic data against which to test it.

Data on the effectiveness in principle of coviewing adults' commentary have been accumulated in several experiments by Corder-Bolz and his colleagues (Corder-Bolz, 1980; Corder-Bolz and O'Bryant, 1978). The typical design was similar to that of the study by Collins et al., 1981 (one group with informative commentary and the other without it), and the results were not surprising. Children who were given the informative commentary were better able to answer questions about the program content to which this commentary was addressed. Once again, of course, we must ask how likely it is that this kind of commentary occurs in real life.

There is some direct evidence, which we shall get to shortly, and there is also some indirect evidence, from two studies that have found connections between coviewing and children's knowledge about various aspects of program content.

In the first of these studies (Salomon, 1977), Israeli mothers were asked to watch "Sesame Street" with their children over a six-month period but were not asked to make any particular kinds of comments—or, indeed, to make any comments at all. In comparison to children whose mothers had not been given such instructions, the children who watched with their mothers had higher scores on certain measures of information gain from the programs. Of course, it is quite possible that this information gain was due solely to heightened attention, of the kind we discussed earlier, since it is unclear to what extent the tests Salomon used were tied strictly to the content of the programs themselves. (Furthermore, data from Israel may not be relevant to inferences about this kind of behavior in the United States) The second of these two studies is clearer on this point. Messaris and Kerr (1982) found that children's knowledge about the occupations of certain television characters was positively related to frequency of mother-child coviewing and discussion of the programs in which these characters appeared (even in the presence of the appropriate controls for viewing frequencies). Since this study was measuring aspects of occupational knowledge that were not covered in the programs themselves, it seems safe to conclude that the specific content of mothers' comments, rather than the mothers' presence, must have had something to do with these results. In any case, both studies lend some weight to the proposition that parental commentary does have some real-life effect on children's learning in the presence of television.

For the most direct data on frequency of parents' informational commentary about television, we turn once again to the study by Messaris et al. (1982) mentioned earlier (forced-choice questions with 332 mothers). The interviews used in this study contained several questions about mothers' informational commentary in relation to television. These questions were prefaced by the following introduction. "Now, what I'm interested in is cases in which you've given (name of child) information in connection with a TV program—in other words, cases in which a TV program has led to a discussion of a particular type of information." The interviewer would then proceed to ask about several areas of information, of which the most relevant for our purposes are. vocabulary (i.e., explanations of words a child had not understood), historical background, geography, science, the mechanisms of human reproduction, adult occupations, and "things of general interest." Responses to all of these questions were given on the 4-point scale described earlier, and the response frequencies

are given, as marginals, in Table 3-3. Perhaps the best way to summarize these data is to point out that, for each of the four areas that are solidly within the bounds of the traditional educational curriculum (vocabulary, history, geography, and science), only a third or so of the respondents answered "rarely" or "never." Of course, there are problems with such data. They come from a nonprobability sample, the measure of discussion frequency is not tied to any explicit common standard, and we cannot tell how much the mothers may have inflated their estimates in talking to the graduate students who interviewed them, but they are the only data of this kind available. Together with the other findings cited above, they tell us that we do not yet have a good reason to discard the assumption

TABLE 3-3 Frequency of Mothers' Informational Comments to Children About TV, by Type of Information and Mothers' Work Status

	Response Category				
	Never (%)	Rarely (%)	Sometimes (%)	Often (%)	Chi-Square[a]
Vocabulary					
Nonemployed mothers	13 5	23.4	41 5	21.6	
Employed mothers	18 0	19.9	39 1	23 0	1.76
Total sample	15 7	21.7	40.4	22.3	
History					
Nonemployed mothers	11 8	17 6	45.9	24.7	
Employed mothers	11 8	27 3	41 0	19 9	4.78
Total sample	11.8	22 4	43 5	22.4	
Geography					
Nonemployed mothers	12 9	21 2	43 5	22.4	
Employed mothers	6 8	30 4	43.5	19.3	6.24
Total sample	10 0	25.7	43 5	20.8	
Science					
Nonemployed mothers	17 0	17.0	38 0	28.1	
Employed mothers	10 6	18 0	42 2	29.2	2.91
Total sample	13 9	17 5	40 1	28.6	
Human reproduction					
Nonemployed mothers	30 6	23 5	34 1	11.8	
Employed mothers	39 4	20 0	27 5	13 1	3 59
Total sample	34 8	21 8	30 9	12.4	
Adult occupations					
Nonemployed mothers	25 1	24.6	36 3	13.5	
Employed mothers	26 9	26.3	33 8	13.1	1.28
Total sample	26 0	25 4	35 0	13.3	
General interest					
Nonemployed mothers	3 5	26.3	46 8	23 4	
Employed mothers	4 3	34 8	36 0	24.8	4.48
Total sample	3 9	30 4	41.6	24.1	

NOTE: Total sample N = 332, nonemployed mothers, N = 171, employed mothers, N = 161

[a]All chi-squares not significant

that parental commentary may add to the educational quality of children's television viewing in everyday life and not just in experiments.

Parental Work Status and Coviewing

To return to the broader question. How does parental work status affect the processes we have just outlined? Do we have any evidence that employment outside the home prevents parents from watching and talking about television with their children as much as they otherwise would? Once again, our only source of data is the study by Messaris et al. (1982); but since we are examining relative frequencies only, rather than absolute numbers, the reservations we expressed above are less damaging. Table 3-3 presents data on the relationship between mother's work status (absence or presence of employment outside the home) and frequencies of the kinds of informational comments we discuss above. As the table shows, there are no significant associations (nor does this situation change when we control for social class, although this part of the analysis does not appear in the table). This study also contained a broader question on mother-child coviewing (a modified version of the standard viewing-frequency question used in the National Opinion Research Center national survey). "Approximately how many hours of television would you estimate that you and (name of child) watch *together*, in each other's company, on the average day?" Here, too, we find no relationship to mother's work status, even though the equivalent question for the mother's own total viewing did yield the expected relationship. In short, there is nothing in the data presently at our disposal to suggest that parental work status has any effect on the amount of time that parents spend watching and talking about television with their children. Consequently, we are bound to conclude that there is no support for the overall assumption that parents' work status affects the educational quality of children's use of television by making it less likely that parents will spend time in television-related activities with them.

Before concluding this section, however, we should note that there may be other, more complicated links between parental work status and coviewing. In particular, it may be that mere presence or absence of employment outside the home is too global a variable for our purposes. Rather, what counts may be certain details of the parent's relationship to work. In a review of findings about the effects of mothers' employment on children's lives, Hoffman (1974) concludes that mothers' attitudes (satisfaction, resentment, etc.) toward their jobs (or the absence of a job) are of greater consequence for the mother child relationship than the mere fact of employment outside the home. More recently, D'Amico, Haurin,

and Mott (Chapter 6) have reported preliminary findings that support this general conclusion. What are the implications of such findings for the processes we have examined in this paper? Since a simple employed/nonemployed dichotomy is likely to lump together, on both sides of the dichotomy, people with very different attitudes toward their current status (employed or otherwise), it could be that the data we have looked at obscure certain underlying differences that might have been revealed if attitude toward employment had been available for inclusion in the analysis. One possibility that suggests itself is that employed mothers who are happy with their jobs make an extra effort to spend some time watching television with their children (or sharing in other activities, of course), while employed mothers who find their jobs too demanding react by withdrawing from their families at home. These two types of mothers might end up, then, on opposite sides of the nonemployed mothers with regard to amount of coviewing—a difference that would be masked if the only work related variable used in the analysis were the presence or absence of employment. Unfortunately, the available data on the kinds of issues we have examined in this paper are in fact limited to that single global distinction, and we must therefore leave this point on the level of pure speculation.

CONCLUSION

This paper was structured around two basic questions. First, does children's television viewing have any educational implications? Second, does parental work status have any influence on the television-education link? Our examination of the first question indicates that there is evidence of a negative relationship between television viewing and reading skills, and some of this evidence supports the conclusion that television is the causal agent in the relationship. There is no other solid evidence of a relationship (outside the laboratory) between television and any schooling outcomes, but there are several possibilities that have not yet been investigated adequately. With regard to education in a more general sense (i.e., going beyond schooling), television viewing has been found to be related both to children's perceptions of social reality and to certain qualities of their interpersonal conduct (aggressiveness, prosocial behavior), but interpretations of the direction of causality in these relationships (when measured outside the laboratory) are problematic. Again, it should be emphasized that there are aspects of television's potential educational effects that are almost entirely untouched by formal research.

With regard to the second question, we have quite good evidence that parental work status is not related to the amount of children's television

viewing and some tentative evidence that parental work status may have consequences for children's program choices. Working mothers may be less likely to guide their children's viewing toward explicitly educational programming. Finally, we have a variety of evidence and speculation on whether and how parent-child coviewing may influence the educational quality of children's encounters with television. There are many indications—some strong, some not so strong—that coviewing can influence the cognitive skills and tendencies as well as the stock of information that children may develop in conjunction with television viewing. There is no indication, however, that presence or absence of parental employment outside the home has any influence on the relevant aspects of coviewing. Other aspects of parental employment (such as degree of job satisfaction) may make a difference here—although the lack of pertinent data has prevented us from examining such a possibility in any detail. We conclude, therefore, on a wholly appropriate note of uncertainty.

AFTERWORD

This paper, motivated to some extent by a concern for the impact on the family of trends in patterns of employment, has not dealt at all with the process of change in television itself, and there are numerous projections of what the likely trends might be in this area. In considering the consequences of these trends for the processes we have just examined, we offer a very quick review of four projected developments in the state of television: cable television (including pay-cable services), video recording and playback devices (tapes and disks), video games, and home computers.

Cable television has already made considerable inroads into broadcast television, and its projected growth is expected to continue. Its penetration of the nation's TV households has risen from 7.6 percent in 1970 to 20 percent in 1980, and it is expected that the figure for 1990 will be about 60 percent. Pay cable, which had a penetration of 10 percent in 1980, is expected to reach over 45 percent by the end of the decade. The standard assumption about cable is that its vast channel capacity (compared with the number of broadcast channels with good reception) will lead to more selective viewing and, some say, to greater use of educational and cultural channels. Perhaps this will come about, but we doubt it. For one thing, current ratings for most public television fare suggest that its audience is minuscule. Furthermore, print media, in which great diversity already is available, are still characterized by mass consumption of a few supermarket-rack magazines and best-sellers.

The same reasoning leads us to expect little substantive change from the increasing use of video cassettes and video disks, even though both

of these media undoubtedly have a bright economic future: The sale of video cassette recorders went up 70 percent in 1981, while video disks, despite gloomy press notices, did better in their first year on the market than any other comparable innovation (e.g., color TV).

The two developments that do seem to us to have potentially significant consequences for the kinds of processes we have been discussing in this paper are the video game and the home computer. The proportion of U.S. households with video games is still relatively low (8 percent in 1981, up from 3.5 percent in 1980), but the video game industry is the fastest-growing segment of the toy market, and manufacturers assume that a 50 percent penetration figure is attainable reasonably soon. Predicted annual growth rates in the sales of personal computers are in the 30-50 percent range for the next few years. Both of these technologies engage the user's mind in ways very different from those that are presumably characteristic of television viewing, and both may displace some of the time spent now with television. It seems reasonable to expect that their impact, if and when they do achieve more substantial penetration, will be considerable. However, as is—or should be—the case with most predictions about the social consequences of technological change, this one is offered with very little confidence.

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4

Changing Patterns of Parental Employment and the Family-School Relationship

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In the past decade in the United States, dramatic shifts in family work patterns and family structure have occurred as more and more mothers, both married and unmarried, have entered the paid labor force and as the number of single-parent families, mostly female-headed, has increased. These changing social patterns have entailed changes in the nature of roles and relationships within families and between families and their communities (Bronfenbrenner and Crouter, 1982). As a consequence, the needs of many families for outside supports and services have also changed.

Schools are among the most prominent community institutions in the lives of families with children, and as a result they have frequently been called on to provide supplemental services to meet the social, emotional, and physical, as well as educational, needs of children and their parents—oftentimes without regard for their capacities or capabilities to do so. Indeed, over the past several decades, schools have been called on and have often assumed an increasing role and responsibility for a broad range of socialization and education activities in addition to teaching basic skills, among them health screening services, the provision of breakfasts and lunches, organized recreational activities, extended day care programs, special counseling for parents and children experiencing social and emotional problems, and adult education (Cuban, 1980; Tyack, 1974).

Because schools are institutions largely guided and supported by local communities, however, the types of supplemental supports and services they provide differ according to the availability of resources, prevailing political and ideological forces, and the perceived needs of the families

they serve. The ways in which schools have adapted to recent changes in family work patterns and family structure undoubtedly vary greatly from community to community and from school to school. Similarly, individual families have undoubtedly made their own accommodations and adjustments to the policies and practices of the local schools they depend on.

Historically the collaborative relationship between families and schools suggests that schools respond to sociological changes in the family, or at least that the repercussions of such change will influence their policies and practices. Implicit in an ecological model is the assumption that family changes or school changes or both will influence the family-school relationship. Therefore it seems obvious that schools and community institutions will be responsive to changing family demographics and the conditions of childrearing associated with them. This paper is based on this assumption and is intended to explore the effects of changing parental work patterns, specifically maternal employment, on the school family relationship and on children's school-related behavior.

Preparation of this review began with a search for school responses to changing patterns of maternal employment. In the process we found no systematic national data on adaptations by schools (public and private, elementary and secondary) across the country. Available information was largely anecdotal, describing the practices and policies of one school or one school system, unrelated to the experience of other schools in communities sharing similar social, economic, demographic, and geographic characteristics. From available evidence we found neither systematic policies regarding the schools' role vis-a-vis family circumstances nor systematic responses by schools. Similarly, we found no studies directly examining the impact of maternal employment on alternative school settings. In the absence of data directly addressing these issues, therefore, we searched more broadly and considered models of the family-school relationship, extrapolating from these to home-school relations and the effects of parental employment on school behavior. Three aspects of the family-school relationship are considered in this analysis: (1) the relationship of families and schools as institutions within society, (2) the specific mechanisms and modes of contact between individual families and schools, and (3) similarities and differences in the home and school settings as they are experienced by children.

INTERINSTITUTION RELATIONSHIPS

Educators have written descriptively of the multiple ways that schools relate to families as a constituency group and to other interested members of the community. Schools direct significant efforts toward maintaining

cooperation and support with other groups in the community (Kim et al., 1976, Wallat and Goldman, 1979). The implication is that constituent support and congruence are necessary conditions to the accomplishment of the educational and socialization goals of schools.

Conceptual frameworks for examining the dynamic aspects of an interinstitution relationship such as that of families and schools have not been well developed. Most research on schools and families as aggregates has been carried out as if each institution could be examined as a distinct, independent entity. Thus, little systematic study of the processes by which schools and families influence one another and the children within each system has been attempted. Viewing society as an ecosystem in which changes in one area produce changes in another has led to growing concern with understanding the processes and mechanisms by which the parts are interconnected. Research on schools and families as institutions that are strongly influenced by this ecological process is just beginning to be designed and reported. Thus, while social scientists have become increasingly aware during the past decade of interrelationships between ostensibly separate institutions (e.g., Bateson, 1972; Bronfenbrenner, 1979; Leichter, 1978, Trickett et al., 1972), the lack of paradigms for understanding and investigating interinstitution relationships has limited this type of study.

Analysis of the family-school relationship at an institutional level involves some special considerations. The two institutions have overlapping goals but may differ in values and the assignment of priorities. And the child is simultaneously a member of both settings and is a primary link between them. Litwak and Meyer (1966, 1974) have proposed a theoretical framework describing family-school interaction that takes into account some of the major distinctions between primary groups and bureaucratic organizations. They suggest that most major tasks in our society, such as education and socialization, are not carried out by a single institution but by both bureaucratic organizations (e.g., schools) and primary groups (e.g., families). These institution-level tasks are accomplished most effectively and efficiently when adequate cooperation between the institutions exists. Each institution has unique and, to a great extent, mutually exclusive strengths.

For example, bureaucratic organizations stress expert knowledge, transitory membership, and merit, while families stress nepotism, permanent membership, and deep affectional ties. The bureaucratic organization is generally ill prepared to handle novel or unique events, operating instead by standard rules and procedures uniformly applied. "In contrast, the strength of the primary group is seen to lie in speed of adaptation and flexibility in meeting nonuniform events. The primary group is incapable of dealing with large numbers of people and is deficient in professional

expertise" (Litwak and Meyer, 1966.37). To accomplish the dual goals of childhood education and socialization, both sets of strengths are important

Because of these differences, Litwak and Meyer propose that if each institution is to function smoothly, a certain distance must be maintained between them—a distance great enough to avoid conflict and yet close enough to solve mutual problems. They argue further that social distance is a function of the degree of consonance between various institutions' goals and values. When family goals and values are fairly consistent with those of the school, for instance, social distance is hypothesized to be slight, and presumably the two institutions are working in congruent, mutually supportive, parallel ways. When optimal distance is maintained, institutional goals and outcomes should be maximized.

Lightfoot (1978) has characterized family-school relations as inherently conflict-ridden. She suggests that the differing priorities and perceptions of families and schools—e.g., concern for the individual versus responsibility for group progress—will place them in conflict over the means and mechanisms of accomplishing their mutual goals of education and socialization. Recognizing similar differences between primary groups and bureaucracies, she argues that collaboration is generally a one-way process, with the school rarely accommodating in any significant way to family needs.

Kim et al. (1976.4) describe the family-school relationship as competitive and conflicting at times and cooperative at other times. The extent to which families and schools compete and conflict varies according to sociopolitical conditions:

> In a relatively stable, homogeneous society, there is little controversy surrounding the tasks and functions of the school. This leads to cooperative "give and take" relations between school and community. Consequently parents enjoy supporting the school system, which provides their children with basic skills, knowledge, and values regarded as positive. On the other hand, a society pervaded by rapid change or faced with social crisis produces conflicting ideas and beliefs about the school's role, which in turn leads to conflicting demands upon the school. Unless the contrasting demands or conflicts are resolved, the relationship becomes competitive and the school is forced to respond to criticisms and challenges from outside. A dynamic approach to the improvement of home-school-community relations is then needed.

Each of these models postulates two related constructs—social distance and congruence between families and schools—to predict the qualitative nature of family-school relations and in turn the balance of responsibility for education and socialization shared by these institutions. The constructs of social distance and congruence have been only loosely defined theoretically and operationally. As described, when congruence is high, social

distance is minimal and child outcomes are optimized. Although these kinds of generalized predictions lack empirical support, they have intuitive and heuristic appeal with regard to the responsiveness of schools to families and vice versa. For example, in those districts in which social distance between schools and families is high, mutual trust is likely, and it may be expected that schools will be sensitive and responsive to family needs. Under such circumstances special services, such as extended day care, are most likely to be initiated by the school. Furthermore, these concepts direct attention to the mechanisms that link families and schools and monitor social distance.

Litwak and Meyer (1974) outline several mechanisms of coordination that mediate the school-family relationship. These include the common messenger (i.e., the child), who carries communications back and forth between school and home, and the formal authority (i.e., the truant officer), which can be used to require members of the organization to conform with its expectations. Litwak and Meyer (1974) also discuss a number of community initiated linking mechanisms used to influence and communicate with schools, including voluntary associations (e.g., PTA) and sustained collective action. Their categorization of these mechanisms suggests that certain ones tend to close social distance and others tend to open it. High-initiative, high-intensity mechanisms (e.g., sustained collective action) must be employed for one institution to influence another when social distance is great, while low-initiative, low-intensity mechanisms (e.g., the common messenger) may be sufficient to exchange influence when distance is small. When one institution seeks to influence another, the coordinating mechanism used must vary as a function of social distance for the desired changes to occur.

These mechanisms provide conduits for mutual involvement and influence from family to school and vice versa. Presumably it is through these mechanisms that schools and families acquire the feedback necessary to initiate change, it is also through these or other linking mechanisms that social distance, balance, or congruence is maintained. Mechanisms for parental involvement and participation in the school are discussed below with respect to the potential implications of maternal employment.

LINKING MECHANISMS, PARENT INVOLVEMENT AND PARENT PARTICIPATION

Schools routinely use a variety of linking mechanisms for the exchange of information between family and school. These include individualized contacts, such as report cards and parent-teacher conferences, and systematic procedures, such as announcements of holiday schedules and newsletters. An increasingly common mechanism is the formation of fam-

ily and community advisory groups, including parent-teacher associations, school boards, and interest groups (e.g., NAACP, League of Women Voters education subcommittees). These all provide ways for families and schools to share and collaborate in their mutual goals of education and socialization.

The most salient family school linkage, however, is parent participation and parent involvement in their children's schooling. Parent involvement has included such diverse activities as helping a child with homework, attending parent-teacher conferences, speaking to a child's class on Career Day, volunteering time as an aide in the classroom, or using home-based curriculum material designed to parallel classroom activities. Despite the widespread belief that such involvement is beneficial to children, there is limited research systematically examining the context and form of parent participation and its role in enhancing school achievement and adjustment. Similarly, there is minimal research regarding the impact of parental employment on parents' involvement in the school. We examine below research supporting a relationship between parent involvement and student achievement in terms of three categories. (1) descriptive and correlational studies linking parent participation with school achievement, (2) evaluations of intervention programs introducing parent participation as a program component, and (3) studies of home based reinforcement programs.

Parent-School Involvement and Achievement

Several studies have reported correlations between student achievement and parent involvement in school activities (Ingram, 1979, McDill et al., 1969, Mowry, 1972, Rankin, 1967, Wagenaar, 1977). Parent involvement has been defined quite broadly within these studies. The assessments of parent involvement vary from measures of teacher perceptions of parent interest and participation in school activities to recorded attendance at PTA meetings and parent teacher conferences. These studies do not identify a single form of parent involvement in the schools as more related to school achievement than any other, but rather suggest that the higher the overall level of involvement, the higher the performance level of students.

Research focused on identifying factors that account for high achievement has also suggested a relationship between parent-school involvement and school performance. For example, the Phi Delta Kappa (1980) study of effective urban schools highlights parent involvement and cooperation in the school's activities as indicative of higher-achieving schools. Rankin's (1967) comparison of high-achieving students and low-achieving students indicates that particular parental behaviors at home and in connection with the school differ significantly between these groups. Parents

of high-achieving students initiate more contact with their children's school, provide a wider variety of experiences for their children, and engage in activities encouraging achievement (e.g., talking about school, helping with homework).

Hewison and Tizard (1980) found in a survey study that children of working-class families whose parents reported that they listened to the child read at home had significantly higher reading performance at ages 7 and 8 than children whose parents did not listen to them read. Data from the Berkeley Children's Time Study of sixth grade children (Benson et al., 1980; Medrich et al., 1982) also support the link between parent-school involvement and school achievement. Significantly, however, these findings indicate that the nature of activities and the strength of their relationship to achievement may vary by socioeconomic group.

Brookover and his colleagues (1979) have studied factors associated with achievement in Michigan schools. Beginning with the assumption that schools can make a difference in achievement, they examined the relative importance of school demographics, structural arrangements (e.g., grouping procedures), school climate, and parental involvement in achievement. Their findings support the overall correlation between parent involvement and achievement ($r = .45$). Further analysis indicates differential effects by race and socioeconomic group. White schools have higher parent involvement than black schools, and schools in high-income areas show greater involvement than schools in low-income areas. In this sample of schools, the relationship between student achievement and parent involvement differed by race and socioeconomic status (Brookover et al., 1979:47):

> . . . high parent involvement is associated with lower achievement in the high SES white schools. This suggests that parents of students in middle class white schools are not likely to be involved with the school unless the level of achievement is unsatisfactory. The positive relationship in the black schools [achievement and parent involvement correlated .59] suggests that black parents may have some impact on the way school affects achievement.

Analyses to predict mean school achievement levels from school climate variables, demographics, and school operating procedures indicate that parent involvement per se does not account for a significant portion of the variance in achievement (Brookover et al., 1979). This variable needs to be considered in the context of other school parameters.

Employing methodology focused on the individual, Benson et al., (1980) found a similar mediating effect for parent activity and school characteristics. Holding socioeconomic status constant, comparisons of high-achieving and low-achieving students in high-achieving and low-achieving schools

indicate that high parental input may or may not be associated with high levels of achievement. Among the children with low socioeconomic status in the sample, parental input does make a difference; although "they [involved parents] do not seem to increase the proportion of high achievers, they clearly do reduce the proportion of low achievers" (p. 201).

In summary, research has suggested that at the most global level a broad set of parental activities linking school and home are correlated with achievement. The parental activities may involve going to school for specific functions or contributing family time and space to school-relevant activities. More molecular analyses point out differing relationships between these variables by both race and socioeconomic level of the family and the socioeconomic and achievement levels of the school.

Intervention Programs Involving Parent Participation

Most of the intervention programs that include parent participation as a program component have been directed toward low-income or low-achieving students with the direct intention of enhancing their achievement and cognitive development. In programs for infant and preschool children, mothers have participated as aides in a preschool group (Gilmer et al., 1970), received direct parent-education training relevant to interaction with their children (Karnes et al., 1968), or received home visits by a program "teacher" to demonstrate toys (Levenstein, 1970, Levenstein and Sunley, 1968) and to promote positive mother-child patterns of interaction (Gilmer et al., 1970). Bronfenbrenner (1974.55), who has reviewed early intervention programs with and without parent participation components, concludes:

> The evidence indicates that the family is the most effective and economical system for fostering and sustaining the development of the child. The evidence indicates further that the involvement of the child's family as an active participant is critical to the success of any intervention program. Without such family involvement, any effects of intervention, at least in the cognitive sphere, are likely to be ephemeral, to appear to erode rapidly once the program ends. In contrast, the involvement of the parents as partners in the enterprise provides an on-going system which can reinforce the effects of the program while it is in operation and help to sustain them after the program ends.

For children in elementary school, Project Follow Through programs (which also target low-income populations) included parent participation as a curriculum component. They were intended to include parents as members of advisory groups and in decision making, as well as to encourage parent involvement in day-to-day program operations. Studies indicate that Fol-

low Through parents were more aware of their children's school activities and were more likely to participate in the school (Bronfenbrenner, 1974). However, specific program models focusing on the parent-school partnership have not resulted in achievement gains greater than those of alternative models (House et al., 1978; Stebbins et al., 1978).

A few intervention programs for younger school-age children have focused on increasing communication, general parent involvement in educationally relevant tasks at home, and parent participation in school activities. For example, Tizard et al. (1982) report significantly greater gains in reading performance for children ages 6 and 7 whose parents listened to them read at home daily compared with a group receiving extra tutoring in school and with a no-intervention control group. This effect was observed for all ability levels of reading, and the superiority of the parental-attention group to the no-intervention group was maintained a full year after the conclusion of the intervention. Smith (1968) reports greater achievement gains compared with a control group among a low-income sample of kindergarten to sixth grade students whose parents were requested to create conditions more conducive to reading and improved study habits and to show encouragement and praise for their children's work at home. Parents also were invited to attend school meetings to discuss ways to help their children achieve better. A program with "high-need" kindergarten students (Boulder Valley School District, 1975) included parent workshops on activities specific to their child's developmental needs and had parents spend 10 minutes a day with their child on some kind of educational activity. The children of participating parents made greater gains during the first two years of school than children participating only in an in-school program. A comparison of three performance-contracting programs with varying levels of parent involvement in the schools (i.e., community information program, open house, in-service training for parents and teachers) concludes that "For most districts where parent involvement was 'pro forma' and consisted of filling out a questionnaire or attending large group meetings, the achievement of the pupils was similar, but less than the achievement in the district where parents participated in deciding what was taught and had responsibility for working with the teachers and children" (Gillum, 1977:18).

The intervention studies manipulating parent involvement and participation in school activities suggest that increasing the level of parental awareness and parental attention to children's school activities and overall development seems to result in enhanced school performance and cognitive gains. The follow up studies of infant and preschool intervention programs further suggest that parental involvement is an important factor in the maintenance of these gains. It is important to note, however, that these

intervention programs have been implemented almost exclusively in the preschool and early elementary grades. Parent-school involvement for adolescents continues to be an underexamined phenomena, and generalization to other age groups of the findings from these intervention programs is premature.

Home-Based Reinforcement Programs

There have been numerous studies of home-based reinforcement programs involving a wide range of school problems, such as poor reading, conduct problems, learning disability, and mental retardation. The basic procedure involves regular communication from the classroom teacher to the parents regarding the child's performance and the participation of the parents in continuing a program of rewards and reinforcement in the home The programs vary in the way in which parents and teachers collaborate. Parents may administer specific rewards (e.g., allowance, television time, special trip) for good behavior or improved performance or lavishly praise the child for positive notes from school. Reviews of this literature (Barth, 1969) suggest that these procedures can be quite effective in improving a child's school performance. Some studies have found the desirable effects to be maintained after the program is phased out. Generally the programs are designed for individual children experiencing difficulties in school. The findings, however, illustrate not only the important role parents may play in their child's school behavior but also the degree of spillover for the child between home and school. Home-based reinforcement programs are one technique to maximize this link. They also suggest the potential benefits for the child's performance of maintaining consistent expectations across settings.

Summary of Relevant Research

These research areas taken together suggest that some degree of coordination and collaboration between parent activity and school activity is beneficial for student achievement. The research to date has been concerned primarily with identifying a relationship between family input, parent-school linkages, and student performance. In the available research, the nature of the effects of home-school linkages and student achievement cannot be separated from a variety of family demographic variables, school variables, and student factors. For example, the intervention programs have almost exclusively focused on young children from low-income families. The parental component has been in addition to child-centered interventions and school curriculum alterations. The correlational studies

identify a relationship between parent participation and achievement, yet they fail to eliminate the hypothesis that parent participation is a by-product of some set of school variables. The type of parent activity in the school and the context of that setting are critical (Bronfenbrenner, 1974, Brookover and Lezotte, 1977, Brookover et al., 1979). Certainly the parents of a child with behavior problems may have a great deal of contact with the school, mainly in the context of conflict and attempts at problem resolution. Similarly, a parent trying to bring about change in the school setting may have multiple home-school links, most steeped in conflict. These effects may be less than beneficial for the child, depending on the parent's status vis-a-vis the school and the school's expectations regarding parent activity. The same parent could be defined as either a troublemaker or a concerned parent, depending on the constellation of factors salient to the participants.

Brookover et al. (1979) and Benson et al. (1980) point to the importance of research delineating a more complex model of the effects of parent-school involvement, with careful attention to intervening and mediating variables, such as the age of the child, family education, employment status, family use of time, the type of family-school contact, student achievement levels, school factors, and other ecological context variables. Most of the research on parent participation and involvement in schools has focused on preschool and elementary grade levels, reflecting an underlying assumption that parent involvement and participation are most important during the child's early years. The research generally fails to examine the parent school relationship at multiple grade levels. Models of parent-school involvement should examine differences in the form and context of parent involvement between grade levels and to consider differential patterns of effect among the variables at these different grade levels.

The magnitude of any relationship between parent participation and achievement (or other educational outcomes) at different grade levels (e.g., early elementary versus high school) and developmental levels is a critically important but unanswered question. The research available suggests that the patterns of effective parent participation differ by age, since the needs of the child and expectations about the balance of family and school involvement change over the developmental span. For preschool and primary grade children the parental role associated with enhanced achievement involves direct instruction and attention. At that developmental level there is a great deal of skill development to be accomplished, and parents and schools can function as partners in the educational arena. At the elementary and middle school grades, one effective parent role vis-a-vis the school is that of supplementing the child's cultural and recreational

experience. For the high school student the relationship is less well defined and is barely considered. Given their developmental needs for independence and experimentation with adult roles, we might predict that the most effective role for parents of high school students is that of adviser providing guidance and a sounding board. These varying relationships imply that the effects of maternal employment on home-school relations differ with the age of the child, his or her developmental demands, and the expectations of the school and parent regarding their respective actions.

CHANGING FAMILY EMPLOYMENT PATTERNS AND PARENT-SCHOOL RELATIONSHIPS

As family employment patterns change and the number of two-earner families and employed single parents increases, intuition suggests that parent involvement in a child's school activities will diminish. The extent to which the level or nature of parent participation in school activities changes with entry into the labor force has not been addressed, and data examining the process are not available. There is anecdotal evidence that schools are responding to the reduced availability of working parents and single-parent families via policy changes that include evening and weekend parent-teacher conferences and more frequent reporting to parents by mail or telephone. At this point, it seems that even these obvious modifications are occurring on an individual basis rather than as widespread policy. The study by Medrich et al. (1982) of sixth grade children provides some data relevant to the issue of differential participation related to employment status. They reported no significant differences between working and nonworking mothers in time spent in a variety of child-related activities, except that employed mothers were less likely to be volunteers in their children's activities. They reported further that the children of working mothers were no less likely to be participants in extracurricular activities than those of nonworking mothers. Their findings indicate that "children of all backgrounds were about equally likely to spend time with their parents on schoolwork" (Medrich et al., 1982:234). Family income and parents' education level were more important than employment status in determining the nature and degree of parent-child activities outside the home.

These findings suggest that other family patterns and values besides employment status are predictive of parental involvement in children's school-related activities. As Medrich et al. (1982) and others have suggested, the working mother who is "time poor" seems to work harder at maintaining some level of activity involving children and spouse, eliminating personal leisure time instead. What might be expected among work-

ing parents, then, is a decline in parent-school activities that do not include the child or allow for contact with the child. Given time conflicts, working parents may be less visible and active in school activities during the day Careful analyses of the nature of parent-school involvement and parent-child educational activity may reveal individual family modifications following a change in employment status. For example, the father may become more active in school participation, or the family may attempt to work out alternative scheduling of teacher conferences or conduct these over the telephone.

In light of the available data relative to maternal employment status, it seems unlikely that work status in and of itself accounts for a significant portion of the variance in student achievement or level of parent participation in school. Furthermore, the family's mode of adaptation to change in employment status and the child's perception of the change may be more important variables. It is less likely that the level of parent-school involvement will be altered significantly and more likely that the form or modes of contact may change. For example, given the additional demands of employment, less active participants are unlikely to increase involvement, while highly involved parents may modify their use of personal time or family resources to maintain that high level of participation. The specific modifications internal to the family (e.g., father attending PTA) may trigger other mechanisms that in turn may influence the child's performance, attitudes, and development. It remains to be seen whether alterations in the modes of contact or the actors change the impact of parent participation on school behavior.

To the extent that change in the level of involvement related to maternal employment can be identified, the consequences of that change may be dependent on the age and grade level of the children and the nature of previous family-school involvements. Within a single family, then, the effects may differ by child, and school responses to change in parental involvement will probably need to be matched to grade clusters For example, at the preschool and primary level the school might provide home-based curriculum materials to enhance the parent's role of teacher. At the middle school level and late elementary grades, school effort and resources might go toward field trips for the parent and child to enhance the parent's role of supplementing recreational and cultural opportunities.

Data support some relationship between parent-school involvement, broadly defined in terms of form, intensity and frequency, and achievement. The existing literature has not identified a particular form of parent-school activity to be uniformly effective in contributing to school achievement. In addition, the relative importance of parent-school involvement in the context of other family, student, and school characteristics remains

to be determined. There is little basis to assume that work status alone will significantly change the functioning of parent-school linkages but rather that a constellation of factors surrounding and accompanying change from nonworking to working status are important. These factors include the age of the child, the child's perceptions of change, internal family modifications relevant to educational activities, and changing roles and expectations regarding parent-school relationships.

CONGRUENCE AND CONSISTENCY. THE INDIVIDUAL PERSPECTIVE

The concepts of congruence and optimal social distance are most often used to refer to interinstitution relationships between families and schools. They also have meaning at the organizational level of an individual family and school and at the individual level of the child's perception of home and school. On the surface there is little apparent contact between family operations and school operations; however, the family and school are surely intertwined and share an interdependent relationship with regard to the child. Events in one setting are carried over to the other and may have behavioral repercussions in multiple settings. For example, the family stressors of separation and divorce can be associated with disturbances in a child's school behavior (Emery, 1982; Hetherington, 1979; Hetherington et al., 1978).

There is growing literature on the effects of work on family life and a few studies of the effects of parental work on children's family experience (Piotrkowski and Katz, 1982). The overlapping effects of work and family life may extend to relationships with other organizations. For example, the parent in a stressful work setting may be psychologically "unavailable" to the family and to the school during nonworking hours. This type of cross-setting analysis is based on an ecological perspective postulating that behavior is neither totally context-specific nor totally an expression of enduring personality traits. Behavior is a result of the interaction of a person's behavioral repertoire developed in prior contexts and the characteristics of the current setting, that is, home or school (Minuchin and Shapiro, 1982). Children's phenomenological perception of the various settings in which they participate plays a major role in establishing their behavioral repertoire and view of self and others. Events and interactions in these settings shape the development of their perceptions. Behavior patterns are interpreted differently as a function of developing intellectual and social cognition abilities and of past experience. Examination of the factors shaping the activities, roles, and interpersonal relationships occurring in the settings that constitute the immediate environment is thus

essential for understanding children's education and socialization outcomes and the impact of change in one of these settings.

Researchers trying to establish direct links between characteristics of the home (e.g., parent-child interaction patterns) or school (e.g., teaching variables) and educational outcomes have not yet found an integrated model of the factors leading to optimal child outcomes. Most recent research on achievement and related educational outcomes has given only superficial attention to the influence of multiple settings in which children are involved (e.g., the home, the neighborhood). Most studies focus on single settings, such as home or classroom, to account for achievement and behavioral differences. For example, researchers have studied school factors and student achievement (Rutter et al., 1979), teacher behaviors and student performance (Brophy and Good, 1974), and parental childrearing attitudes and parent-child interaction as they influence children's school performance (Baumrind, 1973). Components of these single settings have been linked to differential child outcomes, but almost no attention has been directed toward the relationship or interaction of multiple setting components as they relate to these outcomes.

By including different indices of family socioeconomic level, studies of achievement and development may be attempting to relate variables across settings, however, socioeconomic level is such a global measure of family status that it implies very little that is specific about family functioning or family processes as experienced by children. In addition, such measures are typically control variables intended to account for error variance.

One of the earliest large-scale efforts to examine the correlates of school achievement is the Coleman study of the equality of educational opportunity (Coleman et al., 1966). This study included school factors, family factors, and child factors as predictors of achievement. The findings indicate that significant correlates of student achievement include demographic factors such as income, parent educational attainment, and family structure, as well as attitudinal variables (e.g., sense of control over one's environment) presumably based on the family home experience. Mayeske's (1973) analysis of this data set attempts to examine the differential contributions of family structural variables (e.g., size, employment status) and family process variables (e.g., attitudes toward education, parent-child activities). Mayeske reports that across all ethnic groups, family process variables contribute more to the variance in achievement than do family background and structural variables. The salience of family variables in predicting school achievement has directed research attention to the study of home environment and the linkages between family behavior and children's performance in school.

The notion of congruence implies compatibility, complementarity, or similarity in values and goals between the home and school. The predictive value of family process variables may be a reflection of consistency and congruence across home and school settings. The research on home-based reinforcement programs indicates that at least for some groups of children consistency across settings in behavioral contingencies and expectations enhances performance and rated adjustment (Barth, 1969). Bradley and Caldwell (1977) have reported that home environment variables account for a greater portion of the variance in school achievement than demographic variables. The home environment dimensions they assessed seem to reflect a style of interaction and organization routine quite similar to that of the school setting, e.g., the child has a private place for belongings, the child is accompanied by an adult to places outside the home, the mother structures play periods. Such cross-setting consistencies may be viewed as reflections of the constructs of optimal social distance and congruence at the level of individual home and school. Research relevant to similarities in structural properties, role relationships, and performance expectations of home and school is discussed below.

The Structural Organization at Home and School

Orderly or routinized organization of day-to-day activities at home, such as setting aside a certain period of time each day for doing homework, seems to facilitate higher achievement in school. Smith (1968) reports greater achievement gains in an intervention with elementary school children whose parents were encouraged to get the child to bed at a regular time each night, to get the child up each morning in time for a good breakfast, to provide a time and place at home for the completion of homework, and to allot time to read with the child. In this study, change in the organization of the family environment and the focus on good study habits was associated with increases in achievement. The changes are consistent with the demands of the public school environment, in which time, scheduling, and orderly movement are generally highly salient variables. For a child accustomed to this pattern of organization, school may be a more friendly and productive place. The degree to which increasing consensus and consistency across multiple areas can enhance educational and socialization outcomes remains an empirical question. However, for young children in particular, consistency in demands and organizing structures across settings allows them to focus on the task rather than on the rules and interpersonal guidelines governing the setting.

There is some evidence that maternal employment is associated with more highly structured and rule-governed family environments. Hoffman

(1979) suggests that more explicit rules and more exact scheduling of tasks and activities are needed when the mother works if the household is to function smoothly in her absence. Data from the Berkeley Children's Time Study (Medrich et al., 1982) seems to show that the mothers who are employed full time must (and generally do) organize their time very carefully in order to have time to devote to child-related activities.

To the extent that maternal employment enhances time and rule-governed behavior consistent with the school setting, more positive child outcomes might be expected. Similarly, other structural organizing variables (e.g., use of space, transportation, assignment of chores, division of labor, rules of problem solving) may be influenced by parental work and may serve to enhance or diminish consistency in structural features of the home and the school. The minimal data available regarding patterns of family change with maternal employment are consistent with the notion that family life becomes more like the school setting in its structure and demands. It may be equally likely, however, that other patterns of family functioning influenced by parental work are moving the family in directions less congruent with those of the school. The nature of changes in family functioning associated with various kinds of work have yet to be delineated. Given the apparent positive effects of consistency across settings, school response to changing families might be planned to enhance consensus and consistency with family demands.

Role Relationships

The roles that individuals are expected to take on and the degree of latitude in role demands and expectations have significant impacts on behavior (Goffman, 1959). Salient role dimensions within the family are independence and responsibility among the members. Independence has been associated with greater success for adults and with the development of putatively desirable traits such as internal locus of control (Wichern and Nowicki, 1976). Hoffman (1974, 1980) reports data indicating greater encouragement of independence in the homes of working mothers. She suggests that independence is adaptive in these homes because the household functions more smoothly when the mother is absent if the children are relatively independent. Hoffman (1980) also suggests that the undeliberate encouragement of dependence enhances and provides justification for the mother role in families with nonworking mothers.

It seems unlikely that parents are the only factor determining children's ability or predilection to function independently. In the formal education system, the level of independence and initiative children are allowed varies with age and grade level among and within schools. Open classrooms that

make great use of learning centers, for example, encourage greater independence than traditional, highly structured classrooms. Similarly, after-school care arrangements may vary greatly in the level of independence expected. A day care center, for instance, may maintain strict control over children's time, while an older sibling responsible for child care may expect highly independent functioning from his or her charge.

Little is known of the effects of participating in multiple settings with varying requirements for independence. Does going from a high-dependence home setting to a high-independence classroom setting, for example, lead to emotional or cognitive distress, or are variations in expectations for independence easily managed by children and youth? Does the ability to function in settings with variable independence demands vary with age? The importance of this line of questioning is evident if, as has been asserted, children of working mothers generally are encouraged to be more independent than are children of nonworking mothers. The traditional school model, designed to encourage submission and dependence, was developed when few middle-class mothers worked and may once have resulted in relatively constant expectations of independence for the child. If the level of independence expected at home has changed significantly as a function of increasing rates of maternal employment or other factors while school expectations have not changed, the level of independence expected may vary greatly across settings. Information regarding the effects of such variability would be useful in adjusting school and after-school care settings to meet the needs of children most effectively.

Expectations for Performance

Expectations for performance are powerful influences on behavior. A person's expectations seem to influence his or her attitudes and actions, interpersonal relationships, teaching behavior, and the specific behaviors that are encouraged or discouraged in others (Brophy and Good, 1974). As such, attitudes and expectations for performance are important variables mediating the socialization process.

School personnel have been found to expect poorer school functioning of children from families in which the mother is employed (Tetenbaum et al., 1981) or those from single-parent families (Santrock and Tracy, 1978). Research has found a consistent teacher bias against children from poorer and nonmainstream backgrounds (Minuchin and Shapiro, 1982). This line of reasoning leads one to expect negative effects for the children of single parents or two working parents. A competing view is that the more parents work, the better their children will be clothed and provisioned for school, leading school personnel to see both parent and child in a more

favorable light as they assume a higher socioeconomic level. This apparent contradiction raises the possibility that both effects occur. A poorer single parent who works, for example, may still be considered poor and continue to be perceived negatively, while the child of a single parent who has a professional occupation may be perceived more positively by virtue of the parent's occupational attainment. Predictions of those effects are dependent on the type of parental work and specific child factors (e.g., performance level, behavioral adjustment). As more parents work, the stereotypes evident in these expectation effects will need to change. School-initiated efforts to facilitate such change may minimize social distance between families and schools and contribute to increased parental involvement in the school setting.

Piotrkowski and Katz (1982) examined characteristics of mothers' employment "that serve as indirect socializers of children." They found a significant relationship between the autonomy of the maternal job and patterns of the child's school attendance and between the degree of skill utilization in the mother's job and the child's achievement. They interpret these findings as evidence that mothers socialize their children in patterns of behavior that are valued and adaptive in their workplace. These data highlight the role of parental expectations in shaping behavior; they also raise the issue of the degree to which these patterns and expectations are congruent with the school setting and enhance the school-family relationship.

Achievement motivation may be similarly influenced. Dweck and Elliott (1982) suggest there are many different patterns of achievement motivation that produce a variety of achievement outcomes. The development of such patterns depends on the parent's achievement-related attitudes and actions, the child's level of success on achievement-related tasks, and characteristics of the school learning environment (Dweck and Elliott, 1982). Achievement motivation is obviously influenced by the family environment and potentially by parental employment patterns. The nature of the parent's job and his or her motivations for employment afford the child exposure to achievement-oriented behavior by parents, and various kinds of modeling effects may occur. For example, parents may communicate to their children an enhanced sense of the importance of education and achievement for career options as a result of their own work experience. These expectations may significantly alter family goals, the achievement focus of the child, and in turn school performance.

Summary

There is little question that family activities and events influence a child's performance and behavior in the school setting. A variety of family and

organizational dimensions are predictive of the child's overall level of adjustment, hence, as they change, the child's school behavior may change. Cross-setting congruence in structural organizing factors, role relationships, and performance expectations is proposed as a unit of analysis by which to consider these home-school relationships. Each of these has been shown to be related to school performance, to be potentially influenced by maternal employment, and to have implications for procedural change among schools.

CONCLUSIONS, IMPLICATIONS, AND DIRECTIONS FOR RESEARCH AND INTERVENTION

No systematic survey of school policies and school responses to changing family needs is available. The school seems to be an institution likely to respond to or feel the effects of changing family patterns and functioning. Yet there has not been a consistent and identifiable policy regarding school response and as such no systematic response. It appears that modifications have occurred in individualized ways to meet individual needs as they occur.

There is a major movement to bring parents into the educational process in creative and innovative ways. Yet this seems to be more the result of efforts to enhance achievement and respond to the accountability and consumer movements of the 1970s than responsiveness to family conditions per se. There have been calls for the public schools to provide for the day care needs of working families, however, these have occurred on a limited basis and generally in the context of community education or after-school recreational programming.

Some school districts are making changes in their curriculum and school operations to provide for working parents and to facilitate parents' involvement in their child's education. These changes include flexible scheduling, home-based curriculum materials, parent-support networks, and extended day programs. Researchers might study these programs and modifications as naturally occurring experiments to determine the conditions of school-family relationships conducive to change, to consider the effects of programs and programming change for achievement and the family-school partnership, and as potential alternative models of home-school relationships.

Research on the effects of parental employment patterns in general and maternal employment in particular on the family-school relationship is unavailable. Historically there has been mutual influence between families and schools, however, systematic ecological study of the school-family relationship and the mechanisms mediating the relationship is lacking. For

the child involved in both settings, research indicates that home and school variables contribute significantly to growth and development. There is further suggestion that some kinds of family-school linkages affect student performance. The research literature on the processes of mutual influence is in its infancy, making even speculative predictions on the impact of changing patterns of labor force participation difficult.

Predictions of school change following family and community change are limited by the need for more in-depth ecological systems analysis of the interrelationships of families and schools as community institutions. Research such as the Gross et al. (1958) study of the superintendent's role or the Mills and Kelly (1972) study of three communities would provide a descriptive base regarding the interface and interdependence of the family and school as systems from which to predict change and identify points of intervention.

Employment status per se appears to be a weaker predictor of home-school activity and educational outcomes than clusters of demographic variables (e.g., race, education, income) and measures of family process, routines of family functioning, and consistency in demands across the home or school setting. Most research has employed relatively rigid categorizations of families and schools, typically based on demographic criteria such as race, socioeconomic status, single-parent/two-parent family, working/nonworking mother, etc. While these factors do account for some portion of the variance, research repeatedly identifies sets of attitudinal and process variables as more informative. This is particularly important in researching the changes and effects associated with maternal employment. The research to date has demonstrated that work per se is neither beneficial nor detrimental to the child but rather that certain conditions mediate its effects (Kamerman and Hayes, 1982). The Berkeley Children's Time Study (Medrich et al., 1982) further points to the need to cluster families by such process variables as patterns of time use, consistency in role demands, performance expectations, problem-solving strategies, and the nature of organizing variables across settings (Leichter, 1978).

The characteristics of the home-school relationship vary by the grade and developmental level of the child. Research and policy should be considered and defined in the context of grade clusters and the unique dimensions of the associated home-school relationship. Research on maternal employment and child's school behavior should cluster families on the basis of the age of the children when employment began and the conditions of change in parent-child interactions. Any effects of maternal employment status on children's achievement or school behavior may be less a function of absolute conditions of family functioning and parent-child relations and more the result of change associated with employment.

Comparisons of working and nonworking mothers' family operations cannot separate work per se from other parenting factors. For example, it may be the case that mothers who are working would create conditions of independence for their children or would not participate in school activities regardless of their employment status. The implications of employment status should be considered in the context of a constellation of family factors including relationship and organizational dimensions.

Work is not a unidimensional variable, either present or absent. The effect of parental work on the home-school relationship and parental involvement appears to vary for different types of work. Consequently, research and policy should take into account the nature of parental work and the variety of effects it precipitates in the home-school relationship at both the individual and the institutional levels.

Little is known about family modifications in response to employment status that have bearing on the home-school relationship. Survey and longitudinal research in this area is necessary to identify the patterns of family and school modifications accompanying changing patterns of labor force participation. Ideally, longitudinal research would involve study of a sample of single-worker families, some of whom become dual-worker families over time. Longitudinal studies could focus on cohorts of families identified at potential transition times—e.g., the birth of a child—on the assumption that some of the mothers would resume work immediately, others after varying lengths of time, and some not during the child's early school years. Similar longitudinal studies of community and school responses to changing family structures and needs are necessary.

Parent-child interaction has been important in predicting school achievement. With the potential stress of dual-parent employment and the associated "time poverty," parents may be forced to modify parent-child interaction or some other aspect of their lives or rely on others to provide for some of the needs of their children. What kinds of modifications are made and the long-term effects on both parents and children are not known in any detail. These may have implications for the provision of alternative services or supports to families and the role of teachers and day care staff for the children of working parents.

Parent involvement in school activities appears to have beneficial effects on child performance and adjustment in school, however, the effects of labor force participation on parent involvement are generally unknown. Further research is necessary to develop a more complex model of parent-school participation, including such family characteristics as socioeconomic status, race, and educational attainment, other family process dimensions, and delineation of the types of parent involvement at varying grade levels important in enhancing student achievement. Few studies are

available relevant to the level and form of parent-school participation among working parents. The study by Medrich et al. (1982) indicates little difference between working and nonworking parents in the time spent in school-related activities. This suggests that parents may have worked out creative strategies for maintaining involvement amidst their other demands. A survey of the effects of employment on parent involvement and the modifications already adopted by families would offer insight into potential avenues of school response and community services.

Parent involvement in the school setting is a salient component of the home-school relationship. The simultaneous trends of schools seeking family involvement and families seeking employment appear to be at odds. As schools attempt to pull families into the school program, working parents may be less available for participation. The implications for the child (e.g., feeling left out because parents are not present, teachers perceiving the parents as uninterested) remain to be determined. The school-initiated linkage may essentially be one in which parent activity supports and complements the activity of the school. To the extent that school operations are based on the nuclear family model of two parents with one working outside the home, this model of one-way complementarity may require modifications. Lightfoot (1978) has suggested that the issue is not how to involve families in the school, but how to reinforce and mutually adapt the dual curricula of family and school. This may necessitate modifications in school and teacher expectations and practices regarding home-school contacts. Some obvious modifications may be helpful, such as scheduling evening or weekend hours for conferences and student activities. Curricular changes, scheduling flexibility, and support services with the school serving as an organizational medium may further facilitate the process of mutual adaptation. The degree of flexibility and responsiveness may be part of the home-school relationship families purchase when they seek private education for their children. Careful analysis of the barriers to involvement, coupled with more specific knowledge of the critical components of parent involvement, should point to additional intervention alternatives to facilitate parent participation and school responsiveness.

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5

Family Work Patterns and Community Resources: An Analysis of Children's Access to Support and Services Outside School

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In most American communities, a broad, uncoordinated array of programs and informal social networks provides support and services to families and children. Each type of community service, such as education, child care, and recreation, has a different mix of governmental, nonprofit, and commercial elements. The institutions embody a history of responses to major social and economic changes. In the course of industrialization, urbanization, war, and suburbanization, the working and living patterns of families have been transformed in ways that have required new organizational forms for childrearing. We are currently in the midst of what has been called a "subtle revolution" in the labor force participation of women (Smith, 1979). If the demographic changes do approach revolutionary magnitude, then history suggests that community services for families and children will also be substantially altered.

This paper is an analysis of the relationship between families and community services in a period of changing work patterns. It has two perspectives. a long view of the evolution of children's services, augmented by research on their recent structural changes, and a family-based perspective, gained from surveys of time use in a cross-section of urban households.

Time use can be a valuable social indicator for issues concerning work patterns and community services. By measuring the time-use patterns of school-age children, we can explore their contacts with services and their activities around the house and throughout the neighborhood. Their parents' time-use accounts tell us not only about employment schedules but

also about arrangements for child care, housekeeping, and other basic elements of daily life. The popularization of new terms (or revived old ones) such as "time-poor households" (Vickery, 1977), "quality time," "latch-key children," or "the hurried child" (Elkind, 1981) attests to the growing interest in these issues in academic, journalistic, and public policy realms.

These phrases and the discussions from which they arise all indicate a critical awareness of different kinds of time. They portray complementary problems. The unsupervised latch-key child is somehow deprived, but so is the overenrolled, other-directed, hurried boy or girl. For some families the most serious problem is the inadequacy of the literal number of hours together, while for others it is more an issue of turning the available hours into "quality time." Mothers who work outside the home have been the object of much of this discussion. They have been blamed for the problems, lauded for their ingenious and self-sacrificing coping strategies, and advised on how to manage their time more effectively. There has been relatively little empirical research, however, that examines how maternal work patterns directly affect preadolescent children's out-of-school time use and how employed mothers may be adapting to or creating changes in community institutions that were largely designed with nonemployed mothers in mind.

The primary data source for this paper is the Children's Time Study survey of sixth grade public school students and their mothers, conducted in 20 neighborhoods of Oakland, California, in spring 1976 (Medrich et al., 1982; for details see Appendix A of this paper). The issues explored in the survey and in this paper are necessarily oriented to children ages 11 and 12 and to their hours outside the regular school day. The services with which the survey was most directly concerned are recreation and sports programs, libraries, museums, and organized cultural and quasi-academic activities (such as instruction in computer science, natural sciences, and the arts). Providers of these services included the municipal government, numerous nonprofit and religious institutions, several private businesses, and the public school system. The criterion for inclusion as an out-of-school activity was not one of location, since many activities took place at school sites, but one of scheduling outside regular school hours. The survey was similarly detailed concerning the documentation of children's informal social interaction in their neighborhoods and their time-use patterns within their homes.

Additional research was conducted on the history of children's services, in Oakland and the United States in general, and on the severe difficulties faced by these programs following the passage of California's Proposition 13 (Rubin and Medrich, 1980). The empirical study by Rubin and Medrich

provides evidence of the fiscal and political environments in which any service innovations must survive.

The paper is organized so as to juxtapose the cross-sectional family survey and the longitudinal analysis of institutional changes. It begins with a thematic summary of the history of out-of-school services for children and an elaboration of Oakland's place in that history. The survey data on Oakland in 1976 are then analyzed, focusing first on children's activities and then on those of parents. An account of changes since 1976 in the community institutions serving Oakland families follows, with emphasis on the circumstances faced by mothers in the labor force.

CHILDREN'S SERVICES OUTSIDE SCHOOL: HISTORICAL PATTERNS

Community services for children have undergone a long-term evolution from reform movements to embattled bureaucracies. It is a history in many ways parallel to that of the better-known development of public schooling in America. As with the history of schools, there are many excessively optimistic, uncritical "in-house" chronicles of the continuous, socially valued growth of recreation and other community services. And as with educational historiography, there are a growing number of revisionist critical studies to counter this trend, often excessively cynical in their thesis that children's programs have primarily served the functions of social control and the maintenance of class structure. In my review of this literature (Rubin, 1980) I have attempted to avoid these extremes and to draw from both perspectives. Outlined below are four general historical themes that bear directly on the issues of institutional change faced by the services today.

Social Functions of Children's Services

Recreation, youth counseling, and related out-of-school programs have always served several kinds of purposes. First there are the stated program objectives of opportunity enhancement as expressed in the professional literature—remedial tutoring, emotional guidance, cultural enrichment, and physical education. While these objectives may seem worthwhile as ends in themselves, they have typically been both promoted and critiqued as instruments of broader social policy. The reformers of the Progressive Era, who developed playgrounds and recreation programs, intended to "Americanize" the new urban immigrants, to accelerate their cultural assimilation, and to control their delinquency. Their successors have expanded and refined the social-control function of services for children and youth in each historical period. Much recent scholarship has shown the

ways in which playgrounds, recreation, youth employment, and athletic programs have operated at ideological and practical levels to diffuse, coopt, or repress social discontent (Boyer, 1978; Goodman, 1979; Myers, 1974).

Due attention to the issue of social control should not suggest that the programs serve no constructive, meaningful purpose for many families and children. Many of the educational and psychological benefits that result from effective youth programs are hard to measure precisely or attribute to them, although the acquisition of specific skills or the supervision of large numbers of young people can be demonstrated. The literature on such service outcomes, however, is still much less developed than that on other human services. These services are also inherently preventive in nature and highly interactive with other institutions, making it difficult formally to assess their particular impact on the social character of a neighborhood or the patterns of an individual child's life. Heightened political pressure to justify their funding has begun to make professionals and advocates of out-of-school services more concerned with producing tangible results, or at least with specifying the consequences of budget cutbacks.

In addition to the educational and cultural aims cited above, children's services provide a substantial and very difficult-to-estimate amount of free or inexpensive child care to working parents. Possibly because it seems less professional than the other objectives, this function has, until recently, not been explicitly or directly claimed by providers of out-of-school programs. Again, the harsher fiscal climate and the growing number of employed mothers are factors combining to make after-school child care a potentially powerful justification for these programs.

Integration of Families, Communities, and Services

Out-of-school children's services have adopted a wide variety of stances toward parents and the social life of urban neighborhoods. Many of the earliest programs sought to isolate children from what elite reformers saw as backward and unhealthy home environments. This approach can be contrasted with the techniques developed in settlement houses and extended to public recreation centers between 1910 and 1929. The settlement tradition recognized the value of neighborhoods as mediating structures between families and society. The centers established with this goal in mind were more likely to provide programs and facilities for all family members, giving particular attention to working mothers.

Most recreation departments have long since abandoned the comprehensive aims of the settlements, but many still involve parents in youth

programs as volunteers, as members of advisory panels, or as clients in family counseling. During the War on Poverty of the Johnson administration there were also numerous short-lived efforts to use recreation and youth programs as the basis for grass-roots community organizing.

The Coordination of Children's Services

The notion that services for children must be coordinated at the neighborhood level is persistent, and no group has advocated it more strongly than the providers of recreational and cultural programs. Since their inception, these agencies have maintained an ideal of serving the "whole child." Today multipurpose centers or community schools programs constitute the modest extent to which the integration of community services has been implemented. These innovations are often more of a physical clustering of services than an effort to adapt the programs to each other and to the neighborhood. And in recent episodes of fiscal austerity, many of the standard agreements between school systems and other youth-serving agencies regarding joint use of facilities have broken down as each party tried to shed peripheral obligations.

The providers of out-of-school services have advocated coordination from an instinct for institutional self-preservation. Though they may provide a range of useful functions, they have exclusive responsibility for very little. It is both the greatest strength and the greatest weakness of these programs that they operate in the interstices of a social system, between children and families on one hand and the leviathan establishments of juvenile justice, schooling, and social welfare on the other. At their best, out-of-school programs are flexible, community-based services capable of meeting needs left unattended by families, neighborhoods, and the larger, less responsive bureaucracies. At their worst they are irrelevant and redundant anachronisms, pursuing an ineffectual course that has little claim to professional status and weak political support. When, as so often happens in a contemporary hearing on budget cutbacks for public youth services, people propose that these functions are more properly the responsibility of schools, police, churches, voluntary agencies, or parents, they are echoing a century-old argument.

Public and Private Responsibilities

Municipal cultural and recreation departments were established in the early twentieth century following the models created by numerous philanthropic programs. That period also saw the proliferation of nonprofit services for children and youth, such as scouting and summer camps, and of extra-

curricular activities in public schools, such as sports teams, crafts, and performing arts. For many years there has been a persistent but inexact division of program styles between governmental and private providers. Public agencies have emphasized programs of presumably general interest, offered mostly introductory-level instruction and group activities, and charged few if any user fees. The private sector, both nonprofit and commercial, has concentrated on programs with complementary qualities. Private agencies have addressed innumerable particular interests, from those of small ethnic groups to those of obscure hobbyists; provided instruction at advanced levels, often as individual lessons; and levied higher fees. Thus while the chief asset of public services for children has been their greater accessibility, private services have been more diversified and responsive to changing demands.

This division has blurred in recent years as more private nonprofit agencies have received government funding and as previously homogeneous urban public recreational and cultural departments (including libraries, museums, and schools) have begun to address the needs of a heterogeneous population. But the basic questions of the accessibility, quality, and diversity of children's services are no less critical, even if some traditional distinctions between public and private have been relaxed. In fact, the emergence of some new forms of private service provision is forcing a reexamination of the need for governmental programs in some communities.

INSTITUTIONAL CHANGE AND FAMILY WORK PATTERNS

The history of out-of-school children's services suggests some ways of evaluating the prospects for institutional adaptation to the needs of families with mothers employed outside the home. Over the years these institutions have undergone numerous substantial changes in organizational structure, program content, and social goals. These changes have usually come during periods when the services were particularly vulnerable to political attack and curtailment of their financial base. In those periods, service providers sought greater legitimacy as a helping profession, new and more active political constituencies, and more stable sources of funding. These objectives, all closely interrelated, are once again the agenda for advocates of children's programs. Revival through the creation of new federal grant programs, as in the 1930s or 1960s, seems an unlikely solution at this time. Defensive battles to maintain the status quo with regard to local public funding and philanthropy will undoubtedly continue. But new support appears to be necessary, and the growing population of families with employed mothers is the most frequently mentioned source. These families

can be seen as a potential political constituency for innovative and traditional public programs that meet their needs, as well as a market for services provided by private agencies and business enterprises. The distinction between a constituency and a market is critical, for they embody different conceptions of social policy for families. The responses to Proposition 13 and other recent fiscal containment measures, discussed in a later section of this paper, give some indications of those differing conceptions.

To be effective, proposed new programs must be concerned with providing more than simple custodial child care. Not only do the professional interests need a more ambitious set of program objectives, but children's own needs and preferences must also be considered. Sixth graders, for example, are somewhat self-reliant after school. Even though they may be enrolled in organized activities in order to be supervised, in most cases they are unlikely to participate unless they are interested and motivated to be there.

As interest continues to develop around issues of family work patterns, there is a need to measure the potential demand for service and the barriers to access. This suggests attention to more than just children's participation or lack of it in organized activities. The more we learn about the entire structure of time use in families with various work patterns, the better the likelihood of adapting community institutions in meaningful ways. The 1976 Oakland Children's Time Study survey can provide some evidence in this regard.

THE CHILDREN'S TIME STUDY

Oakland as a Study Site

Oakland, California, provides an instructive context in which to study changes in community institutions serving children. In the Progressive Era its recreation department was nationally known for an emphasis on social welfare and neighborhood cohesiveness due to its origins in several settlement houses. Other municipal and voluntary agencies were among the first and most ambitious in the western United States. In the 1960s and 1970s Oakland was the ultimate "demonstration city," receiving every kind of federal or foundation program intended to improve services, mobilize low-income neighborhoods, and create jobs for the large number of unemployed minority youth.

In 1976, when the survey was conducted, the institutions serving children in Oakland were showing signs that they could adapt to the changing

population and life-styles of the city. After a number of acrimonious disputes in the 1960s, city agencies, including many top administrative levels, were racially integrated. Programs in the libraries, recreation departments, schools, and other agencies began to reflect the city's ethnic diversity.[1] Many new grass-roots community organizations were emerging, independent of government assistance, to demand better services for the relatively deprived, mainly nonwhite areas of the city. Many of the issues concerned child care, recreation, schools, and teenage employment, and the direct action techniques of these organizations won a number of small but concrete victories. Simultaneously, there was a proliferation of community-based service organizations in these neighborhoods, which provided health care, legal aid, child care, and other programs apart from city and county bureaucracies. These storefront services were, however, increasingly dependent on government funding, most notably federal revenue sharing funds distributed by the county.[2]

While all this activity was evidence of a revitalized politics of human services, there were concurrent signs that the fiscal situation was deteriorating for both public and voluntary agencies. Oakland had lost about 10 percent of its population since 1960, and public school enrollment had fallen by 13 percent since 1970. Local tax revenues were not keeping up with inflation. Federal community development funds and state aid to the school district, based on population or enrollment, were declining annually, regardless of other indicators of need. The police and fire departments were receiving a larger portion of the municipal budget each year, and the other "less essential" services were feeling the squeeze. The modest cuts acquiesced to in 1976 were only a dress rehearsal for subsequent years. Nonprofit agencies were receiving considerable assistance from the federal Comprehensive Employment and Training Act (CETA) and in 1976 had not yet faced the painful layoffs and program shrinkage made necessary by eventual CETA cutbacks. In short, Oakland's community institutions were, in 1976, headed for fiscally difficult times just when program innovations and independent citizens' initiatives were gathering momentum.

[1] As of 1977, Oakland's racial composition was 45 percent black, 46 percent white, and 9 percent "other minorities." Hispanic residents, enumerated within the above categories, constituted between 10 percent and 15 percent of the total population (Bureau of the Census, 1979).

[2] The Center for Early Adolescence at the University of North Carolina collects information on after-school programs for children ages 11-14. The center reports that prior to recent cutbacks Oakland provided a "richer mix of programs" than most communities (correspondence from Joan Lipsitz, Director, 1982).

Time And Money

The consequences of maternal employment for household time-use patterns can be expected to vary greatly, depending on job characteristics such as flexibility of scheduling, number of hours, personal autonomy, distance from home and, of course, salary. They can also vary according to factors such as family size and composition, overall household income, characteristics of the jobs of other family earners, and the role of community institutions serving children. In other words, the possible impact of a mother's employment on her children's use of time is mediated by a host of traits of the job, the household, and the community.

In addition to the ethnic diversity already reported, the families of Oakland's sixth graders exhibited a broad range on all measures of household composition and socioeconomic status. Because of this diversity we can explore the interaction of labor force participation with these other characteristics of families.

The basic socioeconomic profile of the 764 families sampled is presented in Appendix A of this paper, and Table 5-1 gives distributions for the four largest ethnic groups. Black and Hispanic families had, in the aggregate, considerably less income and lower levels of parental education than whites or Asians, but every group was represented in all categories of social and economic status. A heterogeneous sample such as this one

TABLE 5-1 Family Income and Mother's Education by Ethnic Group

Family Income and Mother's Education	Ethnic Group			
	White (%)	Black (%)	Hispanic (%)	Asian (%)
Family income				
Less than $5,000	9.1	27.9	39.0	5.0
$ 5,000–$ 9,999	13.8	31.0	15.4	15.4
$10,000–$14,999	15.5	15.9	27.9	26.0
$15,000–$19,999	20.2	11.9	15.8	11.3
$20,000 or more	41.4	13.3	1.9	42.3
Weighted (N)	(128)	(485)	(34)	(45)
Mother's education				
Some high school or less	13.3	28.5	64.8	23.2
High school graduate	21.4	32.6	13.2	38.3
Some college	33.7	32.0	16.6	18.9
College graduate or above	31.6	6.9	5.4	19.6
Weighted (N)	(134)	(517)	(36)	(47)

NOTE. Figures do not include 12 respondents of "other" ethnic groups or cases in which data on income or education were not available.

TABLE 5-2 Number of Parents in Household by Ethnic Group

Number of Parents	White (%)	Black (%)	Asian (%)	Hispanic (%)	All Other (%)	Total (%)
One parent	23.7	51.8	7.3	37.3	9.5	42.4
Two parents	76.3	48.2	92.7	62.7	90.5	57.6
Weighted (N)	(133)	(512)	(48)	(37)	(13)	(744)

confounds attempts to simplify class or family status to a single variable or index. The relationship of income to education was different for each ethnic group, as were the patterns of family structure and labor force participation.

The surveyed families presented a wide array of combinations of work patterns, schedules, and household composition. A total of 13 percent of the households included members of an extended family, that is, those other than parents and children. As Table 5-2 shows, 57.6 percent of all families had two parents living at home, a proportion that varied widely among ethnic groups. A majority of mothers (54 percent) held employment outside the home at the time of the survey, and 70 percent of them worked full time. Almost all the employed men worked at full-time jobs, and more than 20 percent of men and women worked six or seven days a week. The traditional nuclear family arrangement of father as wage earner and mother as full-time homemaker was found in only 20 percent of the households.

The patterns of economic inequality shown by the sample are familiar ones. One-parent families were much more likely than two-parent families to be in the lowest income groups (Table 5-3), and whites in all config-

TABLE 5-3 Family Income by Number of Parents in Household for Blacks and Whites

	Black		White		All Families	
Family Income	One Parent (%)	Two Parents (%)	One Parent (%)	Two Parents (%)	One Parent (%)	Two Parents (%)
Less than $5,000	41.8	10.8	26.7	4.1	41.9	8.4
$ 5,000–$ 9,999	39.0	22.9	30.0	8.2	36.8	18.6
$10,000–$14,999	10.8	21.1	23.3	13.3	12.5	20.2
$15,000–$19,999	5.6	19.7	10.0	23.5	5.7	19.9
$20,000 or more	2.8	25.6	10.0	51.0	3.0	32.9
Weighted (N)	(249)	(223)	(30)	(98)	(296)	(392)

urations of marital and job status had higher family incomes than other ethnic groups. This last finding is the case despite the fact that, among two-parent households, nonwhites were more likely than whites to have both parents working at full-time jobs. Black women, married or single, were more likely than others to work full time if they were employed at all. Among two-parent families, part-time work was predominantly undertaken by relatively high-income, married white women.

These patterns suggest that only the wealthiest strata of two-parent families exercised, or could afford to exercise, the option of part-time employment, an arrangement often thought to be the best compromise between childrearing demands and economic needs. Opportunities to use the scheduling advantages of part-time employment were limited to a relatively small number of families. Not surprisingly, it was in many of the same higher-income, predominantly white households that parents reported having substantial flexibility in arranging their work schedules. In contrast, most of the black households in which the mothers worked part time were one-parent families with incomes at or near the poverty level (Table 5-4).

Parents who have genuine options about how much and when to work can make more explicit trade-offs between time and money than can other parents. But all parents make some trade-offs between time and money and among different types of time. They may sacrifice some of their personal time to maintain their hours of availability to their children despite new work commitments. They may rearrange household responsibilities, perhaps by putting older children in charge of caring for their siblings. They may purchase activities for their children to undertake in the hours spent away from parents and outside school. They even may spend time to make community services more responsive to their needs or eventually move to a new community that better suits those needs. The mothers in the Oakland survey undertook these kinds of actions and others.

Data are first presented on a number of children's activities at home, in the neighborhood, and in organized programs. The discussion then focuses on the degree of parents' active involvement in their children's activities.

The Hours Outside School

The time between the end of the school day and dinner time is a period that has always held some conflicting qualities for young people. How much freedom do they have and how much supervision or responsibility? In Oakland it was the time of day when most community youth programs were busiest, it was also the time after school when nearly 75 percent of

TABLE 5-4 Family Income by Mother's Labor Force Status and Number of Parents in Household for Blacks and Whites

	Black				White			
Family Income	Mother Works Full Time (%)	Mother Works Part Time (%)	One Parent (Nnt in Labor Force) (%)	Two Parents (Mother Not in Labor force) (%)	Mother Works Full Time (%)	Mother Works Part Time (%)	One Parent (Not in Labor Force) (%)	Two Parents (Mother Not in Labor Force) (%)
Less than $5,000	11.7	41.2	58.0	8.1	3.8	5.5	68.6	6.1
$ 5,000–$ 9,999	32.7	22.5	32.9	33.9	16.5	7.6	22.7	12.9
$10,000–$14,999	16.9	14.9	4.0	32.5	14.5	16.7	8.7	15.4
$15,000–$19,999	14.8	17.1	2.5	14.8	13.9	31.5	—	23.0
$20,000 or more	23.8	4.3	2.6	10.7	51.2	38.6	—	42.5
Weighted (N)	(203)	(64)	(112)	(84)	(37)	(32)	(8)	(47)

TABLE 5-5 Households With No Adult at Home After School, by Employment and Number of Parents

Employment and Number of Parents	Percentage With No Adult Home After School	Number[a]
Two parents, neither employed	0.0	31
Two parents, one employed	10.7	134
Two parents, both employed	36.8	221
One parent, not employed	14.5	170
One parent, employed	45.0	165

[a]Number of households = 721.

the children surveyed said they "usually go right home." Whether there was an adult at home when they arrived varied considerably according to their parents' employment status. As Table 5-5 shows, the households in which both parents were employed were roughly three times as likely to have no adult at home after school as were households in which one parent was not employed. More striking is the difference, shown in Table 5-6, between full-time and part-time work in determining whether any adult was home. Clearly, many part-time working mothers were arranging their schedules so as to be home after school as often as possible. Since the proportions of mothers at home after school were only slightly raised by the presence of another, younger child, we can assume that the sixth graders were not thought to be too old for this supervision or attention. We cannot tell from the data how many of these mothers would have

TABLE 5-6 Households With No Adult at Home After School, by Mother's Employment Status

Mother's Employment Status	Percentage With No Adult Home After School	Number[a]
All households in which mother is employed full time	51.9	290
Households in which mother is employed full time *and* has no children below sixth grade level living at home	56.5	132
All households in which mother is employed part time	11.5	120
Households in which mother is employed part time *and* has no children below sixth grade level living at home	14.8	46

[a]Number of employed mothers = 410.

sought full-time employment but for the lack of practical child care alternatives, nor can we tell how many found their part-time status satisfying and appropriate.

Those children who return after school to an empty house have become known as "latch-key" children, and there is a growing recognition of their numbers and circumstances. There is now a national YMCA after-school program named and intended specifically for latch-key children, with a branch in Oakland (established several years after our survey). Such programs are still the exception, however, and most latch-key children encounter basically the same community resources as other children. In the Oakland survey these unsupervised children did not use their discretionary time appreciably differently from their more supervised counterparts. For example, the absence of an adult at home after school did not result in greater television watching in the afternoons. (In the entire sample, 61 percent of the homes had the television on "most of the afternoon.")

Maternal employment was associated with a slightly higher level of television viewing in black families, but not among other ethnic groups. Among employed black mothers, those who answered that they "worried a lot" about the safety of their neighborhood were significantly more likely to have the television on in their homes during the afternoon: 74 percent, compared with only 54 percent of mothers who worried "not very much" about safety.[3] In families in which safety was a major worry, the children were more often encouraged, if not ordered, to stay indoors when they were not in the company of someone older. Thus the influence of maternal work patterns on children's television viewing was mediated by an extrafamilial factor—neighborhood safety—that varied widely across the city.

When the children were allowed to go out, they took advantage of the opportunity up to the age-specific limits to their autonomy. The sixth graders were at an age at which their geographic range was widening but their mobility was still mostly restricted to the neighborhood, rather than including the city at large. They were "king of the hill" in their elementary school yards, but extremely cautious on the turf claimed by older children, even those in junior high school. Boys were somewhat more adventurous, or at least more far-ranging, than girls, as indicated by the proportions who had gone outside the neighborhood on their own or who rode public transit without an adult. Boys were also more likely to play in the public

[3] The same trend, though less pronounced, held for other ethnic groups as well. Blacks were more likely than other ethnic groups to live in Oakland's high-crime areas.

parks, recreation centers, and school yards. Black children were generally more mobile and made more use of public play spaces than white children; these findings are partially explained by the relative scarcity of private yards in the low-income, predominantly black neighborhoods.

Throughout the domain of time use that I call "children on their own," there were few differences in activity patterns attributable directly to parents' work patterns. Gender and ethnicity were far more influential determinants of where and with whom children played and of their activity choices alone or with their friends. Improvements in community resources that may be needed, such as neighborhood safety or more and better play spaces, would be needed for all the children of an area, regardless of their parents' work patterns.

Even if the presence or absence of a mother or other adult did not greatly affect the types of things the children chose to do on their own, there remains the question of their obligations. The survey asked each child about a range of jobs, chores, and responsibilities, of which baby-sitting proved to be the most significant. Many of these sixth graders, especially those who were home after school without an adult, had the responsibility of looking after their young siblings. Table 5-7 shows that in both one- and two-parent families, children did more baby-sitting on a regular basis in households in which both parents were employed. Girls consistently did more than boys, but the margin between the sexes was large only in two-parent families with the mother at home. Ethnic differences in the frequency of regular baby-sitting appeared only among two-parent families with both parents employed: 43 percent of black families used their sixth graders as sitters more than once a week, compared with 26 percent of white families and 17 percent of Asian families. The differences may reflect variation in the use of older relatives or paid baby-sitters, as well as in parents' attitudes toward the appropriateness of preadolescents as caretakers.

This kind of child care was by far the most substantial contribution to the household that the sixth graders made. They had very few opportunities for doing any meaningful work other than routine household chores. (Only 15 percent reported any kind of steady paid job and, aside from newspaper routes, even these "jobs" were mostly housework and yardwork for which they were being paid by their parents or neighbors.) For this reason, the baby-sitting can be viewed as having some decidedly positive qualities for the sixth graders. By most parents' accounts they handled the task adequately, so it may have improved their sense of competence and responsibility.

This in-home baby-sitting can also be seen as an unreasonable burden for the sixth graders, a consequence of inadequate child care services for

TABLE 5-7 Child Care Responsibilities of Sixth Graders

Number in Family and Labor Force Status	Baby-sitting Responsibilities				Children Baby-sitting for Siblings More Than Once a Week		
	Child Never Baby-sits (%)	Child Baby-sits Once in a While (%)	Child Baby-sits More Than Once a Week (%)	Weighted Number	Boys (%)	Girls (%)	Weighted Number
Two-parent family							
One parent works	28	47	26	(123)	16	35	(123)
Both parents work	36	27	37	(128)	35	39	(128)
One-parent family							
Parent not in labor force	35	34	31	(96)	27	35	(96)
Parent works	31	28	41	(93)	36	44	(93)

NOTE: Table refers only to proportion of sample children with younger siblings.

their siblings. Only 3 percent of the entire sample did any baby-sitting in other homes. This suggests that they were not old enough to be consistently hired to do this kind of work and were used as a last resort by their own parents.

In general, chores and responsibilities did not measurably restrict children's discretionary activities, even though the time spent on those chores was greater for children of working mothers. This was true for baby-sitting as well, though undoubtedly there were a number of households in which the children's options were significantly reduced on a regular basis.[4] It is not possible to assess families' entire child care needs or alternatives with this data set, so we must limit our observations to the important role that these preadolescents seem to have played. Given their own need for supervision, it is ironic that this is the main function for which their families depend on them.

Organized Activities: Access and Facilitation

The supervision of preadolescents outside school hours and away from home has always been one of the basic goals of organized community recreation programs. As we noted above, there are also more ambitious developmental and social objectives around which these programs are built. The mothers in the Oakland survey shared a nearly unanimous consensus that organized activities were an important element of their child's upbringing. They criticized the city recreation department more sharply than any other department, and they suggested additional children's programs more frequently than any other recommendation for improving their neighborhoods. Organized activities clearly had real value to these parents, and they saw room for considerable improvement by the providers of such activities.

There are several hypotheses regarding the participation rates of children who have no adult at home after school and most of whose mothers hold full-time jobs. They might be expected to participate in more activities, since their need for a reliable source of supervision is greater. Or they might be expected to participate in fewer activities, since many programs require some parent initiative, which for their parents would be more difficult to schedule. In fact, as Table 5-8 shows, there were no systematic differences related to the absence of an adult at home after school. And on a series of other measures, parents' labor force status also failed to affect the number of activities undertaken by children.

[4] In 6 percent of the sample, children said they did baby-sitting "almost every day."

TABLE 5-8 Children's Participation in Organized Activities

Category of Activities	Children Participating During School Year						
	All Children (%)	Children With No Adult at Home After School (%)	Family Income[a]			Boys (%)	Girls (%)
			Low (%)	Middle (%)	High (%)		
All groups, lessons, and after-school programs	79.2	81.2	79.7	72.7	85.9	83.7	74.9
All lessons	53.0	52.2	51.6	49.5	63.3	51.3	54.6
Sports activities	58.1	60.5	61.9	52.3	57.0	71.3	46.8
Fine arts activities[b]	28.4	31.2	25.8	24.1	45.3	21.3	35.1
Music lessons	8.5	11.2	3.7	6.5	27.3	8.5	8.5
Church-related activities[c]	20.7	17.8	19.7	20.4	21.3	19.3	22.1

NOTE: Number of children = 764.

[a]Low = less than $10,000/year. Middle = $10,000–$20,000/year. High = greater than $20,000/year.

[b]Includes music, arts, crafts, dance, and drama.

[c]Does not include regular church services.

It is unlikely that the lessons, groups, teams, and other programs in which the surveyed children participated, even if doubled in number, would have provided by themselves an answer to the child care problems of full-time working parents. This is because these activities were, by their nature, not everyday occurrences. Although 79 percent of the children took part in some activity during the year, hardly any of them participated in more than two activities at a time. Most were occupied on just one afternoon a week at the time of the survey. The coverage was very broad, but far from the level of regular daily attendance that would make the activity effective as child care for a parent with a five-day work week.

This is not a criticism of these activities but a clarification of their function in children's lives. A group, lesson, or team every weekday all year would likely overwhelm most children, just as cultural events five nights a week would be too much for most adults. The role of organized activities as child care is important, but they are supplementary and not, as presently constituted, a solution by themselves.

The finding that children whose mothers work participate in no fewer activities than other children suggests that their parents were making a concerted effort on their behalf. There are a number of time-consuming parental tasks associated with out-of-school activities, including driving

to and from the activity, making special enquiries and visits to register the child, and volunteer work with the community institution that provides the program.[5] On almost every measure of these parental "facilitation" tasks, employed mothers accomplished as much as their nonemployed counterparts. Working mothers as a group were almost as likely as nonworking mothers to engage in some unpaid service at the child's school or organized activity (Table 5-9). Part-time workers actually volunteered more often than those not in the labor force. Volunteering was greater at school activities among those with part-time jobs and greater at out-of-school activities among those who worked full time. This contrast may reflect the different times of the day and week available to those two groups to volunteer, rather than a greater substantive concern with one service over another. These findings support other recent research (O'Donnell and Stueve, 1981) to the effect that employed mothers remain "good neighbors," active in their local community.

Mothers with full-time jobs also did about as much driving, information gathering, and registering for programs as their nonemployed counterparts. To manage this parity, the employed mothers had to operate with more schedule constraints and fewer options as to when to get involved. This level of involvement was probably necessary to keep their children participating at roughly the same rate as others. In a sense, the working mothers were adapting to the demands of the community institutions more than the institutions were adapting to their circumstances. We do not have the detailed or longitudinal data on parents that could determine precisely the trade-offs of other time uses they might have made or the possible increases in fathers' contributions to these childrearing tasks that might have accompanied mothers' employment.

While parents' labor force status did not sharply differentiate children in their participation in organized activities, most other social and economic variables did have a major impact. The overall likelihood of some participation was similar among most groups of children, but there were major differences in the types of activities undertaken. Table 5-8 shows some of these differences between boys and girls and among income classes. The sex differences extended beneath these major categories (e.g., more boys in sports, more girls in fine arts) to particular subjects. For

[5] There are also, of course, parental tasks connected with school, such as helping with homework. Since in some of the surveyed schools homework was not given to sixth graders on a regular basis, the analysis is not fully representative of the sample. However, when homework was assigned, "children of single parents, low-income parents, and black parents are as likely as others to report spending time working with their parents on school related activities" (Medrich et al., 1982:115) as are children whose mothers are employed.

TABLE 5–9 Percent of Parents Volunteering Time on Child's Activities

	Volunteer as School Room Mother	Helps With Child's Outside Activity	Weighted Number
Black	38	31	(530)
Single parent	37	29	(262)
Two parents	39	33	(246)
Mother's labor force status			
Works full time	27	35	(217)
Works part time	56	36	(67)
Not in labor force, one parent	46	26	(118)
Not in labor force, two parents	40	29	(97)
Low income	36	21	(135)
High income	37	46	(65)
Low education	29	15	(146)
High education	40	60	(36)
White	62	52	(134)
Single parent	23	41	(31)
Two parents	75	57	(101)
Mother's labor force status			
Works full time	38	53	(40)
Works part time	80	60	(32)
Not in labor force, one parent	16	9	(8)
Not in labor force, two parents	83	54	(49)
Low income	32	17	(12)
High income	75	55	(53)
Low education	52	12	(18)
High education	74	65	(42)
All parents			
Single parent	35	29	(312)
Two parents	48	38	(427)
Mother's labor force status			
Works full time	29	37	(288)
Works part time	61	41	(120)
Not in labor force, one parent	44	28	(134)
Not in labor force, two parents	51	34	(183)
Low income	35	20	(165)
High income	55	49	(57)
Low education	30	14	(206)
High education	60	62	(90)

NOTE. Low income = less than $5,000 per year. High income = more than $20,000 per year Low education = some high school or less. High education = college graduate or above

example, boys were active in more team sports, while girls' athletic activities were predominantly in individual sports such as tennis or ice skating. These differences reflected institutional agendas about what was appropriate to provide for girls and boys at a time of shifting social values on these traditional limitations. We expect that a comparable study conducted now, six years later, would show some lessening of these sex

differences but not a complete elimination. Insofar as reducing these differences requires not only reallocation but also expansion of financial resources, the publicly financed programs face major constraints, however strong their commitment to equal opportunity may have become.

When organized activities were differentiated according to the various costs to families associated with them, a clear pattern of class differences emerged. Children from lower-income families were much more likely to utilize free, publicly sponsored programs, while children from higher-income families used both public and more expensive private programs.

Income and mother's education were also strong determinants of parents' efforts to facilitate children's activities. Mothers in the highest categories of income or education were about 10 times more likely than those in the lowest categories to score a 3 or 4 on a 4-point "facilitation index." The privately run and more expensive activities required this kind of direct parental involvement more often than did programs at neighborhood municipal recreation centers or public schools. These class differences, and related ones for volunteering (see Table 5-9), were stronger among whites than among blacks. This is probably because higher-status blacks were less likely than comparable whites to be using private facilities. A similar social class effect underlies some of the ethnic differences in nonschool volunteering by marital status or labor force status shown in Table 5-9.

Recreational, cultural, and ancillary educational opportunities for young people are not limited to organized programs, of course. A metropolitan region such as the San Francisco Bay Area contains a large number of facilities, such as museums, zoos, libraries, nature areas, and amusement parks, that are largely child-oriented. For the most part these facilities were not accessible to the sixth graders on their own. We queried the children about a score of these places and found that most had visited all or almost all of the facilities at least once in their lives. Table 5-10 provides extensive details on visits to six of the most important child-focused community institutions (see Appendix B of this paper for brief descriptions of each facility).

Many children who had not visited a facility with their parents had gone with their school class. This was especially true among lower-income families whose schools received federal enrichment funds for field trips.[6] Children in a range of family circumstances visited roughly the same total

[6] The eight schools in the lowest socioeconomic master strata of the sample were the only schools in the survey to receive Federal Elementary and Secondary Education Act (1965) enrichment funds for school trips. Funds were awarded to entire schools and were spent on students regardless of their family income.

number of places in the community, but their destinations and whether they went with parents or school class varied by family income, parents' education, and ethnicity. Children whose mothers held full-time jobs made the same number of trips with their parents as other children (Table 5-11). Many of these excursions took place on the weekend, so normal work patterns would not have been expected to interfere with parents' participation as much as with weekday afternoon activities.

SUMMARY AND EVALUATION OF PROSPECTS

The community institutions about which we have been writing have not been known for compiling detailed and current data on their clients or potential clients. For years such "market research" was considered largely unnecessary or infeasible. The Children's Time Study serves, among other things, as a proxy for that kind of informational link between service users and providers. The market research analogy may be especially apt because, in the years between the data collection and this writing, the services have been badly shaken by progressively more severe budgetary problems. If they are to do more than retrench, service providers must develop better understanding of the needs of potential users and more persuasive claims on public and private financial resources.

The most basic conclusion from the survey analysis is that maternal employment did not, by itself, create significantly different levels of contact with community institutions for either parents or children. The services and facilities played at least a small part in the out-of-school lives of most of the children, regardless of background. The analysis also suggests, however, some hidden (or at least usually unexamined) costs and inequalities that were faced by families with working mothers. When those families relied more heavily on sixth graders as baby-sitters or maintained a comparable level of parental facilitation and volunteering despite a tighter schedule, pressure was created on their remaining time. A casualty of this pressure may have been the less-organized, less goal-oriented but still meaningful time that parents and children can spend together. This may have been a contributing factor to the statement from more than 80 percent of all children that they "would like to spend more time doing things with [their] parents."

Part-time employment showed its scheduling advantages in that mothers were able to be home most afternoons (when some of that more casual time together might be available) and were able to participate in community institutions at a higher rate than full-time workers or nonemployed mothers. The family background information confirmed that part-time employment was proportionally most common in the higher income, two-

TABLE 5-10 Selected Community and Regional Facilities (Percentage of Children Who Have Been to Each Facility During the School Year of the Survey)

	Oakland Museum	Lawrence Hall of Science	Exploratorium	Oakland Zoo	Steinhart Aquarium	Marine World
Total sample	48	19	28	57	30	23
All boys	50	23	26	59	30	25
All girls	46	16	30	54	31	21
Income per family member (monthly)						
Less than $175	54	10	27	59	34	26
$175–$499	44	22	28	57	31	23
$500 or more	51	34	35	53	24	19
Mother's education						
Less than high school degree	52	15	27	57	36	27
High school graduate	46	17	22	54	25	23
Some college	45	21	32	64	29	20
graduate or above	52	32	36	50	34	22

Sex/race typology						
Black	50	16	29	66	33	27
Boy	53	19	27	70	33	29
Girl	47	12	32	62	32	26
White	49	31	26	42	21	15
Boy	49	35	27	44	21	17
Girl	49	28	25	41	21	14
Asian	26	32	16	13	21	9
Boy	27	32	16	9	24	15
Girl	25	32	17	18	17	3
Family structure/mother's labor force status						
Single parent	50	16	28	63	34	29
Working	49	18	25	64	29	29
Not working	51	15	31	61	41	27
Two parents	47	23	29	54	28	19
Working (both)	45	26	30	57	27	24
Working (one)	49	20	28	51	30	13
Who child went with (this year)						
School class	67	70	77	15	67	40
Parents	18	14	12	39	23	43
Child has "ever been" to facility	85	38	47	94	60	73

parent households. Similarly, in the other instances in which parents' labor force status influenced out-of-school time use (including aspects of baby-sitting and television viewing), the effect was specific to an ethnic group or socioeconomic stratum, rather than uniform throughout the sample.

Most of the systematic variations in children's access to community services were based on ethnic, sex, or socioeconomic differences. Efforts to reduce those barriers to access have been slowed, and in some cases even reversed, by the fiscal stresses faced by community services. At present the agencies are planning more for simple survival than for improved or expanded services. Public recreational, cultural, and nonschool educational programs felt the impact of Proposition 13, California's 1978 property tax limitation, sooner and more severely than any other area of government, not only in Oakland but across the state. The Oakland Parks and Recreation Department endured a 45 percent cut in constant dollar funding between July 1978 and January 1981; the city-owned museum, 38 percent, and the library, 25 percent (City of Oakland, 1981). Beginning in 1982 the state will have no revenue surplus to distribute to local government, and efforts to pass specific legislation to fund nonschool children's programs have not succeeded. Coupled with the federal budget cutbacks and the legal limitations on new sources of revenue, these trends make Oakland's fiscal outlook grim, and increasingly common among California cities. In the voluntary sector, resources are also much tighter than before, while the demands for children's services are higher, partly as a consequence of the public cutbacks (Stumpf and Terrell, 1979). From the limited amount of comparative evidence available, there appears to be a common "politics of austerity" encompassing the out-of-school services, regardless of the proximate cause of the austerity. Reports from New York City after its fiscal crisis of 1975-1976, or from Massachusetts since Proposition 2 1/2 was enacted in 1980, for example, reveal roughly similar budget priorities for similarly situated communities and an almost universal tendency for recreation and library budgets to be the most severely affected.[7]

The services have developed a familiar set of crisis management strategies, including layoffs, staff reduction through attrition, site closings, program consolidation, schedule reduction, and institution of user fees. Lower-income families, who are more dependent on the public sector or the voluntary programs that charge little or nothing, have been the most seriously affected by these measures. Innovative programs for underserved

[7] Rubin and other Children's Time Study researchers are undertaking a comparative analysis of the impact of local and state fiscal stress on these services.

TABLE 5-11 Number of Places Visited With Parent

Total Number of Places Visited[a]	Ethnicity				Low Income (%)[b]	Single Parent (%)	Mother Works Full Time (%)	All Children (%)
	Black (%)	White (%)	Asian (%)	Other (%)				
0	41	19	36	35	50	43	37	36
1 or 2	40	42	42	50	35	39	41	41
3 or more	20	39	22	15	16	18	23	23
Weighted number	(530)	(134)	(49)	(51)	(165)	(316)	(390)	(764)

[a]Child's Interview Schedule, checklist of recreational and cultural places throughout San Francisco Bay Area.
[b]Low income = less than $5,000 per year.

groups have often been the first ones cut, along with the already modest in-house capacities for planning and program development. Limitations on the hours of libraries or recreation centers in many instances have brought protests from time-pressed parents whose schedules seemingly locked them into using the facility at a particular time. The initial impact of Proposition 13 was less than expected, but as the budget reductions accumulate, the inconvenienced or seriously deprived groups continue to grow in size and number (Berkeley Planning Associates, 1980; Fitzgerald, 1980; Rubin and Medrich, 1980).

Several new styles of service provision, which can be gathered under the rubric of privatization, have been stimulated by the fiscal austerity. These include new business ventures providing after-school and summer school programs, local foundations through which parents donate money to school districts to prevent cuts in services, and corporate financial sponsorship of public recreation facilities and programs, among other phenomena. Most are too recent to be thoroughly evaluated in terms of stability or effectiveness. Many of the new private summer school ventures thus far have had a hard time finding a large clientele while maintaining a profit, probably because summer school had been universal and without fees prior to Proposition 13. The local school foundations have thrived mainly in the wealthiest suburbs, where parents can donate several hundred dollars per child without hardship. Municipal recreation departments are pleased with any new donations of either volunteer labor or funds, but they know they cannot assume that these assets will reappear regularly in future budgets.

Most of the privatization innovations in California, along with the increases in user fees for public youth programs, have provided service to higher-income families or communities. Many service providers feel that parents are only now beginning to realize how much the programs cost and what they must be willing to pay. This may well be true, and the judicious use of prices sometimes can effectively rationalize consumption of a public service. But the principle of universal access, which has always been central to community children's services (including many voluntary agencies), may also be undervalued at present. Once access is restricted to those who can pay, the service relationship becomes "commodified", that is, rather than a social and political issue of concern to the community as a whole, the program becomes primarily a private transaction. Fiscal austerity is pushing to the forefront this question of how highly society values the public nature of nonschool children's services, even as the debate proceeds about alternatives for the financing and organization of public schools.

Families in which all the adults are employed will be a key force in

shaping community institutions serving children in the 1980s. As their numbers grow, social awareness of their time-management problems is increasing. They are becoming a potentially powerful political constituency and also a significant market for new services. The ways in which community institutions respond to both potentials will have important consequences for the children of those families as well as for all others.

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APPENDIX A. CHILDREN'S TIME STUDY. SETTING, SAMPLE. AND DESIGN

In spring 1976, 764 preadolescents (11 and 12 years old) from Oakland, California (population 333,000), and their parents were interviewed as part of a study of children's use of time outside school.

The sample was drawn in the following manner: Elementary school attendance areas were defined as principal sampling units. Children in Oakland attend the school closest to their home, so school attendance areas are geographic representations of the city's demography. Of the 58 attendance areas, 20 were selected for study by stratified probability sampling techniques to reflect all school attendance areas in the city. Then the names of approximately 40 children were drawn randomly from the sixth grade rolls at each sample school, yielding a cluster sample of 20 attendance areas and 764 cases (number of cases per area proportional to population). Characteristics of the sample are described in Table A-1.

TABLE A-1 Characteristics of the Children's Time Study Sample[a]

Characteristics	Percentage
Ethnicity	
Black	59.8
White	24.2
Asian	9.2
Hispanic	4.6
Other	2.2
Income	
Less than $4,999	17.4
$,5,000–$ 9,999	20.9
$10,000–$14,999	16.0
$15.000–$19,999	14.4
$20.000 or more	24.2
Not available	7.1
Mother's education	
Some high school or less	22.8
High school graduate	27.9
Some college	31.4
College graduate and above	16.1
Not available	1.8

[a]Number of preadolescents in sample = 764.

Interviews were conducted at the home of each child between April and June 1976. The completion rate was 87.2 percent. There were two protocols: a child's interview schedule and a parent's questionnaire (which the parent filled out while the child was being interviewed in another room).

The interviews consisted of both closed and open-ended questions about out-of-school life: things children do alone and with friends, things children do with parents and siblings, chores and work roles outside the home, involvement in organized activities outside school, and television viewing behavior. Parents' questionnaires focused on family demography and also probed socialization priorities and childrearing practices affecting out-of-school life.

APPENDIX B. COMMUNITY AND REGIONAL CULTURAL AND RECREATIONAL FACILITIES IN THE SAN FRANCISCO BAY AREA

The Oakland Museum, located near downtown, has galleries of the art, natural history, and social history of California. It has a substantial education program for young people. After several years of budget cutbacks, this city-run facility has been "sold" to an investment group and leased back to the city. This arrangement is intended to raise money for the museum without altering its policies or procedures.

The Lawrence Hall of Science, located in the Berkeley Hills several miles from most Oakland neighborhoods, is a museum and educational facility oriented primarily toward young people. It is administered by the University of California.

The Exploratorium in San Francisco (about 15 miles from downtown Oakland), is also a science museum for young people, featuring hands-on experiments and teenage "explainers."

The Oakland Zoo is currently run by the city but may soon be taken over by the private Zoological Society, long an active partner. It is a medium-sized zoo featuring a large park and a "baby zoo."

The Steinhart Aquarium, in San Francisco's Golden Gate Park, is one of the largest in the western United States.

Marine World/Africa USA is a large commercial theme park featuring wild animals, rides, and water shows. It has the most substantial admission charge of any of these six facilities and is located on the San Mateo peninsula about 30 miles from Oakland.

6
The Effects of Mothers' Employment on Adolescent and Early Adult Outcomes of Young Men and Women

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In the relatively brief span of one generation, American society has witnessed a major transition in the role of women. As recently as 1960 the typical American family included a husband as breadwinner and a wife whose usual activities were limited to maintaining the household. In contrast, the average wife in 1980 is as likely as not to be in the labor force (U.S. Department of Labor, 1981: Table B). Perhaps the most dramatic statistical manifestation of this transition relates to the employment of women who have children under age 3, the maternal group that traditionally was expected to concentrate its energies on child and home activities. In 1960 only 15 percent of this group was in the labor force (Schiffman, 1961), whereas 40 percent were working in 1979 (Johnson, 1980). These data, perhaps more than any other, suggest how fundamentally the roles of women have evolved in recent years.

In part reflecting this social transition, there has been a renewed interest in issues associated with the possible effects that maternal employment may have on the short-term and long-term behaviors and attitudes of children. For the most part, the empirical evidence that has been gathered has provided inconclusive and frequently inconsistent results.

Because much of this empirical evidence is based on narrowly circumscribed samples (for example, samples limited to specific geographic areas, narrow age groups of children, or children from a narrowly defined social class) that do not readily lend themselves to generalization, the inconsistency in the results from different studies is not surprising. In addition, many of the studies are improperly specified in that they lack controls for

background factors shown in other research to be correlated with mother's employment. In this paper, we use data from a nationally representative sample of youth passing through adolescence and reaching adulthood in the late 1960s and early 1970s to clarify some of the issues associated with effects of mother's employment. While we cannot completely operationalize all the relevant theoretical considerations, our data sets—the National Longitudinal Surveys of Labor Market Experience of young men and women and mature women—include a wider range of information on mothers' employment, other characteristics relating to youths' family of origin, and information about their education and early career experiences than has usually been available to researchers.

THE RESEARCH ISSUES

While recent research on the possible effects of mother's work on children's outcomes has generally been inconclusive, it certainly has been extensive.[1] To review the literature in any comprehensive manner is beyond the scope of this paper. Instead we indicate several research themes suggested by other studies, focusing specifically on those orientations that can be operationalized using our data set.

Briefly, it has been hypothesized in various studies that mothers' work outside the home can affect children through a number of mechanisms. First, the time a mother spends away from home can affect the amount of time she has to spend interacting with her children (Robinson, 1971; Walker and Woods, 1972 [cited in Hoffman, 1974]), which presumably can have effects in terms of educational outcomes and attitudes, everything else being equal (e.g., Fleisher, 1977). Of course, time per se may not be the relevant dimension, of greater importance may be how the mother uses the time she does have available for family interactions (Etaugh, 1974). Also relevant is the nature of the substitute arrangements that the mother makes for child care when she cannot be home (Jones et al., 1967 [cited in Leibowitz, 1974]; Leibowitz, 1974; Yarrow, 1961). This issue is of course of greatest relevance when her child or children are young.

Second, from a psychological perspective, the most important issues relate to the mother's success in accomplishing her defined roles, whether at home, in the labor market, or both. This body of research has most frequently concluded that mothers who have jobs and are satisfied and/or successful with their job choices (1) probably have more satisfactory

[1] Etaugh (1974), Hoffman (1974), and Heyns (1982) are three excellent sources of an overview of the state of the art in this area of research.

relationships with their children (Etaugh, 1974; Yarrow, 1961; Yarrow et al., 1962) and (2) from a role-modeling perspective, have children who view a woman's employment role more positively (Baruch, 1972; Hoffman, 1974). Both of these conclusions may translate into more successful educational progress[2] and a more positive vocational orientation in children (Baruch, 1972; Etaugh, 1974). In addition, the vocational payoffs may be greater for daughters than for sons, although a career-oriented mother also may be more likely to have sons with a greater egalitarian orientation (Banducci, 1967; Gold and Andres, 1978; Vogel et al., 1970). This last conclusion is, however, somewhat tentative because there are also studies suggesting little effect on male sex-role ideology (Brown, 1971; Griggs, 1972 [both cited in Etaugh, 1974]). It is also of some importance to note that the interaction of role choices and satisfaction is not necessarily limited to mothers who work. There is some evidence that mothers who show satisfaction with the home role also transmit positive values in this regard to their children and establish positive intergenerational rapport, which can help lead to positive "payoffs" for children. However, children viewing home roles as satisfying will in all likelihood be conditioned toward different adult behaviors and value orientations than children who have a mother in an apparently satisfying work situation outside the home (Yarrow, 1961).

The extent to which a mother's behaviors and attitudes are manifested in her children's short-term and long-term attitudes and behaviors can of course be affected by the ages at which the children are witnessing the mother's activities, although how age is associated with the impact of the situation remains somewhat unclear on the basis of available evidence (Heyns, 1982). Similarly, the effects can be sensitive to the status and race of the family unit, although once again the evidence is somewhat ambiguous (Angrist et al., 1976; Banducci, 1967; Gold and Andres, 1978).

A third mechanism through which mothers' work can affect youth is essentially economic, in at least some situations, the income generated by a mother's employment can make a difference in how well the family unit copes economically and, in particular, in how feasible it is for the children to make educational progress (Hoffman, 1974:222). While the meaning of this effect is clear-cut, operationally it is difficult to isolate since a mother's higher earnings are usually associated with a more intensive work involvement as well as higher-status employment.

[2] This statement is deliberately qualified. While the literature documenting the relationship between "satisfying" employment and positive parent-child interactions is fairly conclusive, to our knowledge the effect of satisfying employment on actual educational outcomes has not been empirically examined.

The range of child outcomes that have been considered by various researchers runs the gamut from personality-related outcomes to educational and career behaviors and attitudes. More specifically, they include various measures of self-esteem, cognitive development, verbal development, IQ, aptitude and achievement, egalitarian role orientations, traditional and nontraditional career choice paths, and educational completion. Most studies have focused on a restricted range of outcomes in relation to a constrained age or education cohort. Background factors that affect one kind of outcome do not necessarily relate to other outcomes. And it is frequently difficult to make comparisons across outcomes because of the greater variability in the way background factors and mothers' work-related variables are operationalized and in the differences between samples.

This paper focuses primarily on the extent to which a mother's work-related attitudes and behaviors can affect late adolescent and early adult attitudes and behaviors of sons and daughters. It is thus of some use to consider further the extent to which the available literature examines the effect of mother's work on children's educational, family, and early career outcomes. Most of the literature relating to educational outcomes focuses on childhood and early adolescent test scores and achievements. In this regard, as we noted earlier, a mother's employment, in conjunction with her projecting an image of satisfaction with the work role, can sometimes translate into superior achievements by children. Direct empirical evidence regarding this association between satisfaction and outcomes is lacking. Regarding a mother's employment per se, the results are not conclusive. Where positive results have been found, the results are usually qualified by factors such as the child's sex, the family's status and race, and the general acceptability of female employment in the family's specific social milieu. In addition, while earlier achievement presumably translates into more educational success at the later adolescent ages, empirical research finding direct effects in late adolescence is lacking. Research that has examined the association between college plans and a mother's employment is somewhat ambiguous because the effects are contingent on factors such as the parents' specific occupations (Banducci, 1967). We are not aware of any generalizable studies that have examined the association between mothers' roles and daughters' actual college attendance and completion (with the exception of some status-attainment literature, which has focused on cross-generational educational or occupational effects, usually for sons only).

While literature focusing on adolescent educational outcomes is sparse, there has been more research on the extent to which mothers' employment can affect children's career ideas and, in particular, their ideas about appropriate roles for women and men. This literature, which focuses on

sex ideology, is more extensive for mother-to-daughter than for mother-to-son effects. Presumably (although not necessarily) this literature, which generally suggests fairly pronounced effects, has major implications for how young adults view their need for higher education. There is evidence that sons and daughters of working mothers perceive their own sex more favorably with respect to behaviors that are considered socially desirable for the opposite sex (Baruch, 1972; Gold and Andres, 1978; Vogel et al., 1970). In general, having a working mother leads to smaller differences in perception of male and female roles by youth; mothers' work that is viewed as successful by youth leads to more egalitarian sex-role ideologies (Etaugh, 1974). Among women attending college, having a mother who worked can result in a strong career orientation (Almquist and Angrist, 1970; Tangri, 1972) as well as a greater likelihood of making an atypical occupational choice (Tangri, 1969). On the basis of the available literature, it is fair to conclude that a mother's employment, particularly if it is viewed as successful by the mother and her children, frequently translates into a more egalitarian view of the roles of men and women, a stronger career orientation by daughters, and a greater probability of diversification in the occupational choices daughters make.

As we have briefly indicated, the nature and strength of the associations between mothers' employment and most youth outcomes are not at all clear. Whether this lack of clarity primarily reflects the inadequacy of much of the research or whether there really are few associations for most of the outcomes considered is the basic issue. For most of the research we have examined, the presence or absence of significant associations may perhaps reflect misspecifications in the research design or lack of representativeness in the samples. In this paper we attempt to specify models for a nationally representative sample, taking into consideration more relevant background factors than are usually possible.[3] We focus on a full range of adolescent and early adult outcomes for both young men and women, with particular emphasis on educational outcomes—high school completion, college attendance and completion, and years of schooling completed by nationally representative samples of youth reaching adulthood in the early years of the 1970s.

THE DATA

This research uses data from several components of the National Longitudinal Surveys of Work Experience to follow young men and women

[3] See footnote 4 for a more complete statement of biases implied by our sample constraints.

through their late adolescent years, examining a number of educational, career, and family outcomes in relation to the prior employment experiences of their mothers (Center for Human Resource Research, 1982). The cohort of mature women of the National Longitudinal Surveys originally included interviews with a nationally representative sample of about 5,000 women who were ages 30-44 when first interviewed in 1967. This first interview included an intensive battery of questions relating to their ongoing and past employment experiences, their husbands' employment, family income, work attitudes, and related demographic information. This cohort constitutes the mother's generation of our research.

The National Longitudinal Surveys of Work Experience of Young Men initially interviewed 5,000 men ages 14-24 in 1966 and repeatedly interviewed these respondents until 1981. Information was collected from these men about their education, employment, and family experiences. Our research uses a subset of these young men, the "sons," who were ages 14-17 when first interviewed in 1966 and were living with their mothers at that interview date, at age 14, and at age 17. The longitudinal dimension of the data set enabled us to follow them until 1976, when they were ages 24-27 and had, for the most part, completed their education.

The respondents in the National Longitudinal Surveys of Young Women were ages 14-24 when first interviewed in early 1968. Interviews with this cohort, the "daughters," will continue at least until 1983. As for the young men, we used a subset of this sample, who were ages 14-17 when first interviewed in 1968, and followed their educational, family, and employment experiences and attitudes to 1978, at which time they were ages 24-27.

When selecting the original samples for the various cohorts in the 1960s, the Bureau of the Census included in the sample as many respondents from the same household in the appropriate age ranges as possible. Thus we have records for large numbers of matched woman-boy and woman-girl pairs who were in the same household when originally interviewed. We have identified subsets of these matched pairs who are mother and sons and mother and daughters. For all of these matched pairs we have an intensive data bank about the mother and father from the mother's data record and an intensive and continuing longitudinal record of education, employment, and family experiences for the sons and daughters from their respective interviews. In order to ensure that the mothers and children were indeed living together during adolescence, we limited our samples to mother-son and mother-daughter pairs who were living together at the several points specified earlier. In addition, our analysis is limited to "intact" families in which a father was also present. Finally, because essential information about the school experiences of the youth was avail-

able only for those who had completed at least the ninth grade, our sample was constrained to that subset. Our sample thus includes youth who (1) were ages 14-17 in the first survey year, (2) were living with their parents at the first survey date, (3) were living with their mother not only at the first survey date but also at age 14 and age 17, (4) had completed at least nine years of school, and (5) were still being interviewed in the tenth survey year—the year most relevant to the research in terms of outcomes.[4]

THE RESEARCH

Using the data set described above, we examined the extent to which a mother's employment-related characteristics affect the early career progression paths of young men and women, with particular emphasis on educational outcomes. In addition to longitudinal information about the educational completion and the family and career behaviors and attitudes

[4] While the overall National Longitudinal Surveys samples are nationally representative, the introduction of the various sample constraints has undoubtedly introduced some biases into the sample representation, although not necessarily into the multivariate analyses. That is, two groups can be different from each other in terms of socioeconomic or demographic characteristics yet retain similar relationships between characteristics in a multivariate context.

The specific sample we analyze is limited, for a number of reasons specified throughout this paper, to boys and girls from intact family units. Separate analyses for youth from intact units and youth from all family units (some of which are included in this research for comparative purposes) indicate no significant differences in the associations between the critical independent and dependent variables.

In addition, because youth who had completed fewer than nine years of school were not asked any of the questions relating to high school, they have been deleted from this analysis. Thus, to the extent that the exclusion of 14- or 15-year-olds with fewer than 9 years of schooling completed could introduce a bias into our multivariate analysis, caution should be exercised in interpreting our results.

Finally, given the knowledge that the average woman in the mature women's survey was about 37 in late 1967, the average young man (in our subsample) was about 15 or 16 in late 1966, and the average young woman was 15 or 16 in early 1968, we have average generation gaps of 20 to 21 years between mothers and sons and about 22 years between mothers and daughters, this is, however, an understatement, since the average mother in our sample is probably older than the average for the overall women's sample. However, our young respondents are more likely to be earlier- than later-born youth. To some extent, we control for this distortion by controlling for family size and only-child effects in our models. In any event, potential biases of this type relating to overall sample representation are a greater cause for alarm in univariate statistics than in multivariate analyses. Univariate statistics contrasting the total sample and the sample limited to married, husband-present family units are presented in Appendix B.

By the tenth survey year (1976 for the young men and 1978 for the young women), approximately 3 percent of the men and 25 percent of the women had been lost from the sample due to attrition. Recent analyses by the U.S. Bureau of the Census indicate that the attrition has resulted in no significant sample biases.

of the young adults in the sample, we have information relating to their educational experiences as of their first interview, when they were between ages 14 and 17. As of that date, we have information about their educational goals, whether they worked for pay while in high school, the extensiveness of their extracurricular activities while in high school, whether they showed a preference for a less or more traditional high school curriculum, and their feelings about the appropriateness of employment for women with young children.

All of these variables as well as the other explanatory, dependent, and omitted variables are described fully in Appendix A of this chapter. Our modus operandi was to examine separately for sons and daughters the extent to which these intervening factors mediate the strength of the association between the mother's employment-related variables and the final outcome variables.

Because prior research suggests that in some situations the critical explanatory distinction may relate to the nature of the mother's employment rather than merely whether she worked, the multivariate analyses that follow in all instances examine separately the effects of having an employed mother for all respondents as well as the effects of characteristics of the employment when the analyses are limited to working mothers. The models that are limited to working mothers include several variables specifying characteristics of the mother's job that are obviously unavailable for nonworking mothers and hence could not easily be included in the models for the full sample.

Maternal and Other Background Variables

We have tried to include in our analyses a full range of background variables that the relevant literature suggests are perhaps meaningful predictors of adolescent or early adult outcomes. The mother's employment-related variables represent the best proxies available for measuring the extent of her employment, both recent and long term. Additional variables measure characteristics of her job that reflect whether she views her job positively or negatively, her expressed attitudes regarding her commitment to being employed, and her general feelings about employment for women.

Our specific measures of a mother's work intensity are (1) whether she worked while her first child was of preschool age, (2) the proportion of the years between the birth of her first child and her first interview in 1967 in which she worked at least six months, and (3) as a measure of recent intensity, the number of hours she worked in 1966, the year preceding the first interview. The first of the three variables is perhaps the best measure of earlier work commitment, and it relates to a time period

(primarily the early to mid-1950s) when a woman rarely worked if she had a small child in the house. Whether that work reflected primarily an economic need to work we cannot gauge.

The proportion of years the mother worked at least six months is our best measure of the extent to which she was absent from the home during her child's formative years, although some research suggests that the first variable might be more critical in this respect (Heyns, 1981). While a comprehensive discussion of the possible interpretations of such an absence cannot be included here, we note that we have no way of ascertaining the quality of child care during that period. As other literature suggests, the quality of child care during a mother's absence is certainly an important determinant of children's outcomes, as is the quality and nature of the interaction between mother and child (Leibowitz, 1974, 1977). It is also useful to note that because these work variables are jointly incorporated in a multivariate analysis, the variable measuring the number of years worked may be considered as an effect net of the preschool years.

The most comprehensive information on mother's employment we have available is for the year preceding the 1967 survey, and the number of hours worked during that year is our best measure of recent work intensity. For most of the women, recent work began before 1966 and may conceptually be considered a good measure of the extent of the mother's absence from the home during the youth's teenage years. In a life-cycle context, the three variables operationalized thus represent a mother's work attachment (and absence from the home) during her children's infancy, early childhood, and early adolescence.

As we have briefly indicated, the mechanisms through which a mother's employment can be translated into effects on children are undoubtedly complex and may be closely related to how the mother views her employment. From a role-modeling perspective, attitudes transmitted from mother to child are more likely to be positive if the child views the mother as having a satisfactory employment experience. We operationalize this factor in several ways. We hypothesize that mothers who have higher-status jobs (as measured by the Bose score [Bose, 1973] of their 1967 occupation) probably are more satisfied with their work and, on average, transmit more positive feelings to their children.[5] We include an attitudinal

[5] This measure is specified in greater detail in the appendix. The reader may note that we include in the models only characteristics for the most recent job. This is because the high collinearity between current and prior employment made it methodologically unsound for us to include multiple job characteristics in the same model. This research also excludes independent measures of the respondent's current earnings because of its high correlation with both the measure of hours worked and occupational status.

measure ("mother has strong work ethic") of the mother's current work commitment—would she work now, "even if she didn't need the money"?

As a more generalized measure of orientation toward employment, the models also include a scale indicating general feelings about employment for mothers who have small children ("nontraditionality of mother in 1967"). We hypothesize that positively expressed feelings on these attitude items are consistent with the notion that the respondent's children (particularly daughters) are probably viewing her employment as a positive experience. For the models that are limited to employed women, these attitudinal variables are presumably manifesting either a congruence or a lack of it between actual work activities and a like or dislike of employment. Negative employment attitudes in the working subset are hypothesized to be maximally associated with negative employment-related outcomes for youth—more so than for the total sample of women and children. In general, we hypothesize that the greater the congruence between the mother's actual employment behavior and her expressed ideas about employment (as operationalized above), the more positive the likely outcomes for her children.

In addition to a measure of a mother's expressed ideas about appropriate roles for women, we also include a measure of her actual behavior in this regard. The model limited to working mothers includes a measure indicating the extent to which the mother is employed in an occupation in which women have traditionally been employed ("typicality of mother's 1967 job"). We hypothesize that a mother's actual behavior in this regard may perhaps be a better predictor of a daughter's long-term employment and occupational intentions than her more generalized expressed attitudes regarding what are appropriate roles for women.

From a role-modeling perspective, we hypothesize that mothers with more education are probably transmitting more positive values about education to their children. Operationally, we anticipate that children of mothers with more education themselves set higher goals for education, which in turn translate into more attained education. Whether a higher level of education of a mother leads to stronger career orientations of children (independent of the mother's employment) is less clear because for many generations education for women has commonly been espoused as an essential-ingredient-in-raising children properly.

In earlier research we found evidence that a working mother's high level of educational attainment did not translate into higher educational accomplishments for daughters of working mothers. We conjectured that the intergenerational payoff to education for daughters of working mothers came primarily through the status dimension—how daughters' career choices were affected. That is, better-educated mothers who worked had higher-

status occupations, in turn, daughters who viewed their mothers as following successful career paths would then be likely to attain more education in order to attain occupational success. In contrast, nonworking mothers with higher education might be transmitting more traditional ideas about the value of education for women—i.e., education has positive value because it enables one to raise one's children better. To help clarify this possible distinction we include in our models a variable that interacts mother's education with the extensiveness of her recent employment ("highest grade × annual hours 1966").

In addition to these variables related to mothers' employment, our multivariate analyses include measures of fathers' occupational status (measured by the Duncan socioeconomic index [Duncan, 1961]), as well as a variable that indicates the mother's feelings about how the father views the employment of women ("nontraditionalism of father in 1967"). The family's status measure is included because we wish (1) to measure the status effect of the mother's employment independent of the family's status and (2) to contrast the effects of mother's and father's occupational status on sons and daughters.

Regarding the attitude measure, while we acknowledge that it may be biased by the mother's perspective, it is nonetheless our only way of measuring the extent to which a father's feelings about female employment can ultimately affect what a daughter does.[6] Also, it may be that the mother's perception of the father's feelings, insofar as it affects her relationship with her children, may be as important as his actual feelings.

The models also include five control variables that enable us to measure more accurately the independent effects of the primary variables of interest. These controls are the family's income, the number of family members, the race of the respondent, whether he or she was firstborn, and his or her age at the time of the first survey. While these variables have some intrinsic interest of their own as predictors of education and careers for youth, they are not central to the thrust of this analysis.

We indicated earlier that the models included in this analysis are limited to intact family units, those in which both parents were present in the home at the time of the first interview of the mother. The analysis is limited to this universe primarily because we viewed it as of greater importance to include the variables relating to the father's status and attitude than to include the 10 percent of the overall sample for whom the

[6] It is of some importance to note that the zero-order correlations between mothers' and fathers' feelings about employment for women are quite low, about .20.

father was not present. The relative importance of the father's status and attitudes in comparison with those of the mother is central to the focus of this paper. It is important to note, however, that all of the models specified in this research were replicated for the full sample, including respondents from single-parent homes. We found no evidence of different effects for the key variables related to mother's employment between these overall models and the models limited to intact families. Thus we can conclude that the coefficients from the models examined here are in no important way biased by the exclusion of the respondents from families in which the father was not present.

In a later section of this paper, we briefly examine some of the findings from the supplementary analysis, which includes respondents from single-parent families. In particular, we examine jointly the effects of not having two parents present (in either 1967 or in the preschool years) and of mother's employment on selected adolescent and educational outcomes.

The Intervening Adolescent Outcomes

The mechanisms through which family background translates into adult success are mediated by a large number of intervening experiences frequently relating to the character of high school experiences. We try to clarify this process to the extent our data permit by including a number of adolescent behaviors and attitudes as intervening between family background and early adulthood outcomes. As briefly noted earlier, our procedure is to measure the effect of mothers' work-related variables on children's early adult outcomes with and without these intervening variables. Through this process we can gain insights into the extent to which the intervening variables are meaningful mediators. For two outcomes of particular interest, the probability of completing college and educational attainment, we also include path models that exemplify more precisely the mechanisms through which mothers can affect sons' and daughters' education.

There are several particular channels of causation that we explore. First, to what extent does a mother's employment and education affect a child's educational outcome (1) by affecting his or her educational goals at a relatively early age, (2) by affecting his or her (particularly a daughter's) feelings about the appropriateness of employment for women, and (3) by appreciably altering the extensiveness of a child's occupational knowledge?

Second, does the extent and nature of a mother's employment and education affect (1) the extensiveness of a child's extracurricular activities while in high school, (2) the likelihood that a daughter will favor a less

traditional (i.e., mathematics, science, or vocational) curriculum while in high school, and (3) the extent to which a child will be employed while in high school? To the extent that significant associations are found, we then examine whether these intervening factors affect subsequent behaviors or attitudes.

The intervening variables we consider are either those cited in the literature as factors that can potentially affect subsequent behaviors or variables that seem to us to have a high face validity as likely predictors of subsequent educational progress or vocational orientation. Rationales for their inclusion are considered more extensively in a later section.

The Final Outcomes

Having defined the intervening stage, we completed the model by measuring the direct and indirect effects of mothers' employment on a number of educational, vocational, and family outcomes of interest. These outcomes were measured as of the tenth survey year, at which time the respondents were between the ages 24 and 27. Some of the outcomes could be measured for both the young men and young women, whereas a number of other outcomes could specified only for the young women. Our principal focus was on educational outcomes.

For both sexes we measured the effects of the various dimensions of mothers' employment on education (educational completion, the probability of dropping out of high school, and the probabilities of college attendance and completion), vocational orientation (current occupational status and occupational aspirations for the future), ideas regarding the appropriateness of employment for women, and demographics (the number of children a son or daughter has had by age 24).

For young women only we measured several other outcomes suggestive of the extent to which various dimensions of mothers' employment can translate into more or less traditional orientations among daughters when they reach adulthood. These measures include a scale based on a lengthy series of attitudinal items on each young woman's ideas about home, work, and related considerations and whether she plans to follow a nontraditional career path (as measured by the typicality of her occupational intentions and whether she plans to be working at age 35) and the number of children she expects to have.

The specifics for all variables described in the preceding sections can be found in Appendix A of this chapter. The means and standard deviations of these variables for sons and daughters of all mothers and of the subset of working mothers appears as Tables B-19 to B-22 in Appendix B.

RESULTS

Effects of Maternal Employment on Adolescent Outcomes

Congruent with the life-cycle approach outlined earlier, we begin our discussion of results by focusing on the determinants of sons' and daughters' high school and other adolescent activities. Focusing on the determinants of adolescent experiences is worthwhile not only because these outcomes are of interest in their own right, but also because the experiences of youth in their formative, adolescent years may bear critical relations to adult attainments and behaviors. To our knowledge no prior research has had data adequate for examining the mechanisms of maternal work effects in this fashion.

Educational goals, for example—one of the intermediate outcomes we looked at—are shown to bear a pervasive relationship to eventual educational attainments. Understanding the effects of mothers' employment on the formation of ambition among adolescents can therefore clarify our comprehension of the mechanisms by which background factors may determine adult achievements. Similarly, the extensiveness of participation in extracurricular activities, a second intermediate outcome investigated, has been shown by others (Otto, 1976; Otto and Featherman, 1975) to be an effective measure of integration into peer networks, which bears important consequences for eventual educational and occupational achievements as well as for adult ego strength and mental adjustment.

A third outcome of particular interest is whether the respondent worked while attending high school. Others have noted that such labor force activity can have a strong detrimental impact on educational progress, presumably by robbing youth of the time they need for their studies. Alternatively, employment while in high school can provide youth with occupational information and insights into the job search process, which can be of benefit in subsequent job pursuits. If mothers' employment enhances family finances, then student employment may be unnecessary; conversely, mothers' employment may provide a work-oriented role model that induces sons and daughters to sustain strong labor market attachments through high school.

A fourth intermediate outcome is occupational knowledge. Here we hypothesize that extensive maternal work experiences may broaden children's range of secondhand labor market experiences, thereby improving their ability ultimately to find employment in positions commensurate with their skills.

The last two outcomes, the nontraditionalism of attitudes regarding

women's roles and the nontraditionalism (for women) of high school subject most preferred, are indicators of the range of options that daughters, especially, perceive are appropriate for them to pursue. Intuitively we expect these measures to be important considerations as daughters begin to formulate their long range career and family plans and to be strongly determined by maternal employment experiences.

Appendix Tables B-1, B-2, B-11, and B-12 show the regression coefficients reflecting the impact of each measure of maternal employment and other characteristics and control variables on each of these six intermediate outcomes for sons and daughters for the total sample as well as for the subsample of families in which mothers worked in the first survey year. To simplify the discussion of our major findings, these results are presented in schematic form for daughters and sons as text Tables 6-1 and 6-2, respectively. In these tables, as well as in all subsequent text tables, we present the effects only for those key maternal and paternal employment and attitude variables that are central to this paper. For the effects of other background and control variables the interested reader is referred to the appendix tables. Moreover, to improve the visibility of overall patterns of effects, coefficients themselves are not presented in the text tables. Instead, significantly positive and negative effects (at the .10 level in a two-tailed test) are denoted for each variable by a + or −, respectively. No entry for a particular cell indicates the absence of a significant effect of that independent variable on the outcome variable in question. Finally, given the sheer number of equations that are being estimated throughout this paper, a large number of nonsubstantive, statistically significant relationships may emerge through chance alone. Consequently, our emphasis is on looking for patterns of effects rather than focusing on individual effects for each variable.

Inspection of the results displayed in Tables 6-1 and 6-2 reveals a number of patterns of interest. Note the pervasive effects associated with mothers' education, especially for daughters. The more education the mother attained, the more likely the daughter is to have high educational aspirations, to enjoy scientific or technical (nontraditional) courses in high school, to have greater knowledge of the world of work, and to work while still in high school. Highly educated mothers clearly pass their achievement orientations on to their children. The expectation that these role-modeling influences should be strongest for same-sex offspring is evidenced by the much weaker associations between mothers' education and sons' intermediate outcomes.[7]

[7] Ideally it would have been of interest to pursue this issue further by incorporating fathers'

Other evidence of mother-daughter intergenerational transmissions is provided by the strong effect of the nontraditionalism of mothers' attitudes regarding appropriate sex roles for women on daughters' own attitudes—the more supportive the mother is of the right of a woman to work despite family constraints, the more supportive the daughter is of such a position. Similarly, the more nontraditional fathers' attitudes are perceived to be, the more nontraditional are daughters' attitudes, again providing evidence for intergenerational attitude congruence. Interestingly, neither mothers' nor fathers' attitudes are significant predictors of sons' attitudes. Indeed, the almost total absence of effects on this outcome for sons suggests a certain imperviousness of sons' sex-role attitudes to parental characteristics; only the occupational status score of fathers' occupation bears any relation to sons' nontraditionalism. The absence of effects on this variable does not derive from a general lack of support for sexual equality for sons. Indeed, if anything, sons are on the average slightly more nontraditional in their sex role attitudes than are daughters.[8] But whatever determines sons' nontraditionalism apparently does not relate to either parent's attitudes.

Other determinants of daughters' nontraditionalism appear to be counterintuitive. For example, the more traditional the mother's 1967 job is, the more nontraditional the daughter's sex-role attitudes are. However, recognizing that the effect of mothers' occupational traditionalism is the evaluated net of other variables in the model may make this finding somewhat more explicable. Daughters now may have their own attitudes further radicalized by seeing their mothers toil in traditional, often low-paying occupations. In such an event, rather than serving as a role-modeling influence, mothers' employment in a traditional occupation may impress upon daughters the inequity of labor market segregation.

Of special note in Tables 6-1 and 6-2 is the absence of any persistent detrimental impact of mothers' previous and present work intensity on adolescent outcomes. The effects of mothers' employment that do emerge follow identifiable patterns, however. These patterns can best be explicated if we conceptualize the three variables, "mother's employment with preschoolers in the household," "percentage of years mother worked since birth of her first child," and "annual hours worked in 1966," as representing the effects of mothers' employment while children were toddlers,

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education into these equations, unfortunately, the large number of missing values on this item made this strategy impractical.

[8] Tables B-19 and B-21 in Appendix B show the mean nontraditionalism score to be 6.27 for sons and 5.40 for daughters. Part of this sex differential doubtless derives from the fact that the nontraditionalism item was asked of sons at a somewhat later age.

TABLE 6-1 Effects of Mothers and Fathers' Work-Related Attitudes and Behaviors on Adolescent Attitudes and Behaviors: Results for Daughters

	Dependent Variables					
	Educational Goal	Extensiveness of High School Extracurricular Activities	Worked in High School	Occupational Knowledge	Nontraditionalism of Preferred High School Curriculum	Nontraditional Attitude
Variables in all equations						
Mother's highest grade completed	+		+	+	+	−[a]
Nontraditionalism of mother in 1967	−[a]					+
Mother worked preschool			+		−	
Percentage years mother worked 6 or more months between birth of first child			−		+	

Number of hours mother worked in 1966				−
Mother's education-hours interaction				+
Mother has strong work ethic				
Mother's perception of father's nontraditionalism				+
Father's occupational status (Duncan) in 1966	+			
Variables relevant for working mothers only				
Mother's occupational status (Bose) on 1967 job		−		
Typicality of mother's 1967 job				+

NOTE: + = positive effect, significant at the .10 level in a two-tailed test.
− = negative effect, significant at the .10 level in a two-tailed test.

[a]Significant for worker model only.

TABLE 6-2 Effects of Mothers' and Fathers' Work-Related Attitudes and Behaviors on Adolescent Attitudes and Behaviors. Results for Sons

	Dependent variables					
	Educational Goal	Extensiveness of High School Extracurricular Activities	Worked in High School	Occupational Knowledge	Nontraditionalism of Preferred High School Curriculum	Nontraditional Attitude
Variables in all equations						
Mother's highest grade completed	+			+		
Nontraditionalism of mother in 1967				+		
Mother worked preschool			+[a]	+	+	
Percentage years mother worked 6 or more months between birth of first child and 1967						

Number hours mother worked in 1966					
Mother's education-hours interaction					
Mother has strong work ethic		−			
Mother's perception of father's nontraditionalism			−	−[a]	
Father's occupational status (Duncan) in 1966	+	−			−
Variables relevant for working mothers only					
Mother's occupational status (Bose) on 1967 job	+	+			
Typicality of mother's 1967 job		−			

NOTE: + = positive effect, significant at the .10 level in a two-tailed test.
− = negative effect, significant at the .10 level in a two-tailed test.

[a]Significant for worker model only.

elementary-school students, and adolescents, respectively. Note that the first two of these variables have effects on daughters' adolescent outcomes that are of opposite sign, suggesting that indeed the timing of mothers' employment may be of some importance. Maternal employment with preschoolers at home is associated with a greater likelihood that daughters will work in high school (which subsequent results show has detrimental long-term consequences) and a lesser likelihood that they will enjoy technical high school courses, often associated with a more lucrative career. These findings are consistent with earlier results by Coleman, who found that maternal employment while their children were toddlers retarded subsequent academic achievements (cited in Heyns, 1982). Conceivably, mothers' absence from the home while children are very young retards the career orientations of adolescent daughters. Alternatively, recognizing that maternal employment with preschoolers at home contravened strong normative expectations extant two to three decades ago, we might speculate that such employment was mandated by some extreme family financial exigency that is further reflected in daughters' need to work while in high school. In any case, whether for its own sake or because it reflects other family circumstances, maternal employment with preschoolers at home has a modest depressant effect on daughters' career orientations. Interestingly, while this variable also increases the likelihood that sons will work while in high school—consistent with the financial exigency interpretation—it does not have other deleterious career consequences for them. Indeed, maternal employment with preschoolers at home is actually associated with increases in sons' occupational knowledge and preference for technical high school subjects.

While maternal employment with preschoolers at home is associated with a weaker career orientation of daughters, the percentage of years a mother worked has the opposite effects of decreasing a daughter's proclivity to be employed while in high school and increasing her preference for technical high school courses. Apparently, a mother's employment during her daughter's formative years does appear to have some positive, role modeling influences. Interestingly, such effects do not emerge for sons. Finally, the sole effect of mothers' contemporary work intensity for either sex is to increase daughters' traditionalism.

The most striking impressions left by Tables 6-1 and 6-2 are the modest extent and complex nature of the effects of mothers' work intensity on daughters' and sons' adolescent outcomes. Apparently mothers' employment has neither the pervasive beneficial role-modeling influences that some suggest nor the consistent detrimental effects due to maternal deprivation that others decry. Maternal employment seems to have differing

effects depending on the nature of the outcome variable and the age of the child at the time of employment. Whether maternal employment has a similar pattern of effects for subsequent educational and other outcomes is investigated in the next section.

Effects of Maternal Employment and Adolescent Outcomes on Educational Attainments

In this section we follow sons and daughters further along their life paths by reporting on educational attainments measured as of the tenth survey year, at which time they were ages 24-27. The aim is to uncover some of the more enduring effects of mothers' attitudes and behaviors on the educational progress of their children. Moreover, all equations are estimated both with and without the six adolescent outcomes of the previous section as additional independent variables. Presenting the results in this fashion enables us to make some statements regarding the mechanisms by which mothers' behaviors and other exogenous variables affect later outcomes. In particular, the results estimated without these adolescent outcomes enable us to gauge the *total* effects of mothers' work-related behaviors and attitudes. If the magnitude of these coefficients decreases when the adolescent outcomes are added to the equation, we can infer that these intervening variables mediate some of the effects of mothers' characteristics on eventual educational attainments of sons and daughters. In this way we have effectively decomposed the total effect of exogeneous variables into a direct (the effect of mothers' behaviors that remain when the intervening variables are added to the equation) and an indirect effect (the difference between the total effects, gauged without the intervening variables added, and the direct effects). All these results are reported for sons and daughters for the total sample, and for the subset of sons and daughters of working mothers only (Tables B-3, B-4, B-13, and B-14 in Appendix B).

Following a strategy outlined earlier, we simplify the presentation of these results by highlighting the significant effects of key variables of interest in the text tables. Table 6-3 presents the effects of maternal employment and related characteristics and Table 6-4 describes the effects of the intervening variables on four measures of eventual educational attainment—whether the respondent completed high school, whether she or he attended college, whether she or he completed college, and finally a single continuous measure of the respondent's highest grade completed. The results reported in Tables 6-3 and 6-4 represent the effects when both the exogenous and adolescent intermediate outcomes are included simul-

TABLE 6-3 The Effects of Mothers' and Fathers' Work Related Attitudes and Behaviors on Daughters' and Sons' Educational Outcomes

	Daughters				Sons			
	Completing High School	Attending College	Completing College	Highest Grade Completed	Completing High School	Attending College	Completing College	Highest Grade Completed
Variables in all equations								
Mother's highest grade completed		+	+	+	+	+		+
Nontraditionalism of mother in 1967								
Mother worked preschool					−			
Percentage of years mother worked 6 or more months between birth of first child and 1967								
Number of hours mother worked in 1966					+			
Mother's education-hours interaction		−						
Mother has strong work ethic	−[a]	+[a]						
Mother's perception of father's nontraditionalism								
Father's occupational status (Duncan) in 1966								
Variables relevant for working mothers only								
Mother's occupational status (Bose) on 1967 job			+					
Typicality of mother's 1967 job								

NOTE. + = positive effect, significant at the .10 level in a two-tailed test.
− = negative effect, significant at the .10 level in a two-tailed test.

[a]Significant for worker models only.

TABLE 6-4 Effects of Adolescent Behaviors and Attitudes on Daughters' and Sons' Educational Outcomes

	Daughters				Sons			
	Completing High School	Attending College	Completing College	Highest Grade Completed	Completing High School	Attending College	Completing College	Highest Grade Completed
Worked in high school	+		−	−[a]		−	−	−
Nontraditionalism of preferred high school curriculum		+		+	+			
Extensiveness of high school extracurricular activities	+					+	+	+
Occupational knowledge					+			+
Nontraditional attitudes								+
Educational goal	+	+	+	+	+	+	+	+

NOTE: + = positive effect, significant at the .10 level in a two-tailed test.
− = negative effect, significant at the .10 level in a two-tailed test.

[a]Significant in model limited to working mothers only.

taneously. For results from the reduced-form equations (i.e., the models that exclude the intervening adolescent outcomes as independent variables) the reader is referred to the relevant tables in Appendix B.

One of the most striking patterns shown in Table 6-3 is the consistent effect of mothers' highest grade completed for both sons and daughters. Highly educated mothers have children who in general complete more years of schooling, and in particular they have sons who are more likely to complete high school and attend college and daughters who are more likely to attend and complete college. Note that these effects appear despite the inclusion of educational goals and the other adolescent outcomes in the equation. Mothers' education, then, not only has an effect on educational aspirations and other adolescent experiences as pointed out in the previous section, but apparently also has a direct and unmediated effect on educational attainments, even holding these intervening experiences constant.

The other striking pattern shown in Table 6-3 is the relative absence of any strong effects of mothers' work-intensity variables. Some isolated effects do emerge. A mother's employment with preschool children in the household is associated with a somewhat lower probability of a son's completing high school, a finding consistent with the interpretation this variable was given in the previous section. The percentage of years a mother worked since the birth of her first child, by contrast, somewhat improves the likelihood that sons will complete high school. For the sample of working mothers only, mothers who say they would work even if they did not need to are more likely to have daughters who drop out of high school and also to have daughters who attend college. In any event, the results in Table 6-3 provide no evidence that absence of the mother from the home for long periods retards sons' and daughters' educational achievements in any substantial way. In short, the complex if modest effects of maternal employment found when adolescent intervening outcomes are examined do not apply when determinants of eventual educational attainments are considered.

Finally, in Table 6-3, note the significantly negative effect of the interaction of mothers' education and hours worked for the attending college variable for daughters. This finding is consistent with the hypothesis advanced earlier that mothers' education should have the greatest impact on nonworking mothers. Also consistent with this interpretation is the finding that the effects of mothers' highest grade completed are generally weaker for the subsample of working mothers. However, given the significance of the interaction of hours worked and education in only one of the eight educational attainment equations, our hypothesis is not well supported.

Table 6-4 extends the investigation by considering the role of adolescent

outcomes in determining subsequent educational attainments. Bearing the maternal and paternal determinants of these intervening outcomes from Tables 6-1 and 6-2 in mind illuminates the *indirect* effects of parental characteristics on educational attainment.

Unsurprisingly, the respondents' reported educational goals have pervasive effects on eventual educational attainments for both sexes. While daughters who work in high school are more likely to complete high school, they are less likely to complete education beyond high school. It may be that earnings from a part-time job while in high school make it possible for some young women to stay in school at least until high school graduation, even though the longer-term consequences of this employment are negative.

Daughters' and, to a lesser extent, sons' preference for technical subjects may well reflect a higher level of occupational aspiration and for this reason is associated with higher educational attainment. Occupational knowledge and participation in extracurricular activities also heighten eventual educational progress, especially for boys; apparently, extensiveness of extracurricular participation is a more adequate measure of integration into peer networks for boys. Another explanation is that such social integration is more relevant for boys' subsequent attainments than for those of girls. Alternatively, the kinds of extracurricular activities in which boys participate simply may be more functional inputs in terms of utility for subsequent educational progress.

If maternal employment exerts no strong direct effects on educational attainment net of adolescent intervening outcomes perhaps there are some important indirect effects mediated through these intervening variables If this is the case, the reduced-form equations (in the appendix tables) show the total effects of maternal work intensity to be sufficiently modest so as not to attain statistical significance in any case. Nonetheless, the pattern of direct and indirect effects of maternal characteristics on eventual educational attainments can perhaps be more clearly illustrated by several path diagrams summarizing the findings of the previous sections. Part B in Figures 6-1 to 6-4 represents the significant direct effects from the full model, while Part A of these figures represents the significant total effects from the reduced-form equations. These reduced-form equations represent the total effects (that is, direct and indirect effects) of mothers' employment and other background characteristics on eventual educational attainments, which in turn represent the effects when adolescent outcomes are *not* included in the equations. Parts A and B of these figures together explicate more fully the mechanisms by which background characteristics exert their impact. Path diagrams are presented for both sexes for two dependent variables, highest grade completed and college completion.

Results for daughters are presented for highest grade completed and college completion as Figures 6-1 and 6-2, respectively. Results from the reduced-form equation for highest grade completed (Part A of Figure 6-1) show mothers' highest grade, fathers' occupational status, and race to be the only significant determinants of daughters' education completed. However, estimation of the full model reveals that the second and third of these exogenous variables exert their influence entirely indirectly; fathers' occupational status operates primarily by increasing daughters' educational goals, while, as others have found (Portes and Wilson, 1976), whites are shown to have *lower* educational goals than blacks, net of other factors. A mother's highest grade completed retains a large direct effect on a daughter's educational attainment, but also operates indirectly by increasing a daughter's preference for technical high school subjects and by heightening her educational goals.

The total effects of a mother's employment with preschool children in the household, her percent of years worked since the birth of her first child, and the number of family members in the household are too small to be significant in the reduced-form equation. Nonetheless, Part B of Figure 6-1 reveals that these three variables have a modest indirect effect on highest grade completed because of their impact on a daughter's preference for technical high school subjects. Mothers' employment with

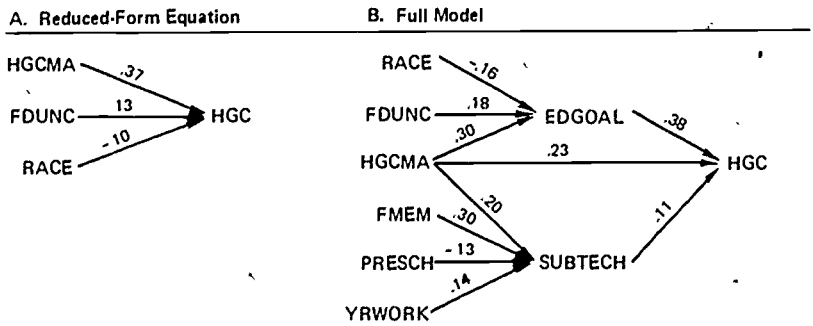


FIGURE 6-1 Path diagram of daughter's highest grade completed. Coefficients are standardized regression coefficients (betas) that are the unstandardized coefficients from Appendix Table A-3 multiplied by the ratio of the standard deviation of the independent variable to the standard deviation of the dependent variable. Only significant paths are shown.

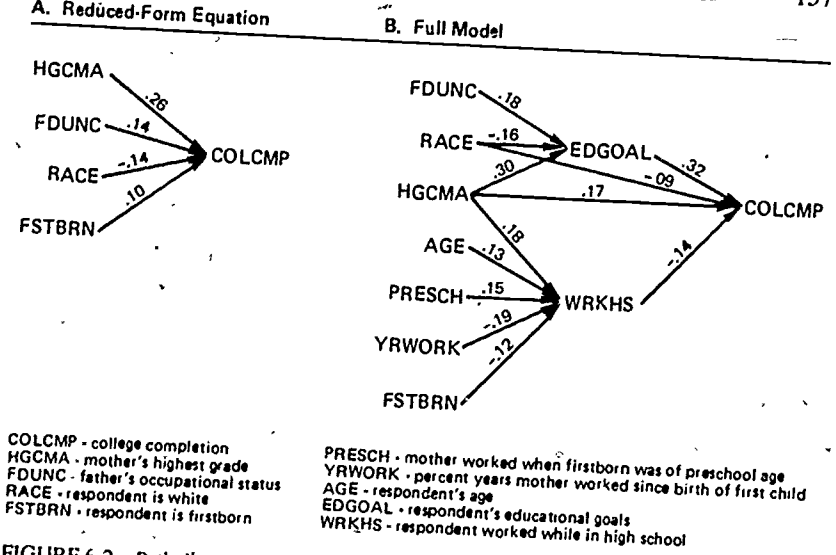


FIGURE 6-2 Path diagram of daughter's college completion. Coefficients are standardized regression coeffieents (betas) that are the unstandardized coeffiicients from Appendix Table A-3 multiplied by the ratio of the standard deviation of the independent variable to the standard deviation of the dependent variable. Only significant paths are shown.

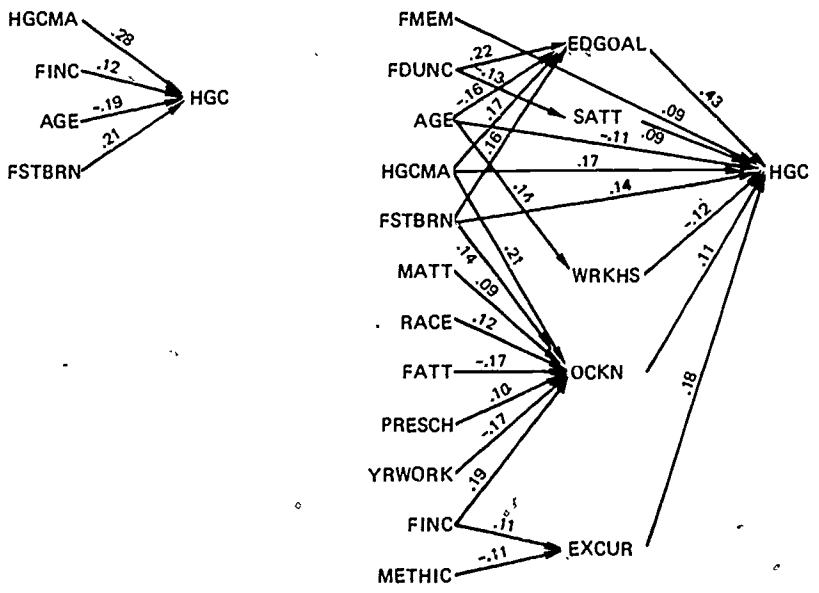
preschoolers at home is associated with a lower likelihood of daughters' enjoying technical subjects, while the percent of years the mother worked since the birth of her first child, as well as number of family members in the household, is associated with a great likelihood of daughters' preference for technical courses.

The path diagrams representing the determinants of college completion for daughters are presented as Figure 6-2, and the results, while similar in some respects, include some interesting differences. As with the equation for highest grade completed, mothers' education, race, and fathers' occupational status have significant effects in the reduced-form model, as does being firstborn. As before, fathers' occupational status exerts its effects entirely indirectly through educational goals. Race has both direct and indirect (through educational goals) effects, and once again mothers' highest grade completed emerges with pervasive direct and indirect effects.

Again, a mother's employment with preschoolers at home and her prior work intensity are shown to have modest and conflicting indirect effects, though in this case they operate indirectly through work while youth are in high school, rather than through high school subject preference.

Analogous models are presented for son's educational outcomes in Figures 6-3 and 6-4. One is immediately struck by the greater complexity

A. Reduced-Form Equation B. Full Model



HGC - highest grade completed
HGCMA - mother's highest grade
FINC - family income
FSTBRN - respondent is firstborn
AGE - respondent's age
FDUNC - father's occupational status
SATT - son's nontraditionalism
EXCUR - participation in extracurricular activities
WRKHS - respondent worked while in high school
EDGOAL - respondent's educational goals
MATT - mother's nontraditionalism
FATT - father's nontraditionalism
PRESCH - mother worked when firstborn was of preschool age
YRWORK - percent years mother worked since birth of first child
RACE - respondent is white
METHIC - mother's work commitment
OCKN - occupational knowledge

FIGURE 6-3 Path diagram of son's highest grade completed. Coefficients are standardized regression coefficients (betas) that are the unstandardized coefficients from Appendix Table A-3 multiplied by the ratio of the standard deviation of the independent variable to the standard deviation of the dependent variable. Only significant paths are shown.

of the path model of highest grade completed for boys than for girls. This is due primarily to the greater number of adolescent outcomes that are related to this outcome for boys. Indeed, the substantively interesting relationship in the reduced-form model is the same for sons and daughters. Mothers' education exerts the largest impact of any exogenous variable for both sexes. These effects operate directly and indirectly both on sons' educational attainments and on college completion.

While we have been accustomed to seeing that a mother's employment with preschool children in the household has a slightly depressant effect and percent of years she worked since the birth of her first child has a

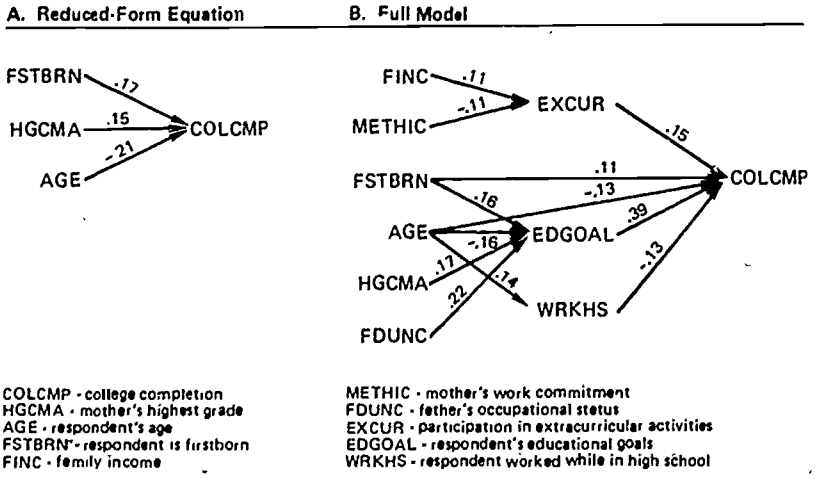


FIGURE 6-4 Path diagram of son's college completion. Coefficients are standardized regression coefficients (betas) that are the unstandardized coefficients from Appendix Table A-3 multiplied by the ratio of the standard deviation of the independent variable to the standard deviation of the dependent variable. Only significant paths are shown.

slightly beneficial effect on youth outcomes, the pattern is reversed for the model of sons' highest grade completed. Here, somewhat anomalously, the former variable has a positive indirect effect and the latter a negative indirect effect on sons' education, through the occupational knowledge variable. Interestingly, none of the mothers' work intensity variables has a direct or indirect effect on sons' college completion.

In short, these diagrams show that mothers' work intensity variables have no total or direct effects on educational attainment for either sex and only very modest and conflicting indirect effects.

Effects of Maternal Employment on Family and Career Orientations

In this section we extend our life-cycle orientation by considering the role of mothers' employment on selected family and career outcomes of sons and daughters. The specific outcomes looked at, the results of which are summarized in Table 6-5, are number of children the respondent has had by age 24, the occupational status (using the Bose scale for daughters and the Duncan socioeconomic index for sons) of the 1978 (1976 for sons) job and of the job desired for age 35 (age 30 for sons), and an attitude scale of nontraditionalism. Five additional outcomes that are available or relevant only for daughters are investigated in Table 6-6; these items are

TABLE 6 5 Effects of Mothers' and Fathers' Work Related Attitudes and Behaviors on Selected Career and Family Outcomes of Daughters and Sons

	Daughters				Sons			
	Number of Children by Age 24	Occupational Status (Bose) of 1978 Job	Anticipated Occupational Status (Bose) of Job Planned for Age 35	Non-traditional-ism in 1978	Number of Children by Age 24	Occupational Status (Duncan) of 1976 Job	Anticipated Occupational Status (Duncan) of Job Planned for Age 30	Non-traditional-ism in 1976
Variables in all equations								
Mother's highest grade completed								
Nontraditionalism of mother in 1967	−			+[a]				−[a]
Mother worked preschool				−[a]				
Percentage of years mother worked 6 or more months between birth of first child and								
								+[a]

Number of hours mother worked in 1966				−	
Mother's education-hours interaction				+	
Mother has strong work ethic			−		
Mother's perception of father's nontraditionalism	−	−	+		−[a]
Father's occupational status (Duncan) in 1966		−	+		
Variables relevant for working mothers only					
Mother's occupational status (Bose) in 1967 job					
Typicality of mother's 1967 job					−

NOTE: + = positive effect, significant at the .10 level in a two-tailed test
− = negative effect, significant at the .10 level in a two-tailed test.

[a]Significant in model limited to working mothers only.

TABLE 6-6 Effects of Mothers and Fathers' Work-Related Attitudes and Behaviors and Adolescent Attitudes and Behaviors on Other Adult Female Outcomes

	Number of Children Expected	Probability of Expecting to Work at Age 35	Atypicality of Age 35 Job	Atypicality of 1978 Job	1978 Nontraditionalism (Long Attitude Series)
Work background					
Mother's highest grade completed		−[a]			
Nontraditionalism of mother in 1967	−	+			+
Mother worked preschool					
Percentage of years mother worked 6 or more months between first birth and 1967					
Number of hours mother worked in 1966		−[a]			
Mother's occupational status (Bose) on 1967 job				+[a]	
Typicality of mother's 1967 job			+[a]		
Mother has strong work ethic		+[a]	+[a]		
Mother's education-hours interaction		+[a]		−	
Mother's perception of father's nontraditionalism	+	−			
Father's occupational status (Duncan) in 1966		+[a]	−		+[a]
Adolescent attitudes and behaviors					
Worked in high school					
Nontraditionalism of preferred high school curriculum	+			+	
Extensiveness of high school extracurricular activities				+	+
Occupational knowledge	−			+	
Nontraditional attitudes					+
Educational goal	−	+[a]		−	

NOTE. + = positive effect, significant at the .10 level in a two-tailed test.
− = negative effect, significant at the .10 level in a two-tailed test.

[a]Significant in model limited to working mothers only

total number of children expected, plans to work at age 35, the typicality score of the 1978 job and of the occupation desired at age 35, and a more extensive attitude scale of nontraditionalism.

While some interesting relationships emerge in these tables, there is again an absence of any clear patterns of effects of maternal work intensity on either career or family outcomes of young adults. Some isolated effects do emerge. Mothers' employment with preschoolers at home is associated with greater traditionalism of daughters' attitudes, perhaps because daughters observe the difficulty their mothers experienced in combining work commitment with family responsibilities. The negative association of mothers' annual hours worked with daughters' plans to work at age 35 can perhaps be explained in similar fashion.

Curiously, mothers' work commitment and annual hours worked in 1966 are inversely related to sons' occupational status in 1976 and status of occupation preferred at age 30, respectively. One interpretation for this finding is that sons from families in which mothers were career-oriented and had satisfying jobs expect their wives to have similarly successful labor market experiences. Accordingly, their career ambitions might not be driven to the same degree by the strong economic pressures that come from the expectation of being a family's sole economic provider. Under these circumstances, such sons may feel they need not focus exclusively on making more money but have the flexibility to pursue nonpecuniary rewards of employment.

In any case, more surprising than these isolated effects of maternal employment is the absence of any strong or pervasive role-modeling influences, especially on daughters' work-related plans and ambitions, that we might have expected. Daughters' plans to work at age 35 are not bolstered by mothers' work intensity at any of the three life-cycle stages measured in our model. Indeed, the only such effect that does emerge is the negative impact of mothers' annual hours worked, as described in the preceding paragraph. There is some evidence of an intergenerational inheritance of atypical job preference, with daughters whose mothers work in atypical occupations more likely to prefer atypical occupations for themselves at age 35. But the status of a mother's occupation is related neither to the status of a daughter's job held in 1978 nor to the status of her occupation preferred at age 35.

Interestingly, one of the few effects of mothers' employment on daughters' career intentions that does emerge is the significance of the mothers' work commitment variable on daughters' intentions to work at age 35. As Table 6-6 shows, mothers who say they would work even if they did not need to financially have daughters who are more likely to plan to work at age 35. This result applies only to the sample with working mothers.

This pattern is consistent with our previous speculations and with the findings of Gold and Andres (1978) that it is not so much whether a mother works or in what sort of job that matters, but whether she is satisfied with her role. Thus, in the sample of working mothers the significance of mothers' work commitment on daughters' plans to work is consistent with the notion that employed mothers who have satisfying labor market experiences pass on career-orientations to their daughters.

Also of interest in Tables 6-5 and 6-6 are the important and consistent effects of mothers' nontraditionalism on daughters' attitudes and family orientation. The more nontraditional the mother's sex role attitudes, the more nontraditional the daughter's attitudes on both the "short" and "long" attitude series, the fewer the number of children she expects, the fewer the children she has given birth to by age 24, and the more likely she is to express work intentions for age 35. Moreover, we speculated in an earlier section that mothers' nontraditionalism is likely to have a larger impact on daughters with working mothers. This is presumably because a mother's nontraditionalism influences daughters more forcefully when the mother's attitudes are reinforced by her actual work behavior. This hypothesis is lent some support if one compares the coefficients representing the effects of mothers' attitudes on daughters' attitudes for the total sample and the subsample of working mothers (Appendix Tables B-9 and B-10). Such a comparison shows that the effects of mothers' nontraditionalism are 33 percent greater in the latter than in the former sample.

Mothers' perceptions of fathers' support for nontraditional sex roles have somewhat more complicated effects. The more nontraditional the father's attitudes are perceived to be, the more nontraditional are the daughter's attitudes and the fewer children she has given birth to by age 24 but, surprisingly, the *more* children she ultimately expects to have. This latter finding perhaps can be explained by hypothesizing that if the daughter's experience has been of a male head of household supportive of egalitarian sex roles and presumably willing to share some household chores, then combining family responsibilities and career commitments may seem more feasible. Curious, however, is the negative effect of fathers' nontraditionalism on daughters' plans to work. Conceivably this represents the effects of delayed childbearing for nontraditional women. It is not that daughters of nontraditional fathers are not career-oriented, but perhaps just that they envision dropping out of the labor force at least temporarily in their mid-30s to bear children.

While a clear intergenerational transmission of attitude nontraditionalism appears for daughters, no such pattern emerges for sons. Indeed, fathers' and mothers' nontraditionalism are actually associated with more traditional attitudes for sons.

The Effect of a Father's Absence

As indicated earlier, coming from a fatherless home, although not a variable included in our equations, was used in many of the preliminary analyses for this paper.[9] Indeed, all the models were reestimated for the full sample, and those respondents whose father was not present as of the mother's first interview in 1967 were included. In addition, for the adolescent intervening outcomes and the educational outcomes (the outcomes of particular interest in this study), models were also run with variables specifying (1) whether two parents were present during early childhood, (2) whether two parents were present as of the initial survey year, and (3) interactions between these variables and the contemporaneous mothers' employment variables. A summary table (Table B-23 in Appendix B) reports the unstandardized regression coefficients (and their associated "t" values), showing the association between these parent-present/mothers' employment interactions and the adolescent and early adult education outcomes. The results of this supplementary analysis, stated most succinctly, suggest no major differences in the effects of mothers' employment between youth from intact family backgrounds and youth from fatherless homes. In the few instances in which differences in the effects of mothers' employment on youth from broken homes and on those from intact families ocurred, there are no theoretically satisfactory rationales for interpreting the differences. As mentioned earlier, the results that include all respondents do not seem inconsistent in any maior way with those from the models limited to respondents from intact families.

Our findings on the impact of a disrupted family background on other career-related outcomes were of somewhat greater interest They showed that coming from a broken home represented a disadvantage for sons, for whom the occupational status of the 1976 job and occupational status of the occupation expected at age 30 are sharply depressed. For daughters, by contrast, coming from a female-headed household actually increases the occupational status of the job expected at age 35. These findings are consistent with a role-modeling interpretation. Sons find their achievements retarded by the absence of a father in the family; by contrast, daughters, who presumably have the experience of a strong, career-oriented maternal influence, themselves adopt a more aggressive stance vis-

[9] It was considered imperative to include fathers' occupational status as a control variable in all our models to avoid any possibility of confounding mothers' work intensity variables with social class effects Since fathers' occupational status is obviously irrelevant for broken homes. for this reason all analyses in this paper are restricted to intact families.

a-vis the labor market. We should note that these effects of coming from a broken home are likely to be conservative estimates, in that the impact of the broken home variable is evaluated *net* of family income and other important family characteristics. Since female-headed households typically have much lower earnings levels than those of intact families, a substantial and deleterious indirect effect of coming from a broken home is likely to result for both sons and daughters for this reason.

The Effects of Control Variables

Because the effects of the other control variables are not central to the main themes of this paper, we have omitted virtually all mention of them. However, the effects of the number of family members and of being firstborn are of some interest and do relate to contemporary changes in the demographic composition of families. Accordingly, some of the interesting findings with respect to these variables are briefly summarized here.

Being firstborn has pervasive effects on adult attainments, especially for sons. Firstborn sons complete more education and are more likely to attend and complete college. The reduced-form equations show them also to have higher-status 1976 jobs and to aspire to a higher-status job at age 30. For daughters, the firstborn variable shows effects only on college completion and occupational status in 1978 and only in the reduced-form equations. Perhaps this sex differential reflects the fact that firstborn sons do indeed get priority in the distribution of family resources. By contrast, firstborn daughters may find that the needs of younger brothers take precedence. In any event, our finding regarding the advantageousness of being firstborn is in line with other research (e.g., Mott and Haurin, 1982).

By contrast, our findings regarding the effects of the number of family members seem counterintuitive. One might have thought that the greater the number of family members, the more a family's resources must be spread, leading to deleterious consequences for each family member. Our results do not support this contention. At least for sons, coming from a large family is associated with more educational attainment and a higher-status job expected for age 30.

Finally, brief mention should be made of other independent and dependent variables used in earlier stages of our analysis, which for one reason or another were discarded from the final equations. Other maternal employment characteristics that were examined include the Bose status index of the occupation held longest by the mother since the birth of her first child, the atypicality of that occupation, a dummy variable indicating whether she was employed full time on this job, and her annual earnings

in 1967. These were ultimately discarded in the interests of theoretical parsimony and also because they were excessively collinear with the occupational status of current job, atypicality of current job, percent of years worked since the birth of the first child, and annual hours worked in 1967, respectively. In any event, preliminary analyses showed that none of these excluded variables in any significant way enhanced our understanding of the impact of maternal employment.

Also excluded as exogenous variables were measures of mothers' satisfaction with housekeeping and with raising children. We initially hypothesized that mothers who professed satisfaction with these homemaking activities would have daughters who were less likely to be career-oriented and more likely to espouse traditional values. None of these hypotheses were borne out. Accordingly, to pare down the number of variables in the model, these regressors were deleted from further consideration.

Additional adolescent intervening variables examined were respondents' satisfaction with high school, time expenditure on homework, Rotter score (a measure of internality), and, for daughters, ideal age at marriage. These were discarded when preliminary analyses showed them to be ineffective as mediators of mothers' employment characteristics on respondents' adult attainments.

Finally, additional dependent variables tried but omitted include whether the respondent was ever married by the tenth survey year, whether she or he was ever divorced by that time, and, for daughters, level of responsibility for household chores as of 1978. Results for these three outcomes were not included because they were entirely unrelated to maternal employment and other relevant family background characteristics.

A complete list of independent, intervening, and dependent variables tried but omitted from the final analysis is included in Appendix A.

CONCLUSION

In the final analysis our results are more similar than dissimilar to what other researchers have found. There is a strong tendency for mothers to transmit intergenerational educational behavior patterns to daughters and sons. There is also considerable evidence that mothers can transmit nontraditional values and career orientations to daughters. There is very little evidence that the employment of mothers per se has any pervasive effect—positive or negative—on the educational, family, or career paths of their sons or daughters. While there are some sporadic associations between a mother's employment when her children are young and poorer outcomes for them, our results in this regard are far from systematic or conclusive. And while parental employment characteristics, as measured by mothers'

and fathers' occupational attachment, occasionally showed some value as a predictor of adolescent or adult outcomes, strong intergenerational role-modeling influences were not observed.

The research focused on a generation reaching adulthood in the years around 1970. Thus, for the most part, we have been examining the effects of mothers' employment between the late 1950s and about 1970. For a considerable portion of that period, employment by women who had children in the home was, if not a rare, certainly an atypical occurrence. Indeed, the average mother in our sample worked six months or more in less than a quarter of the years between her first child's birth and 1967. For the most part, mothers of this generation who worked were doing so because of severe economic pressures. What they probably were transmitting to their children, for the most part, was that employment was necessary in order for the family to cope financially. Moreover, in a social environment in which paid employment by women with small children was generally viewed as normatively unacceptable, a mother's work conceivably was frequently associated with the presence of a father who either consciously or subconsciously transmitted feelings of inadequacy—that he was not properly filling the role that society expected him to fill. Thus, while some of the mothers undoubtedly found their work satisfying and fulfilling, it frequently was within the kind of family context described above. A mother's employment had some positive results, economic and otherwise, it could also have some negative manifestations. The net effect of these factors is undoubtedly sensitive to the "chemistry" of the particular family and is at least to some extent beyond the capability of being operationalized in a large-scale survey. As such our proliferation of "non-results," as measured by direct effects of mothers' employment on the various outcomes, seems entirely explicable.

As a final caveat, it is useful to consider how a replication of this research with a sample of youth reaching adulthood in the 1980s might respond differently to mothers' employment-related considerations than the sample in our analysis. Indeed, it might be hypothesized that should our society acknowledge the universal acceptability of women (and mothers) pursuing a career, the potential negative social reinforcement of having a mother who follows a nonnormative path by not working may be a research question of considerable interest.

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APPENDIX A. SAMPLE AND VARIABLE DESCRIPTIONS

The Samples

Our samples originally consisted of 784 pairs of matched mothers and daughters and 768 pairs of matched mothers and sons. These samples

were derived from the original cohorts of older women in 1967, young women in 1968, and young men in 1966 of the National Longitudinal Surveys. Our analyses were restricted to mother and child pairs living together in 1967 and when the child was age 14 and age 17. In order to have 10-year outcome measures, an additional sample restriction required that the child be interviewed at his or her 10-year survey point (1978 for young women and 1976 for young men).

Our universes were further restricted by the need to include the 1968 (for girls) and 1966 (for boys) intervening high school variables. These questions were asked only of youth who had completed at least one year of high school. This loss represents approximately 245 sample cases for young women and 200 for young men. In the mother-son analyses, 74 additional pairs were lost as a result of missing data on the 1971 short attitude series on women working. In most instances, these 74 cases represent young men who were in the military at that time.

Dependent Variables

1. Probability of not completing high school
   1978 (1976)

   A dummy variable coded 1 if the daughter (son) had completed 0 to 11 years of school and coded 0 otherwise. In all instances, the earlier date given refers to the 10-year interview point for the young men and the later date refers to the 10-year interview point for the young women.
2. Probability of college attendance
   1978 (1976)

   A dummy variable coded 1 if the daughter (son) had completed 13 or more years of school and coded 0 otherwise.
3. Probability of college completion
   1978 (1976)

   A dummy variable coded 1 if the daughter (son) had completed 16 or more years of school and coded 0 otherwise.
4. Highest grade completed
   1978 (1976)

   Highest grade of schooling completed by the daughter (son). This is a continuous variable ranging from 0 to 18 years of schooling with the 18th year representing 6 or more years of college.
5. Probability of expecting to work at age 35
   (in 1978)

   A dummy variable coded 1 if the daughter indicated she wanted to be working at age 35 and coded 0 if she wanted to be married and keeping house.

6. Typicality of occupation expected for age 35 (in 1978)

Atypicality score for the 3-digit occupation daughter wants to hold at age 35. An atypicality score is the difference between the percentage of women found in the occupational category (1970 census definition) and the percentage of women represented in the experienced civilian labor force in 1970. For example, in 1970, women were 38.1 percent of the experienced civilian labor force and 4.6 percent of all architects. The atypicality score for a woman who is an architect is $4.6 - 38.1 = -33.5 \times 10$. The larger the positive value of the atypicality score, the more typical the occupation is for women, conversely, the larger the negative value, the more atypical the occupation is for women. The variable ranges from -609 to $+609$.

7. Typicality of 1978 job

Atypicality score of daughter's 3-digit occupation of current job in 1978. The variable ranges from -609 to $+609$ and includes only currently employed women. See item 6 for further details on the atypicality score.

8. Nontraditionalism of 1978 attitudes (long series)

This variable was derived from the daughter's long attitude series about women's roles (question 48 in the 1978 schedule). Specifically, it incorporates responses to the following items:

(a) Modern conveniences permit a wife to work without neglecting her family.

(b) A woman's place is in the home, not in the office or shop.

(c) A wife who carries out her full family responsibilities doesn't have time for outside employment.

(d) A working wife feels more useful than one who doesn't hold a job.

(e) The employment of wives leads to more juvenile delinquency.

(f) It is much better for everyone concerned if the man is the achiever outside the home and the woman takes care of the home and family.

(g) Men should share the work around the house with women, such as doing dishes, cleaning, and so forth.

(h) A working mother can establish just as warm and secure a relationship with her children as a mother who does not work.

(i) Women are much happier if they stay at home and take care of their children.

(j) A woman should not let bearing and rearing children stand in the way of a career if she wants it.

Each separate item was scaled from 1 to 5 (a code 3 was undecided) such that higher values reflected a less traditional response. All items were then summed to obtain a single scale ranging from 10 to 50.

9. Number of children by age 24

The number of children born to a daughter by her 24th birthday. For sons, this variable represents the number of children the daughter reports in her household at the first survey at which she is age 24 (or closest prior survey to her 24th birthday if she was not interviewed the year she turned 24). The variable ranges from 0 to 10.

10. Number of children expected

Continuous number of children daughters expect to have as of the 1978 survey. The variable ranges from 0 to 15.

11. Anticipated occupational status (Bose) of job planned for age 35

Bose index score attached to the 3-digit occupation the daughter expects for age 35. This variable ranges from 0 to 100 and is measured as of 1978.

The Bose index represents an ordinal measure of occupational prestige. The scale was developed originally by Christine Bose (1973, Appendix E) from a sample of 197 white households in the Baltimore area who responded to questions about the prestige of 110 selected occupations. Rankings within each occupation were averaged and mean values transformed to a scale ranging from 0 to 100. These scores were then regressed on 1959 median earnings and 1960 median years of school completed for the civilian experienced female labor force employed in these occupations. The resulting equation was then used to calculate prestige scores for occupations for women in the National Longitudinal Surveys sample.

12. Occupational status (Bose) of 1978 job

Bose index score for the daughter's 3-digit occupation of current job (see item 11 for further details on the Bose index). This variable ranges from 0 to 100 and includes only currently employed women.

13. Anticipated occupational status (Duncan) of job planned for age 30

The 2 digit Duncan index score attached to the 3-digit occupation the son expects for age 30. The variable ranges from 0 to 96. This variable is measured as of 1978. The Duncan socioeconomic index is a measure of occupational prestige based on (1) the proportion of male workers in 1950 whose completed education included four years of high school or more and (2) the proportion of men with incomes of $3,500 or more in 1949 (see Duncan, 1961).

14. Occupational status (Duncan) for 1976 job

The 2-digit Duncan index score for the son's 3-digit occupation of

current job (see item 13 for further details on the Duncan index). This variable has a range of 0 to 96 and includes only currently employed men.

15. Nontraditionalism of 1978 attitudes (short series)

This variable was derived from daughters' responses to the short series of attitude statements on women's roles. The question and statements were phrased as follows:

> Now I'd like you to think about a family where there is a mother, a father who works full time, and several children under school age. A trusted relative who can care for the children lives nearby. In this family situation, how do you feel about the mother taking a full-time job outside the home?"
>
> (a) If she prefers to work and her husband agrees.
>
> (b) If she prefers to work, but her husband doesn't particularly like it.

Responses to each statement ranged from 1, "definitely not all right," to 5, "definitely all right." Our variable consists of the sum of these two items. The scale ranges from 2 to 10, with higher values representing a less traditional attitude toward women working.

16. Nontraditionalism of 1976 attitudes (short series)

This variable derives from sons' responses to the short series of attitude statements on women's roles. The question and statement were phrased as follows:

> Now I'd like your opinion about women working. People have different ideas about whether married women should work. Here are statements about a married woman with preschool-aged children. In each case, how do you feel about such a woman taking a full-time job outside the home?
>
> (a) If she wants to work and her husband agrees.
>
> (b) If she wants to work, even if her husband does not particularly like the idea.

Responses to each statement ranged from 1, "definitely not all right," to 5, "definitely all right." Our variable consists of the sum of these two items. The scale ranges from 2 to 10, with higher values representing a less traditional attitude toward women working.

Independent Variables

1. Percent of years working 6 or more months between birth of first child and 1967

This variable is the ratio of the number of years the mother worked 6 months or more between the birth of her first child and 1967 to the number of years that have passed between the birth of her first child and 1967. It is a continuous measure ranging from 0 to 1.

2. Mother worked preschool

A dummy variable coded 1 if the mother returned to work within 0 to 5 years after the birth of her first child and coded 0 otherwise.

3. Family income

The mother's report of total family income (in 1966 dollars) during the year preceding the 1967 interview. If the mother's record was missing data on either her own or her husband's earnings, total family income data was obtained from the daughter's (son's) 1968 (1966) survey.

4. Number of family members

Number of family members in mother's household in 1967.

5. Respondent is white

A dummy variable coded 1 if the daughter (son) is white and coded 0 if she (he) is nonwhite.

6. Typicality of mother's 1967 job

A measure of how typical or atypical the mother's current occupation is for women. An atypicality score is attached to the mother's 3-digit occupation code (see dependent variable item 6 for further details on the atypicality score). This variable is for currently employed women and ranges from -609 to $+609$.

7. Mother's occupational status (Bose) of 1967 job

Bose index score attached to the 3-digit occupation of mother's current job (see dependent variable item 11 for further details on the Bose index). This variable is for currently employed women and ranges from 0 to 100.

8. Annual hours worked (by mother) in 1966

A continuous measure of hours worked by the mother during the past year (1966). Usual hours worked at current or last job were multiplied by the number of weeks worked in the past year. Women who did not work during the past year were assigned zero annual hours.

9. Highest grade completed by mother

Number of years of schooling completed by the mother. If data were missing from the mother's record, information on completed years of schooling was obtained from the daughter's (son's) 1968 (1966) survey. This variable ranges from 0 to 18 years, a code of 18 includes 6 or more years of college.

10. Highest grade $\times$ annual hours

An interaction variable that multiplies the highest grade completed by the mother by her annual hours of work during 1966.

11. Age of respondent

Age of the daughter (son) in 1968 (1966). Range is from 14 to 17 years.

12. Respondent firstborn

A dummy variable coded 1 if the daughter (son) was the first child born to the mother and coded 0 otherwise.

13. Nontraditionalism of mother in 1967

Mother's short attitude series on women's roles. This variable was derived from responses to the following question:

> Now I'd like your opinion about women working. People have different ideas about whether married women should work. Here are statements about a married woman with children between the ages of 6 and 12. In each case, how do you feel about such a woman taking a full-time job outside the home?
>
> (a) If she wants to work and her husband agrees.
> (b) If she wants to work, even if her husband does not particularly like the idea.

Responses range from 1, "definitely not all right, to 5, "definitely all right." Our variable is the sum of the two separate items creating a single scale ranging from 2 to 10, with higher values representing a less traditional attitude toward women working.

14. Mother has strong work ethic

A dummy variable derived from the respondent's (1967) reply to the question, "If by some chance you were to get enough money to live comfortably without working, do you think that you would work anyway?" Our variable is coded 1 if the respondent answered yes and coded 0 otherwise. All nonworkers were coded 0.

15. Nontraditionalism of father in 1967

Older woman's response to question: "How does your husband feel about your working?" If the respondent was not currently working the question was phrased, "How do you think your husband would feel about your working now?" The variable ranges from a code of 1, "dislike it very much," to 5, "like it very much."

16. Father's occupational status (Duncan) in 1966

The 2-digit Duncan index score attached to the 3-digit occupation reported for the older woman's husband in the 1967 household record (see dependent variable item 13 for further details on the Duncan index). If data for the husband were missing from the household record, the woman's occupation of current or last job was used instead. The variable ranges from 0 to 96.

Intervening Variables

1. Respondent worked in high school

A dummy variable coded 1 if the daughter (son) worked during her (his) most recent year in high school and coded 0 otherwise.

2. Respondent's educational goal in 1968 (1966)

This variable was derived from the daughter's (son's) response to the question. "How much more education would you like to get?" It ranges from 0 to 18 years of schooling, with a code of 18 including 6 or more years of college. If the respondent indicated she (he) desired no additional schooling, her (his) current highest grade of schooling completed was imputed.

3. Extensiveness of respondent's high school extracurricular activity

A categorical variable indicating the average number of hours the daughter (son) spent per week on extracurricular activities at school during her (his) most recent full year in high school:

(0) 0 hours (i.e., did not participate)
(1) 1-4 hours
(2) 5-9 hours
(3) 10-14 hours
(4) 15-19 hours
(5) 20 hours or more

4. Nontraditionalism of respondent's preferred high school curriculum

A dummy variable coded 1 if the high school subject preferred was atypical for women and coded 0 otherwise. Mathematics, science, and vocational subjects were considered atypical for women.

5. Nontraditionalism of respondent in 1968

This variable was derived from the daughter's responses to the short series of attitude statements on women's roles. The question and statements were phrased as follows:

> Now I'd like you to think about a family where there is a mother, a father who works full time, and several children under school age. A trusted relative who can care for the children lives nearby. In this family situation, how do you feel about the mother taking a full-time job outside the home?
>
> (a) If she prefers to work and her husband agrees.
> (b) If she prefers to work, but her husband doesn't particularly like it.

Responses to each statement ranged from 1, "definitely not all right," to 5, "definitely all right." Our variable consists of the sum of these two items. The scale ranges from 2 to 10, with higher values representing a less traditional attitude toward women working.

6. Nontraditionalism of respondent in 1971

This variable was derived from the son's responses to the short attitude statements on women's roles. The question and statements were phrased as follows:

Now I'd like your opinion about women working. People have different ideas about whether married women should work. Here are some statements about a married woman with preschool-age children. In each case, how do you feel about such a woman taking a full-time job outside the home?

(a) If she wants to work and her husband agrees.

(b) If she wants to work, even if her husband does not particularly like it.

Responses to each statement ranged from 1, "definitely not all right," to 5, "definitely all right." Our variable consists of the sum of these two items. The scale ranges from 2 to 10 with higher values representing a less traditional view toward women working.

7. Daughter's occupational knowledge

This variable is the continuous score (0 to 10) on a test used in the daughter's 1969 survey to measure the extent of labor market (occupational) information. It represents the number of correct responses to 10 items. The means and standard deviations for the scale, respectively, are 7.7 and 2.0 for whites and 5.6 and 2.5 for blacks. Actual items from the test are available from the authors.

8. Son's occupational knowledge

This variable is the continuous score (0 to 10) on a test used in the son's 1966 survey to measure the extent of labor market (occupational) information. It represents the number of correct responses out of 10 occupation items. Actual items from the test are available from the authors. Items for the young men differ somewhat from those used in the 1969 survey of young women.

Variables Tried But Omitted From Analysis

The following is a list of variables included in the regression models at one time or another and for various reasons eventually excluded from our analyses.

Dependent variables

1. A series of dummy variables indicating the degree of responsibility the daughter had for cooking, washing dishes, cleaning house, and washing clothes in her own household (1978).
2. Probability of daughter being ever married by 1978.
3. Probability of daughter being divorced by 1978.

Independent variables

4. Bose index of mother's longest-held job between the birth of her first child and 1967.

5. Atypicality of mother's longest held job between the birth of her first child and 1967.
6. Duncan index of occupation held by head of household when daughter was age 14 (1968).
7. Mother's earnings from wages and salary during past year (1967).
8. Family income less mother's earnings (1967).
9. Mother's satisfaction with housekeeping (1967).
10. Mother's satisfaction with taking care of children (1967).
11. A dummy variable indicating whether daughter lived with both parents at age 14 (1968).
12. A dummy variable indicating whether daughter lived in an urban area at age 14 (1968).
13. Usual hours worked by the mother on her longest-held job since the birth of her first child.

Intervening variables

14. The average amount of time the daughter spent on homework during her last year in high school (1968).
15. Daughter's long series of attitudes on women's roles (1972).
16. Daughter's satisfaction with high school (1968).
17. Daughter's Rotter score (1970).
18. Daughter's ideal age for marriage (1968).

APPENDIX B: TABLES

The following tables include ordinary least-squares regression models for estimating the effects of background factors on male and female adolescents and the attitudes and behaviors of young adults.

TABLE B-1 Effects of Background Factors on Female Adolescent Attitudes and Behaviors. Unstandardized Regression Coefficients (Married, Husband-Present Families)

	Dependent Variables					
Background Factors	Nontraditionalism in 1968	Extensiveness of High School Extra-curricular Activities	Educational Goal in 1968	Nontraditionalism of Preferred High School Curriculum	Worked in High School	Occupational Knowledge
Family income	$.49 \times 10^{-5}$	$.16 \times 10^{-5}$	$.90 \times 10^{-5}$	$.32 \times 10^{-5}$	$-.47 \times 10^{-5}$	$-.26 \times 10^{-4}$[b]
Number of family members	.046	−.096[a]	.021	.067[a]	$.24 \times 10^{-2}$	−.175[a]
Respondent is white	.201	−.054	−1.14[a]	.040	−.058	1.12[a]
Age of respondent	.086	$-.99 \times 10^{-3}$	−.098	$.27 \times 10^{-2}$	−.082[b]	.058[a]
Percentage of years working 6 or more months between birth of first child and 1967	.137	−.019	.437	.220[c]	−.321[b]	.034
Respondent firstborn	−.027	.17	.163	−.036	−.119[b]	.615[a]
[illegible]orked preschool	.093	−.041	.036	−.120[b]	.153[b]	−.246

Nontraditionalism of mother in 1967	121[b]	.029	−.050	.013	$-.60 \times 10^{-2}$	−.02[b]
Highest grade completed by mother	113	.041	.231[a]	.039[b]	.038[b]	.196[a]
Highest grade × annual hours 1966	$.14 \times 10^{-3}$[a]	$.18 \times 10^{-4}$	$.23 \times 10^{-4}$	$-.71 \times 10^{-5}$	$.43 \times 10^{-5}$	$-.25 \times 10^{-4}$
Annual hours worked in 1966	$-.14 \times 10^{-2}$[b]	$-.14 \times 10^{-3}$	$-.51 \times 10^{-3}$	$.53 \times 10^{-4}$	$.41 \times 10^{-4}$	$.53 \times 10^{-3}$
Mother has strong work ethic	−.011	.172	−.034	−.073	−.025	−.145
Father's occupational status (Duncan) in 1966	$-.59 \times 10^{-2}$	$-.11 \times 10^{-2}$	.012[a]	$.14 \times 10^{-2}$	$-.19 \times 10^{-2}$	$-.74 \times 10^{-4}$
Nontraditionalism of father in 1967	225[a]	.039	.056	$.14 \times 10^{-2}$	$.73 \times 10^{-2}$	.072
Constant	3.56	1.05	13.95[a]	−.767	−1.19[b]	−5.34[a]
R^2 (adjusted)	082	056	.162	.095	.051	.248
F ratio	3.27	2.51	5.90	3.65	2.37	9.34
Sample size	355	355	355	355	355	355

[a]Significant at the .01 level in a 2-tailed test
[b]Significant at the .05 level.
[c]Significant at the .10 level

TABLE B-2 Effects of Background Factors on Female Adolescent Attitudes and Behaviors in Families with Working Mothers. Unstandardized Regression Coefficients (Married, Husband-Present Families)

	Dependent Variables					
Background Factors	Nontraditionalism in 1968	Extensiveness of Extra-curricular Activities	Educational Goal in 1968	Nontraditionalism of Preferred High School Curriculum	Worked in High School	Occupational Knowledge
Family income	$-.64 \times 10^{-4}$	$.11 \times 10^{-4}$	$-.64 \times 10^{-5}$	$-.15 \times 10^{-4}$	$-.51 \times 10^{-5}$	$-.53 \times 10^{-4}$
Number of family members	.089	$-.100^{b}$	.017	$.066^{a}$	$-.13 \times 10^{-2}$	$-.155^{b}$
Respondent is white	.496	−.368	-1.48^{a}	.213	−.019	1.74^{a}
Age of respondent	−.013	−.131	.139	.044	.064	$.671^{a}$
Percentage of years working 6 or more months between birth of first child and 1967	.712	.071	.507	$.376^{b}$	$-.366^{b}$	.420
Respondent firstborn	$-.527^{c}$	.252	−.067	−.044	$-.28 \times 10^{-2}$	$.452^{c}$
Mother worked preschool	−.245	−.146	−.193	−.090	.102	−.328
Nontraditionalism of mother in	$.194^{a}$	.013	$-.108^{c}$	$.49 \times 10^{-3}$	.034	.036

Highest grade completed by mother	$-.256^{c}$	$-.26 \times 10^{-2}$	$.309^{b}$	$.30 \times 10^{-3}$	.034	.036
Highest grade × annual hours 1966	$.19 \times 10^{-3b}$	$.27 \times 10^{-4}$	$-.21 \times 10^{-4}$	$.72 \times 10^{-5}$	$.20 \times 10^{-4}$	$.28 \times 10^{-4}$
Annual hours worked in 1966	$-.19 \times 10^{-2b}$	$-.31 \times 10^{-3}$	$.94 \times 10^{-4}$	$-.11 \times 10^{-3}$	$-.12 \times 10^{-3}$	$-.96 \times 10^{-4}$
Mother's occupational status (Bose) on 1967 job	$.87 \times 10^{2}$	$.37 \times 10^{-2}$	.012	$.44 \times 10^{-2}$	$-.66 \times 10^{-2b}$	.010
Typicality of mother's 1967 job	$.11 \times 10^{-2b}$	$-.13 \times 10^{-3}$	$.34 \times 10^{-4}$	$-.47 \times 10^{-4}$	$-.88 \times 10^{-4}$	$.58 \times 10^{3}$
Mother has strong work ethic	.363	−.206	.056	−.021	−.027	.010
Father's occupational status (Duncan) in 1966	$-.49 \times 10^{-2}$	$-.29 \times 10^{-3}$	$.76 \times 10^{-2}$	$-.10 \times 10^{-2}$	$-.52 \times 10^{-3}$	$.17 \times 10^{-2}$
Nontraditionalism of father in 1967	$.248^{c}$	.088	.062	.036	$.24 \times 10^{-2}$	$.55 \times 10^{-2}$
Constant	5.44	3.66^{c}	9.76^{a}	−1.21	.638	-4.71^{c}
R^2 (adjusted)	124	.036	.175	.060	.023	.229
F ratio	2.53	1.40	3.30	1.70	1.25	4.20
Sample size	174	174	174	174	174	174

[a]Significant at the .01 level in a 2-tailed test.
[b]Significant at the .05 level.
[c]Significant at the .10 level.

TABLE B-3 Effects of Background Factors and Adolescent Outcomes on Adult Educational Outcomes of Young Women. Unstandardized Regression Coefficients (Married, Husband-Present Families)

Background Factors and Adolescent Outcomes	Dependent Variables							
	Probability of Not Completing High School		Probability of College Attendance		Probability of College Completion		Highest Grade Completed	
	With Int.[a]	Without Int.[b]	With Int.	Without Int.	With Int.	Without Int.	With Int.	Without Int.
Family income	$.74 \times 10^{-6}$	$.68 \times 10^{-6}$	$.99 \times 10^{-6}$	$.16 \times 10^{-5}$	$.87 \times 10^{-6}$	$.23 \times 10^{-5}$	$-.15 \times 10^{-4}$	$.21 \times 10^{-4}$
Number of family members	$-.11 \times 10^{-2}$	$-.17 \times 10^{-2}$	$-.010$	$-.72 \times 10^{-2}$	$-.017$	$-.011$	$-.038$	$-.016$
Respondent is white	$-.022$	$-.96 \times 10^{-2}$	$-.104$	$-.204^{c}$	$-.164^{c}$	$-.243^{d}$	$-.364$	$-.821^{e}$
Age of respondent	$.047^{c}$	$.046^{c}$	.011	.014	.024	$.67 \times 10^{-2}$	.032	$-.023$
Percentage of years working 6 or more months between birth of first child and 1967	$-.041$	$-.045$	$-.058$	$-.49 \times 10^{-2}$	$-.026$	.062	$-.322$	.043
Respondent firstborn	.014	$-.016$	.050	.073	.066	$.091^{c}$	.194	.311
Mother worked preschool	.050	.048	.028	.018	$-.023$	$-.048$	.129	.035
Nontraditionalism of mother in 1967	$-.79 \times 10^{-2}$	$-.67 \times 10^{-2}$	$.91 \times 10^{-2}$	$.46 \times 10^{-2}$	.011	$.72 \times 10^{-2}$	.063	.048
Highest grade completed by mother	$-.54 \times 10^{-2}$	$-.016^{c}$	$.045^{c}$	$.080^{c}$	$.033^{d}$	$.050^{c}$	$.200^{c}$	$.324^{e}$
Highest grade × annual hours 1966	$-.26 \times 10^{-5}$	$-.28 \times 10^{-5}$	$-.17 \times 10^{-4e}$	$-.17 \times 10^{-4}$	$-.40 \times 10^{-5}$	$-.43 \times 10^{-5}$	$-.57 \times 10^{-4}$	$-.55 \times 10^{-4}$
Annual hours worked in	$.43 \times 10^{-4}$	$.44 \times 10^{-4}$	$.20 \times 10^{-3}$	$.18 \times 10^{-3}$	$.48 \times 10^{-4}$	$.19 \times 10^{-4}$	$.61 \times 10^{-3}$	$.45 \times 10^{-3}$

Mother has strong work ethic	.037	.045	.043	.022	−.044	−.047	$.49 \times 10^{-2}$	−.166
Father's occupational status (Duncan) in 1966	$-.34 \times 10^{-3}$	$-.62 \times 10^{-3}$	$.13 \times 10^{-2}$	$.26 \times 10^{-2}$[d]	$.11 \times 10^{-2}$	$.25 \times 10^{-2}$[d]	$.40 \times 10^{-2}$	.010[d]
Nontraditionalism of father in 1967	$-.26 \times 10^{-2}$	$-.36 \times 10^{-2}$	$.78 \times 10^{-2}$	.014	−.026	−.024	−.072	−.052
Nontraditionalism of respondent in 1968	$.74 \times 10^{-2}$		−.013		$-.73 \times 10^{-2}$		−.046	
Extensiveness of respondent's high school extracurricular activities	−.024[c]		.037		$-.89 \times 10^{-2}$		.145	
Respondent's educational goal in 1968	−.024[c]		.100[c]		.080[c]		.431[c]	
Nontraditionalism of respondent's preferred high school curriculum	−.039		.115[d]		.063		.491[d]	
Respondent worked in high school	−.044[c]		.042		−.124[c]		−.240	
Respondent's occupational knowledge	$.19 \times 10^{-3}$		.015		$.18 \times 10^{-2}$		.015	
Constant	−.189	−.446	−1.84[c]	−.671	−1.40[c]	−.240	4.26[c]	10.09[c]
R^2 (adjusted)	.089	.042	.260	.132	.193	.104	.305	.162
F ratio	2.73	2.11	7.23	4 84	5.23	3.93	8.76	5.88
Sample size	355	355	355	355	355	355	355	355

[a]With intervening outcomes.
[b]Without intervening outcomes.
[c]Significant at the .01 level in a 2-tailed test.
[d]Significant at the .05 level.
[e]Significant at the .10 level.

TABLE B-4 Effects of Background Factors and Adolescent Outcomes on Adult Educational Outcomes of Young Women in Families With Working Mothers. Unstandardized Regression Coefficients (Married, Husband-Present Families)

Background Factors and Adolescent Outcomes	Dependent Variables							
	Probability of Not Completing High School		Probability of Attending College		Probability of Completing College		Highest Grade Completed	
	With Int.[a]	Without Int.[b]	With Int.	Without Int.	With Int.	Without Int.	With Int.	Without Int.
Family income	$-.32 \times 10^{-5}$	$-.30 \times 10^{-5}$	$.13 \times 10^{-4}$	$.85 \times 10^{-5}$	$-.17 \times 10^{-4}$[d]	$-.18 \times 10^{-4}$[d]	$-.37 \times 10^{-5}$	$-.11 \times 10^{-4}$
Number of family members	.011	$.83 \times 10^{-2}$	−.030	−.023	−.023	−.019	−.118	−.088
Respondent is white	.023	.072	−.250	−.286[c]	−.220	−.292[d]	−.729	−1.09[c]
Age of respondent	.054[d]	.052[d]	−.019[d]	.019	.020	.026	−.047[c]	.017
Percentage of years working 6 or more months between birth of first child and 1967	$.46 \times 10^{-2}$	$-.77 \times 10^{-2}$	−.056	.072	$-.65 \times 10^{-3}$	.093	−.244	.278
Respondent firstborn	$.60 \times 10^{-3}$	$-.15 \times 10^{-2}$	.064	.069	.052	.040	.210	.192
Mother worked preschool	.037	.042	−.015	−.059	$.47 \times 10^{-2}$	−.022	.127	−.036
Nontraditionalism of mother in 1967	$-.37 \times 10^{-2}$	$.55 \times 10^{-4}$	$.46 \times 10^{-2}$	$-.59 \times 10^{-2}$	$.75 \times 10^{-2}$	$.12 \times 10^{-2}$	.029	−.013
Highest grade completed by mother	−.024	−.035	.041[c]	.068[c]	.027	.041	.166	.266[d]
Highest grade × annual hours 1966	$.30 \times 10^{-5}$	$.29 \times 10^{-5}$	$-.16 \times 10^{-4}$	$-.17 \times 10^{-4}$	$-.11 \times 10^{-5}$	$-.58 \times 10^{-5}$	$-.40 \times 10^{-4}$	$-.56 \times 10^{-4}$
Annual hours worked in 1966	$.15 \times 10^{-4}$	$.10 \times 10^{-5}$	$.16 \times 10^{-3}$	$.16 \times 10^{-4}$	$.18 \times 10^{-4}$	$.47 \times 10^{-4}$	$.41 \times 10^{-3}$	$.49 \times 10^{-3}$
Mother's occupational status on 1967 job	$.17 \times 10^{-2}$	$.15 \times 10^{-2}$	$.12 \times 10^{-2}$	$.34 \times 10^{-2}$	$.58 \times 10^{-2}$[c]	$.76 \times 10^{-2}$[a]	.015	.024[d]

Typicality of mother's 1967 job	$.17 \times 10^{-4}$	$.40 \times 10^{-4}$	$-.15 \times 10^{-3}$	$-.15 \times 10^{-3}$	$-.17 \times 10^{-3}$	$-.14 \times 10^{-3}$	$-.64 \times 10^{-3}$	$-.60 \times 10^{-3}$
Mother has strong work ethic	.070[c]	.080	.016[c]	.014	−.074	−.057	−.074	−.054
Father's occupational status (Duncan) in 1966	$-.65 \times 10^{-3}$	$-.76 \times 10^{-3}$	$.18 \times 10^{-2}$	$.24 \times 10^{-2}$	$.14 \times 10^{-2}$	$.20 \times 10^{-2}$	$.60 \times 10^{-2}$	$.87 \times 10^{-2}$
Nontraditionalism of father in 1967	$.83 \times 10^{-2}$	$.38 \times 10^{-2}$	$-.66 \times 10^{-2}$	$.45 \times 10^{-2}$	−.025	−.024	−.096	−.064
Nontraditionalism of respondent in 1968	$.74 \times 10^{-2}$		$-.55 \times 10^{-2}$		$-.44 \times 10^{-2}$		−.018	
Extensiveness of respondent's high school extracurricular activities	−.025		$.80 \times 10^{-2}$		−.034		$-.94 \times 10^{-2}$	
Respondent's educational goal in 1968	−.025[d]		.083[c]		.065[c]		.355[c]	
Nontraditionalism of respondent's preferred high school curriculum	−.067		−.179[d]		$-.99 \times 10^{-2}$		.443	
Respondent worked in high school	−.052		.022		−.167[c]		−.473[c]	
Respondent's occupational knowledge	$.70 \times 10^{2}$		.031		$.49 \times 10^{-2}$		.037	
Constant	−.373	−.589	−.958	−.498	−1.02	−.393	7.67[d]	10.60[c]
R^2 (adjusted)	.071	.036	.164	.088	.172	.109	.220	.125
F ratio	1.60	1.40	2.55	2.04	2.63	2.32	3.22	2.54
Sample size	174	174	174	174	174	174	174	174

[a]With intervening outcomes.
[b]Without intervening outcomes.
[c]Significant at the .01 level in a 2-tailed test.
[d]Significant at the .05 level.
[e]Significant at the .10 level.

TABLE B-5 Effects of Background Factors and Adolescent Outcomes on Career-Related Attitudes and Behaviors of Young Women. Unstandardized Regression Coefficients (Married, Husband-Present Families)

Background Factors and Adolescent Outcomes	Dependent Variables					
	Occupational Status (Bose) of 1978 Job		Anticipated Occupational Status (Bose) of Job Planned for Age 35		Probability of Expecting to Work at Age 35	
	With Int.[a]	Without Int.[b]	With Int.	Without Int.	With Int.	Without Int.
Family income	$.73 \times 10^{-4}$	$.10 \times 10^{-3}$	$.79 \times 10^{-4}$	$.12 \times 10^{-3}$	$.34 \times 10^{-5}$[c]	$.39 \times 10^{-5}$
Number of family members	−.595	−.596	−.686	−.736	−.013	$-.70 \times 10^{-2}$
Respondent is white	−7.14[c]	−7.89[c]	−6.72[c]	−9.09[d]	−.101	−.130
Age of respondent	.525	.190	−1.12	−1.66	.050[c]	.045
Percentage of years working 6 or more months between birth of first child and 1967	5.91	8.98	−4.92	−1.61	−.056	−.044
Respondent firstborn	3.31	4.58[d]	.562	2.02	.022	.014
Mother worked preschool	−1.28	−2.14	1.15	−.661	.020	.022
Nontraditionalism of mother in 1967	.200	.266	−.130	−.284	.034[c]	.037[c]
Highest grade completed by mother	.504	1.05	.746	1.62[c]	−.023	−.019
Wage × annual hours 1966	$.13 \times 10^{-4}$	$.79 \times 10^{-4}$	$.80 \times 10^{-4}$	$-.15 \times 10^{-4}$	$.10 \times 10^{-4}$	$.13 \times 10^{-4}$

Annual hours worked in 1966	$-.21 \times 10^{-2}$	$-.25 \times 10^{-2}$	$.69 \times 10^{-3}$	$.75 \times 10^{-3}$	$-.94 \times 10^{-4}$	$-.13 \times 10^{-3}$
Mother has strong work ethic	−3.39	−3.86	−3.17	−3.45	.095	.087
Father's occupational status (Duncan) in 1966	$-.41 \times 10^{-2}$	.033	−.085[c]	−.044	$.54 \times 10^{-3}$	$.64 \times 10^{-3}$
Nontraditionalism of father in 1967	−1.26[c]	−1.43[c]	−.095	−.040	−.064[c]	−.059[c]
Nontraditionalism of respondent in 1968	−.336		−.868[c]		.015	
Extensiveness of respondent's high school extracurricular activities	1.49		.699		.018	
Respondent's educational goal in 1968	1.88[c]		2.97[c]		.015	
Nontraditionalism of respondent's preferred high school curriculum	2.55		1.90		.062	
Respondent worked in high school	−3.95[c]		−1.91		.032	
Respondent's occupational knowledge	.271		.584		−.012	
Constant	19.77	46.56	23.10	78.15[c]	.022	.287
R^2 (adjusted)	.094	.042	.139	.035	.049	.049
F ratio	2.18	1.72	3.21	1.71	1.91	2.29
Sample size	228	228	276	276	355	355

[a]With intervening outcomes.
[b]Without intervening outcomes.
[c]Significant at the .01 level in a 2-tailed test.
[d]Significant at the .05 level.
[e]Significant at the .10 level.

TABLE B-6 Effects of Background Factors and Adolescent Outcomes on Career-Related Attitudes and Behaviors of Young Women in Families with Working Mothers. Unstandardized Regression Coefficients (Married, Husband-Present Families)

Background Factors and Adolescent Outcomes	Dependent Variables					
	Occupational Status (Bose) of 1978 Job		Anticipated Occupational Status (Bose) of Job Planned for Age 35		Probability of Expecting to Work at Age 35	
	With Int.[a]	Without Int.[b]	With Int.	Without Int.	With Int.	Without Int.
Family income	$.58 \times 10^{-3}$	$.35 \times 10^{-3}$	$.88 \times 10^{-4}$	$-.57 \times 10^{-4}$	$-.21 \times 10^{-4d}$	$-.22 \times 10^{-4d}$
Number of family members	−1.04	−.615	−.448	−.449	−.022	−.027
Respondent is white	−18.85[c]	−15.24[d]	−12.23[c]	−13.04[d]	−.051	−.090
Age of respondent	−1.37	−.541	−3.90[d]	−2.64	$.35 \times 10^{-2}$	.017
Percentage of years working 6 or more months between birth of first child and 1967	5.06	9.38	−3.61	−.213	−1.58	−.459
Respondent firstborn	2.31	2.89	5.13[c]	5.12[c]	$.31 \times 10^{-2}$	$.49 \times 10^{-2}$
Mother worked preschool	−4.05	−4.76	.816	−1.27	.069	.063
Nontraditionalism of mother in 1967	.013	.141	−1.06	−1.31[c]	.034[d]	.031[d]
Highest grade completed by mother	−.295	$-.71 \times 10^{-2}$	.433	1.61	−.099[c]	−.089[c]
Highest grade × annual hours 1966	$.25 \times 10^{-3}$	$.16 \times 10^{-3}$	$-.28 \times 10^{-4}$	$-.25 \times 10^{-3}$	$.42 \times 10^{-4c}$	$.44 \times 10^{-4c}$
Annual hours worked in 1966	$-.24 \times 10^{-2}$	$-.19 \times 10^{-2}$	$.36 \times 10^{-2}$	$.51 \times 10^{-2}$	$-.41 \times 10^{-3d}$	$-.42 \times 10^{-3d}$
Mother's occupational status (Bose) 1 job	.044	.151	.134	.184	$.27 \times 10^{-2}$	$.29 \times 10^{-2}$

Typicality of mother's 1967 job	$-.86 \times 10^{-2}$	$-.66 \times 10^{-2}$	$-.41 \times 10^{-2}$	$-.38 \times 10^{-2}$	$.13 \times 10^{-3}$	$.15 \times 10^{-3}$
Mother has strong work ethic	−2.19	−2.09	−2.92	−2.20	.129[e]	.134[e]
Father's occupational status (Duncan) in 1966	.023	.035	−.116[e]	−.097	$.25 \times 10^{-2e}$	$.28 \times 10^{-2e}$
Nontraditionalism of father in 1967	−.491	−.472	−.182	−.109	−.047[e]	−.043
Noptraditionalism of respondent in 1968	−.057		.027		$.99 \times 10^{-2}$	
Extensiveness of respondent's high school extracurricular activities	−.457		−1.38		$.33 \times 10^{-2}$	
Respondent's educational goal in 1968	1.15		2.67[e]		.037[e]	
Nontraditionalism of respondent's preferred high school curriculum	6.83[d]		1.62		−.055	
Respondent worked in high school	−5.36[e]		−2.71		.032	
Respondent's occupational knowledge	1.53		1.32		.014	
Constant	65.76[e]	64.81[e]	79.32[d]	93.68[e]	1.11	1.52[d]
R^2 (adjusted)	.049	.013	.114	.067	.087	.095
F ratio	1.28	1.09	1.80	1.62	1.75	2.14
Sample size	120	120	138	138	174	174

[a]With intervening outcomes.
[b]Without intervening outcomes.
[c]Significant at the .01 level in a 2-tailed test.
[d]Significant at the .05 level.
[e]Significant at the .10 level.

TABLE B-7 Effects of Background Factors and Adolescent Outcomes on Adult Family-Related Outcomes of Young Women. Unstandardized Regression Coefficients (Married, Husband-Present Families)

Background Factors and Adolescent Outcomes	Dependent Variables			
	Number of Children by Age 24		Number of Children Expected	
	With Int.[a]	Without Int.[b]	With Int.	Without Int.
Family income	$-.88 \times 10^{-5}$	$-.89 \times 10^{-5}$	$.32 \times 10^{-5}$	$.55 \times 10^{-5}$
Number of family members	$-.98 \times 10^{-2}$	$.69 \times 10^{-2}$	.074[d]	.105[c]
Respondent is white	−.409[d]	−.302	−.028	−.043
Age of respondent	−.030	−.028	.117	.063
Percentage of years working 6 or more months between birth of first child and 1967	.225	.177	.136	.113
Respondent firstborn	−.078	−.139	−.017	−.112
Mother worked preschool	.020	.020	−.103	−.101
Nontraditionalism of mother in 1967	−.043[d]	−.031	−.083[c]	−.074[d]
Highest grade completed by mother	−.040	−.065[d]	$-.37 \times 10^{-2}$	−.026
Highest grade × annual hours 1966	$.17 \times 10^{-4}$	$.17 \times 10^{-4}$	$.34 \times 10^{-4}$	$.32 \times 10^{-4}$
Annual hours worked in 1966	$-.11 \times 10^{-3}$	$-.90 \times 10^{-4}$	$-.32 \times 10^{-3}$	$-.29 \times 10^{-3}$
Mother has strong work ethic	−.036	−.045	−.117	−.129
Father's occupational status (Duncan) in 1966	$.20 \times 10^{-3}$	$-.14 \times 10^{-2}$	$-.34 \times 10^{-2}$	$-.41 \times 10^{-2}$
Nontraditionalism of father in 1967	−.062[c]	−.065[c]	.109[d]	095[c]
Nontraditionalism of respondent in 1968	C21		−.025	
Extensiveness of respondent's high school extracurricular activities	$.72 \times 10^{-2}$		.043	
Respondent's educational goal in 1968	−.123[c]		−.085[d]	
Nontraditionalism of respondent's preferred high school curriculum	.193[c]		.273[c]	
Respondent worked in high school	.118		.091	
Respondent's occupational knowledge	−.033[c]		−1.06[c]	
Constant	4.31[c]	2.57[d]	2.18	1.18
R^2 (adjusted)	.116	.068	.062	.038
F ratio	3.32	2.84	2.14	1.98
Sample size	355	355	346	346

[a]With intervening outcomes.
[b]Without intervening outcomes.
[c]Significant at the .01 level in a 2-tailed test.
[d]Significant at the .05 level.
[e]Significant at the .10 level.

TABLE B-8 Effects of Background Factors and Adolescent Outcomes on Adult Family-Related Outcomes of Young Women in Families With Working Mothers: Unstandardized Regression Coefficients (Married, Husband-Present Families)

Background Factors and Adolescent Outcomes	Dependent Variables			
	Number of Children by Age 24		Number of Children Expected	
	With Int.[a]	Without Int.[b]	With Int.	Without Int.
Family income	$-.18 \times 10^{-4}$	$-.17 \times 10^{-4}$	$.57 \times 10^{-6}$[c]	$.61 \times 10^{-4}$[d]
Number of family members	.011	.050	.094	.154[d]
Respondent is white	−.141	−.107	−.470	−.411
Age of respondent	−.049	−.133[c]	−.026	−.114
Percentage of years working 6 or more months between birth of first child and 1967	.146	.152	.363	.394
Respondent firstborn	−.137	−.231[c]	.156	105
Mother worked preschool	− 013	.024	−.336	−.282
Nontraditionalism of mother in 1967	−.036	−.012	−.128[d]	−.127[d]
Highest grade completed by mother	−.087	−.138[d]	−.018	− 048
Highest grade × annual hours 1966	34×10^{-4}	41×10^{-4}	$.52 \times 10^{-4}$	$.42 \times 10^{-4}$
Annual hours worked in 1966	$-.26 \times 10^{-3}$	$-.36 \times 10^{-3}$	$-.52 \times 10^{-3}$	$-.47 \times 10^{-3}$
Mother's occupational status (Bose) on 1967 job	$.47 \times 10^{-2}$	$.35 \times 10^{-2}$	$-.48 \times 10^{-2}$	$-.63 \times 10^{-2}$
Typicality of mother's 1967 job	29×10^{-3}	$.27 \times 10^{-3}$	$-.36 \times 10^{-3}$	$-.55 \times 10^{-3}$
Mother has strong work ethic	− 029	$-.99 \times 10^{-2}$	$-.34 \times 10^{-3}$	$-.17 \times 10^{-2}$
Father's occupational status (Duncan) in 1966	$.12 \times 10^{-2}$	$-.19 \times 10^{-3}$	$-.34 \times 10^{-3}$	$-.17 \times 10^{-2}$
Nontraditionalism of father in 1967	− 037	−.031	167[c]	162[c]
Nontraditionalism of respondent in 1968	050		−.078	
Extensiveness of respondent's high school extracurricular activities	−.055		− 075	
Respondent's educational goal in 1968	− 108[c]		− 116[c]	
Nontraditionalism of respondent's preferred high school curriculum	176		534[d]	
Respondent worked in high school	− 037		− 014	
Respondent's occupational knowledge	− 121[c]		− 151[d]	
Constant	4.86[c]	4.26[c]	587[d]	4.19
R^2 (adjusted)	.161	070	.104	058
F ratio	2 51	1.82	1.89	1.65
Sample size	174	174	169	169

[a]With intervening outcomes.
[b]Without intervening outcomes.
[c]Significant at the .01 level in a 2-tailed test.
[d]Significant at the .05 level.
[e]Significant at the .10 level.

TABLE B-9 Effects of Background Factors and Adolescent Outcomes on Adult Attitudes and Behaviors of Young Women Regarding Roles of Women: Unstandardized Regression Coefficients (Married, Husband-Present Families)

Background Factors and Adolescent Outcomes	Dependent Variables							
	Typicality of Occupation Expected for Age 35		Typicality of 1978 Job		Nontraditionalism of 1978 Attitudes (Short Series)		Nontraditionalism of 1978 Attitudes (Long Series)	
	With Int.[a]	Without Int.[b]	With Int.	Without Int.	With Int.	Without Int.	With Int.	Without Int.
Family income	$-.37 \times 10^{-2}$	$-.39 \times 10^{-2}$	$.48 \times 10^{-4}$	$-.63 \times 10^{-4}$	$.22 \times 10^{-4}$	$.19 \times 10^{-4}$	$.87 \times 10^{-4}$	$.81 \times 10^{-4}$
Number of family members	−6.45	−6.88	.957	−4.60	.0159	−.011	$.27 \times 10^{-2}$	−.150
Respondent is white	29.65	47.59	−100.36	−57.18	−.790[c]	−.735	−2.57	−2.59[c]
Age of respondent	−43.44[c]	−37.28	−95.95[c]	$-.78 \times 02$[c]	.220	.260[c]	.082	.278
Percentage of years working 6 or more months between birth of first child and 1967	76.49	73.44	97.12	74.41	.133	−.013	−.261	−.295
Respondent firstborn	−18.99	−21.32	−10.24	.458	−.138	−.046	1.15	1.53[d]
Mother worked preschool	8.85	7.26	−41.72	−48.73	−.409	−.332	−.505	−.391
Nontraditionalism of mother in 1967	−10.05	−9.27	−1 26	5.55	.074	.083[c]	.662[c]	.702[c]
Highest grade completed by mother	1.39	1.24	10.23	11.37	$.25 \times 10^{-2}$	−.017	−.222	−.154
Highest grade × annual hours 1966	$-.82 \times 10^{-2}$	$-.84 \times 10^{-2}$	−.014[c]	−.013	$.26 \times 10^{-4}$	$.45 \times 10^{-4}$	$.17 \times 10^{-3}$	$.25 \times 10^{-3}$
Annual hours worked in	.070	.077	.136	.147	$-.26 \times 10^{-3}$	$-.43 \times 10^{-3}$	$-.17 \times 10^{-2}$	$-.25 \times 10^{-2}$

Mother has strong work ethic	71.38	66.63	15.32	−19.11	−.214	−.214	−1.34	−.145
Father's occupational status (Duncan) in 1966	−1.61[e]	−1.77[c]	−.988	−1.29	.43 × 10^{-2}	.24 × 10^{-2}	.013	.011
Nontraditionalism of father in 1967	−1.75	−1.68	2.86	11.68	.104	.135	.144	.317
Nontraditionalism of respondent in 1968	−.226		5.58		.094[e]		.486[c]	
Extensiveness of respondent's high school extracurricular activities	8.05		69.67[c]		.203[e]		.620[c]	
Respondent's educational goal in 1968	−12.35		−29.69[d]		−.011		.336	
Nontraditionalism of respondent's preferred high school curriculum	23.45		83.57[e]		−.662[c]		−1.01	
Respondent worked in high school	11.99		9.66		−.012		−.023	
Respondent's occupational knowledge	4.68		21.44[e]		.051		.291	
Constant	1186.9[d]	954.23	1959[c]	1465.5[c]	.259	3.22	24.60[c]	30.92[c]
R^2 (adjusted)	.004	.021	.095	.022	.041	.019	.098	.072
F ratio	1.05	1.43	2.12	1.36	1.76	1.49	2.90	2.95
Sample size	276	276	228	228	354	354	353	353

[a]With intervening outcomes.
[b]Without intervening outcomes.
[c]Significant at the .01 level in a 2-tailed test.
[d]Significant at the .05 level.
[e]Significant at the .10 level.

TABLE B-10 Effects of Background Factors and Adolescent Outcomes on Adult Attitudes and Behaviors Regarding Women's Roles of Young Women in Families With Working Mothers. Unstandardized Regression Coefficients (Married, Husband-Present Families)

Background Factors and Adolescent Outcomes	Dependent Variables							
	Typicality of Occupation Expected for Age 35		Typicality of 1978 Job		Nontraditionalism of 1978 Attitudes (Short Series)		Nontraditionalism of 1978 Attitudes (Long Series)	
	With Int.[a]	Without Int.[b]	With Int.	Without Int.	With Int.	Without Int.	With Int.	Without Int.
Family income	$-.20 \times 10^{-2}$	$.185 \times 10^{-2}$	$-.36 \times 10^{-2}$	$-.33 \times 10^{-2}$	$-.37 \times 10^{-4}$	$.20 \times 10^{-4}$	$-.13 \times 10^{-3}$	$-.13 \times 10^{-3}$
Number of family members	7.29	11.35	16.40	8.30	.025	−.100	−.027	−.231
Respondent is white	212.94[c]	186.76	101.55	132.21	−1.48[d]	−1.40[d]	−4.84[c]	−4.60[c]
Age of respondent	20.17	−5.31	−92.63[d]	−97.36[c]	.021	.037	−.680	−.570
Percentage of years working 6 or more months between birth of first child and 1967	200.79	−149.35	169.81	157.28	.354	.127	−2.56	−1.86
Respondent firstborn	−13.71	−22.00	−53.19	−52.40	−.262	−.037	−.966	1.29
Mother worked preschool	−41.21	−5.43	−75.62	−88.46	−.794[d]	−.779[d]	−.069	−.443
Nontraditionalism of mother in 1967	6.89	−7.79	16.99	19.95	.127[c]	.126[c]	.849[c]	.891[c]
Highest grade completed by mother	−17.23	−24.66	−23.54	−43.31[c]	.183	.168	−.118	−.176
Highest grade × annual hours 1966	$-.12 \times 10^{-2}$	$-.48 \times 10^{-2}$	−.013	-43×10^{-2}	$.32 \times 10^{-5}$	$-.28 \times 10^{-5}$	$-.28 \times 10^{-3}$	$.34 \times 10^{-3}$
Annual hours worked in 1966	−.012	.026	.128	.050	$.16 \times 10^{-3}$	$.24 \times 10^{-3}$	$-.22 \times 10^{-2}$	$-.28 \times 10^{-2}$
Mother's occupational status (NORC) on 1967 job	2.50	2.05	5.86[d]	5.69[d]	−.016	−.016	−.035	.016

Typicality of mother's 1967 job	.180[c]	.147	.068	.043	$.13 \times 10^{-3}$	$.23 \times 10^{-3}$	$-.70 \times 10^{-3}$	$.28 \times 10^{-4}$
Mother has strong work ethic	117.25[c]	107.52[c]	74.72	57.07	−.268	−.339	−1.28	−1.32
Father's occupational status (Duncan) in 1966	−2.67[d]	−2.60[c]	−.690	−1.11	.010	.011	.051[d]	.052[d]
Nontraditionalism of father in 1967	16.77	4.55	11.68	19.88	.121	.096	−.192	−.073
Nontraditionalism of respondent in 1968	−26.04		16.83		−.033		.317	
Extensiveness of respondent's high school extracurricular activities	−16.63		56.48[c]		.267[c]		.808	
Respondent's educational goals in 1968	−19.29		−37.64[d]		−.058		.197	
Nontraditionalism of respondent's preferred high school curriculum	−23.43		−17.71		−.940[d]		−1.03	
Respondent worked in high school	19.57		69.70		−.359		−1.64	
Respondent's occupational knowledge	−26.16		−4.56		.176[c]		.495	
Constant	394.64	290.62	1848.0[c]	1756.2[c]	5.66	6.42[c]	41.60[c]	48.14[c]
R^2 (adjusted)	−.009	−.006	.089	.066	.071	.024	.103	.085
F ratio	.947	.947	1.53	1.52	1.60	1.26	1.90	2.00
Sample size	138	138	120	120	173	173	173	173

[a]With intervening outcomes.
[b]Without intervening outcomes.
[c]Significant at the .01 level in a 2-tailed test.
[d]Significant at the .05 level.
[e]Significant at the .10 level.

TABLE B-11 Effects of Background Factors on Male Adolescent Attitudes and Behaviors. Unstandardized Regression Coefficients (Married, Husband-Present Families)

	Dependent Variables					
Background Factors	Nontraditionalism in 1968	Extensiveness of Extra-curricular Activities	Educational Goal in 1968	Nontraditionalism of Preferred High School Curriculum	Worked in High School	Occupational Knowledge
Family income	$.31 \times 10^{-4}$	$.22 \times 10^{-4c}$	$.32 \times 10^{-4}$	$-.34 \times 10^{-5}$	$.31 \times 10^{-10}$	$.45 \times 10^{-4a}$
Number of family members	$.88 \times 10^{-2}$	−.059	−.011	.025	.022	−.049
Respondent is white	−.532	.173	−.534	.252[b]	.077	.843[b]
Age of respondent	.17	−.119	−.331[a]	−.010	.068[b]	.130
Percentage of years working 6 or more months between birth of first child and 1967	.846	.257	.246	−.021	.011	−.980[b]
Respondent firstborn	−.347	−.036	.651[a]	−.031	.037	.443[a]
Mother worked preschool	.023	−.028	.114	.128[c]	.054	.356[c]
Nontraditionalism of mother in [illegible]7	.018	.019	$-.72 \times 10^{-2}$	$.27 \times 10^{-2}$	$-.43 \times 10^{-2}$	.068[c]

Highest grade completed by mother	.081	$-.99 \times 10^{-3}$	.142[b]	$.46 \times 10^{-2}$	−.015	.135[a]
Highest grade × annual hours 1966	$-.17 \times 10^{-4}$	$.39 \times 10^{-4}$	$-.22 \times 10^{-4}$	$-.76 \times 10^{-5}$	$.16 \times 10^{-5}$	$-.16 \times 10^{-4}$
Annual hours worked in 1966	$.17 \times 10^{-3}$	$-.59 \times 10^{-3}$	$.20 \times 10^{-3}$	$.35 \times 10^{-4}$	$-.15 \times 10^{-3}$	$.37 \times 10^{-3}$
Mother has strong work ethic	.237	−.354[c]	−.061	.107	−.016	.142
Father's occupational status (Duncan) in 1966	−.012[b]	$.50 \times 10^{-2}$	.018[a]	$-.67 \times 10^{-3}$	$.82 \times 10^{-3}$	$.36 \times 10^{-2}$
Nontraditionalism of father in 1967	−.086	.090	.083	$.60 \times 10^{-2}$	−.018	−.186[a]
Constant	3.407	3.10[b]	17.425[a]	.335	−.730	2.215
R^2 (adjusted)	.004	.024	.189	−.0008	.002	.186
F ratio	.098	1.586	6.387	.982	1.041	6.274
Sample size	324	324	324	324	324	324

[a]Significant at the .01 level in a 2-tailed test.
[b]Significant at the .05 level.
[c]Significant at the .10 level.

TABLE B 12 Effects of Background Factors on Male Adolescent Attitudes and Behaviors in Families With Working Mothers: Unstandardized Regression Coefficients (Married, Husband-Present Families)

	Dependent Variables					
Background Factors	Nontraditionalism in 1971	Extensiveness of High School Extra-curricular Activities	Educational Goal in 1966	Nontraditionalism of Preferred High School Curriculum	Worked in High School	Occupational Knowledge
Family income	$.20 \times 10^{-4}$	$.15 \times 10^{-5}$	$.44 \times 10^{-4}$	$-.11 \times 10^{-4}$	$-.23 \times 10^{-5}$	$.37 \times 10^{-4}$
Number of family members	$-.054$	$-.125^{c}$	.088	.024	$.041^{c}$	$-.28 \times 10^{-2}$
Respondent is white	$-.051$	$-.168$	$-.982$	.203	.134	.260
Age of respondent	$.423^{b}$	$-.150$	$-.383^{b}$	$-.11 \times 10^{-2}$	$.102^{a}$	.062
Percentage of years working 6 or more months between birth of first child and 1967	1.12	.626	$-.231$	$.43 \times 10^{-2}$	$-.192$	-1.57^{a}
Respondent firstborn	$-.481$	$.75 \times 10^{-2}$	.425	$-.028$	.118	$.498^{c}$
Mother worked preschool	.055	$-.374$	.287	.133	$.224^{b}$	$.607^{c}$
Nontraditionalism of mother in	$-.015$	.045	$-.023$	$-.34 \times 10^{-2}$	$-.013$	.021

Highest grade completed by mother	.154	.185	.099	−.015	−.062	.201
Highest grade × annual hours 1966	$-.63 \times 10^{-4}$	$-.61 \times 10^{-5}$	$-.84 \times 10^{-4}$	$-.11 \times 10^{-4}$	$.20 \times 10^{-4}$	$-.56 \times 10^{-4}$
Annual hours worked in 1966	$.75 \times 10^{-3}$	$-.31 \times 10^{-3}$	$.10 \times 10^{-2}$	$.61 \times 10^{-4}$	$-.18 \times 10^{-5}$	$.11 \times 10^{-2}$
Mother's occupational status (Bose) on 1967 job	.012	−.011	.042[a]	$.62 \times 10^{-2}$	.012[a]	$.37 \times 10^{-2}$
Typicality of mother's 1967 job	$-.12 \times 10^{-2}$	$.30 \times 10^{-3}$	$-.44 \times 10^{-3}$	$.18 \times 10^{-3}$	$-.30 \times 10^{-3}$[b]	$-.38 \times 10^{-3}$
Mother has strong work ethic	.458	−.834[a]	.075	.081	.086	.336
Father's occupational status (Duncan) in 1966	−.021[b]	$.39 \times 10^{-2}$	$.97 \times 10^{-2}$	$-.74 \times 10^{-3}$	$-.15 \times 10^{-2}$	$.71 \times 10^{-2}$
Nontraditionalism-of-father-in 1967	−.042	.132	−.018	−.069[a]	−.046	−.152
Constant	−1.386	3.24	17.52[a]	.603	−1.12	2.329
R^2 (adjusted)	.003	.090	.136	.003	.114	.167
F ratio	.029	1.88	2.40	.976	2.137	2.779
Sample size	143	143	143	143	143	143

[a]Significant at the .01 level in a 2-tailed test.
[b]Significant at the .05 level.
[c]Significant at the .10 level.

TABLE B-13 Effects of Background Factors and Adolescent Outcomes on Adult Educational Outcomes of Young Men. Unstandardized Regression Coefficients (Married, Husband-Present Families)

Background Factors and Adolescent Outcomes	Dependent Variables							
	Probability of Not Completing High School		Probability of Attending College		Probability of Completing College		Highest Grade Completed	
	With Int.[a]	Without Int.[b]	With Int.	Without Int.	With Int.	Without Int.	With Int.	Without Int.
Family income	$.18 \times 10^{-5}$	$.26 \times 10^{-6}$	$.49 \times 10^{-5}$	$.93 \times 10^{-5}$[d]	$.44 \times 16^{-6}$	$.53 \times 10^{-5}$	$.11 \times 10^{-4}$	$.37 \times 10^{-4}$[d]
Number of family members	$-.37 \times 10^{-2}$	$-.24 \times 10^{-2}$	$.47 \times 10^{-2}$	$-.22 \times 10^{-2}$	.019	.011	.102[d]	.066
Respondent is white	.022	$-.58 \times 10^{-2}$	$-.40 \times 10^{-2}$	.040	.034	$-.73 \times 10^{-2}$	-.034	-.148
Age of respondent	$-.12 \times 10^{-2}$	$.20 \times 10^{-2}$	-.033	-.074[c]	-.063[c]	-.102[c]	-.215[d]	-.393[c]
Percentage of years working 6 or more months between birth of first child and 1967	-.132[d]	-.105[c]	.019	.044	$.68 \times 10^{-2}$	.034	-.445	.044
Respondent firstborn	.015	$.41 \times 10^{-2}$	.112[d]	.169[c]	.106[d]	.158[c]	.587[c]	.854[c]
Mother worked preschool	.044	.028	$.41 \times 10^{-2}$	.013	-.022	-.014	-.086	-.012
Nontraditionalism of mother in 1967	$.19 \times 10^{-2}$	$-.25 \times 10^{-3}$	.014	.016	$-.61 \times 10^{-2}$	$-.35 \times 10^{-2}$	-.015	$.15 \times 10^{-2}$
Highest grade completed by mother	-.023[c]	-.029[c]	.032[d]	.048[d]	.011	.028[d]	.136[c]	.227[c]
Highest grade × annual hours 1966	$.64 \times 10^{-5}$	$.77 \times 10^{-5}$	$.16 \times 10^{-5}$	$.59 \times 10^{-7}$	$.11 \times 10^{-4}$	$.88 \times 10^{-5}$	$-.139 \times 10^{-3}$	$-.73 \times 10^{-4}$
Annual hours worked in 1966	-589×10^{-4}	$-.75 \times 10^{-4}$	$-.67 \times 10^{-4}$	$-.63 \times 10^{-4}$	$-.17 \times 10^{-3}$	$-.15 \times 10^{-3}$	$-.139 \times 10^{-3}$	$-.73 \times 10^{-4}$

Mother has strong work ethic	.064[d]	.057[d]	−.024	−.045	.047	.033	.055	$-.40 \times 10^{-2}$
Father's occupational status (Duncan) in 1966	$-.51 \times 10^{-3}$	$-.84 \times 10^{-3}$[e]	$-.65 \times 10^{-3}$	$.12 \times 10^{-2}$	$-.13 \times 10^{-2}$	$.36 \times 10^{-3}$	$-.35 \times 10^{-2}$	$.45 \times 10^{-2}$
Nontraditionalism of father in 1967	$-.89 \times 10^{-2}$	$-.55 \times 10^{-2}$	.021	.032	.016	.025	.076	.107
Nontraditionalism of respondent in 1971	$.18 \times 10^{-2}$		$.22 \times 10^{-2}$		.016		.081[d]	
Extensiveness of respondent's high school extracurricular activities	$-.20 \times 10^{-2}$		.053[c]		.051[c]		.263[c]	
Respondent's educational goal in 1968	−.013[d]		.092[c]		.088[c]		.421[c]	
Nontraditionalism of respondent's preferred high school curriculum	−.041[e]		$.60 \times 10^{-2}$		$.36 \times 10^{-2}$		.124	
Respondent worked in high school	.024		−.090[c]		−.126[c]		−.518[c]	
Respondent's occupational knowledge	−.029[c]		.125		.018		.140[d]	
Constant	.723[c]	.402[d]	−.998[d]	.885[c]	−.534	1.370[c]	6.749[c]	16.007[c]
R^2 (adjusted)	.170	.111	.346	.192	.287	.127	.445	.230
F ratio	4.288	3.866	9.491	6.431	7.473	4.320	13.89	7.838
Sample size	322	322	322	322	322	322	322	322

[a]With intervening outcomes.
[b]Without intervening outcomes.
[c]Significant at the .01 level in a 2-tailed test.
[d]Significant at the .05 level.
[e]Significant at the .10 level.

TABLE B-14 Effects of Background Factors and Adolescent Outcomes on Adult Educational Outcomes of Young Men in Families With Working Mothers. Unstandardized Regression Coefficients (Married, Husband-Present Families)

Background Factors and Adolescent Outcomes	Dependent Variables							
	Probability of Not Completing High School		Probability of Attending College		Probability of Completing College		Highest Grade Completed	
	With Int.[a]	Without Int.[b]	With Int.	Without Int.	With Int.	Without Int.	With Int.	Without Int.
Family income	$-.14 \times 10^{-6}$	$-.141 \times 10^{-5}$	$.26 \times 10^{-5}$	$.71 \times 10^{-5}$	$.62 \times 10^{-5}$	$.10 \times 10^{-4}$	$.36 \times 10^{-4}$	$.54 \times 10^{-4}$[c]
Number of family members	$.17 \times 10^{-2}$	$.93 \times 10^{-3}$	.019	$.65 \times 10^{-2}$	.022	.018	.128	.111
Respondent is white	.046	.041	.051	−.012	.014	−.073	−.083	−.416
Age of respondent	−.022	−.013	−.031	−.056	−.077[d]	−.111[c]	−.240	−.372[d]
Percentage of years working 6 or more months between birth of first child and 1967	−.200[d]	−.143[c]	.134	.138	.187	.209	.557	.573
Respondent firstborn	.063[c]	.035	.121	.146[c]	.131[c]	.163[d]	.621[d]	.802[d]
Mother worked preschool	.081[c]	.052	−.098	−.116	−.042	−.049	−.532	−.504
Nontraditionalism of mother in 1967	$.77 \times 10^{-2}$	$.65 \times 10^{-2}$	.027	.032	$-.18 \times 10^{-2}$	$-.37 \times 10^{-3}$	$.93 \times 10^{-2}$	.018
Highest grade completed by mother	−.025	−.036[c]	.024	.058	$.75 \times 10^{-3}$	.220	.244	.356[d]
Highest grade × annual hours worked in 1966	$.14 \times 10^{-4}$	$.18 \times 10^{-4}$	$.45 \times 10^{-5}$	$-.27 \times 10^{-5}$	$.87 \times 10^{-5}$	$.24 \times 10^{-5}$	$-.85 \times 10^{-4}$	$-.12 \times 10^{-3}$
Annual hours worked in 1966	$-.18 \times 10^{-3}$	$-.23 \times 10^{-3}$[c]	$-.11 \times 10^{-3}$	$-.34 \times 10^{-4}$	$-.13 \times 10^{-3}$	$-.73 \times 10^{-4}$	$.88 \times 10^{-3}$	$.12 \times 10^{-2}$
Mother's occupational status on 1967 job	$.98 \times 10^{-4}$	$.90 \times 10^{-3}$	$.18 \times 10^{-3}$	$-.29 \times 10^{-4}$	$.64 \times 10^{-3}$	$.27 \times 10^{-2}$	$.52 \times 10^{-2}$	.016

Typicality of mother's 1967 job	$-.22 \times 10^{-4}$	$-.24 \times 10^{-4}$	$-.58 \times 10^{-4}$	$-.75 \times 10^{-4}$	$.20 \times 10^{-3}$	$.18 \times 10^{-3}$	$.10 \times 10^{-3}$	$-.65 \times 10^{-4}$
Mother has strong work ethic	028	.030	−.041	−.099	.067	.017	107	−.120
Father's occupational status (Duncan) in 1966	$-.14 \times 10^{-2}$	$-.19 \times 10^{-2}$[d]	$-.78 \times 10^{-3}$	$.81 \times 10^{-4}$	$.11 \times 10^{-2}$	$.20 \times 10^{-2}$	$-.28 \times 10^{-2}$	$.14 \times 10^{-2}$
Nontraditionalism of father in 1967	−.014	$-.68 \times 10^{-2}$	.032	.044	.049	.058	.186	.214
Nontraditionalism of respondent in 1971	$.63 \times 10^{-2}$		.013		$.39 \times 10^{-2}$		.032	
Extensiveness of respondent's high school extracurricular activities	−.023		.083[c]		.067[d]		.358[c]	
Respondent's educational goal in 1966	−.016		.037[c]		.070[c]		.297[c]	
Nontraditionalism of respondent's preferred high school curriculum	−.066[c]		−.073		−.041		−.125	
Respondent worked in high school	$-.80 \times 10^{-2}$		−.062		$.39 \times 10^{-2}$		.155	
Respondent's occupational knowledge	−.038[c]		.041		$.47 \times 10^{-2}$		.093	
Constant	1.267[c]	.786[d]	−.576	.450	−.314	1.110	6.775[d]	13.054[c]
R^2 (adjusted)	.148	.055	.186	.096	.310	.206	.376	.232
F ratio	2.121	1.520	2.478	1.940	3.901	3.308	4.885	3.674
Sample size	143	143	143	143	143	143	143	143

[a]With intervening outcomes.
[b]Without intervening outcomes.
[c]Significant at the .01 level in a 2-tailed test.
[d]Significant at the .05 level.
[e]Significant at the .10 level.

TABLE B-15 Effects of Background Factors and Adolescent Outcomes on Career-Related Attitudes and Behaviors of Young Men. Unstandardized Regression Coefficients (Married, Husband-Present Families)

	Dependent Variables			
	Occupational Status (Duncan)-for-1976-Job		Anticipated Occupational Status (Duncan) of Job Planned-for-Age-30	
Background Factors and Adolescent Outcomes	With Int.[a]	Without Int.[b]	With Int.	Without Int.
Family income	$-.46 \times 10^{-3}$[d]	$-.15 \times 10^{-3}$	$-.40 \times 10^{-3}$[d]	$-.96 \times 10^{-4}$
Number of family members	.087	−.457	1.14[c]	.691
Respondent is white	−4.10	−1.84	−2.44	−2.94
Age of respondent	1.08	.162	−1.59	−2.29
Percentage of years working 6 or more months between birth of first child and 1967	−2.70	−4.07	−2.82	−3.24
Respondent firstborn	3.36	5.89[d]	3.63	6.62[d]
Mother worked preschool	.093	1.78	−.946	−.539
Nontraditionalism of mother in 1967	.048	.193	−.192	−.539
Highest grade completed by mother	.297	1.04	.122	1.12
Highest grade × annual hours 1966	$.41 \times 10^{-3}$	$.27 \times 10^{-3}$	$.13 \times 10^{-2}$[d]	$.12 \times 10^{-2}$[d]
Annual hours worked in 1966	$-.30 \times 10^{2}$	$-.18 \times 10^{2}$	−.014[c]	−.013[c]
Mother has strong work ethic	−7.32[d]	−7.14[d]	1.23	.946
Father's occupational status (Duncan) in 1966	.128	.190[c]	.083	.133[d]
Nontraditionalism of father in 1967	1.95[c]	1.71	1.11	1.00
Nontraditionalism of respondent in 1971	.463		.784	
Extensiveness of respondent's high school extracurricular activities	1.85[d]		1.87[d]	
Respondent's educational goal in 1966	2.87[c]		2.96[c]	
Nontraditionalism of respondent's preferred high school curriculum	2.34		−2.83	
Respondent worked in high school	−1.23		−2.14	
Respondent's occupational knowledge	2.70[c]		2.85[c]	
Constant	−48.83	19.886	−2.33	62.57[d]
R^2 (adjusted)	.133	.061	.219	.110
F ratio	3.187	2.320	5.162	3.625
Sample size	286	286	298	298

[a]With intervening outcomes.
[b]Without intervening outcomes.
[c]Significant at the .01 level in a 2-tailed test.
[d]Significant at the .05 level.
[e]Significant at the .10 level.

TABLE B-16 Effects of Background Factors and Adolescent Outcomes on Career-Related Attitudes and Behaviors of Young Men in Families With Working Mothers. Unstandardized Regression Coefficients (Married, Husband-Present Families)

Background Factors and Adolescent Outcomes	Dependent Variables: Occupational Status (Duncan) for 1976 Job		Anticipated Occupational Status (Duncan) of Job Planned for Age 30	
	With Int.[a]	Without Int.[b]	With Int.	Without Int.
Family income	$-.83 \times 10^{-3}$[d]	$-.52 \times 10^{-3}$	$-.84 \times 10^{-3}$[d]	$-.54 \times 10^{-3}$
Number of family members	−.151	−2.10	.446	−.263
Respondent is white	−7.31	−8.77	−8.73	−10.032
Age of respondent	2.31	1.89	−2.16	−1.426
Percentage of years working 6 or more months between birth of first child and 1967	4.34	1.11	3.76	.657
Respondent firstborn	2.03	4.24	3.85	5.173
Mother worked preschool	−5.02	−2.59	−5.17	−4.84
Nontraditionalism of mother in 1967	.788	.453	−.748	−.441
Highest grade completed by mother	2.90	3.87[c]	1.41	2.941
Highest grade × annual hours 1966	$-.38 \times 10^{-1}$	$-.66 \times 10^{-3}$	$.53 \times 10^{-3}$	$.15 \times 10^{-3}$
Annual hours worked in 1966	40×10^{-2}	77×10^{-2}	$-.74 \times 10^{-2}$	$-.13 \times 10^{-2}$
Mother's occupational status (Bose) on 1967 job	−.214	−.153	.170	.158
Typicality of mother's 1967 job	$-.31 \times 10^{-2}$	$-.48 \times 10^{-2}$	$.49 \times 10^{-2}$	$-.64 \times 10^{-3}$
Mother has strong work ethic	−9.47[c]	−9.40[d]	.512	1.42
Father's occupational status (Duncan) in 1966	.182[c]	.229[d]	.025	.030
Nontraditionalism of father in 1967	1.83	1.56	.260	.328
Nontraditionalism of respondent in 1971	.751		.170[d]	
Extensiveness of respondent's high school extracurricular activities	1.99		1.05	
Respondent's educational goal in 1966	2.23[c]		.646	
Nontraditionalism of respondent's preferred high school curriculum	−1.53		−4.75	
Respondent worked in high school	2.21		−4.01	
Respondent's occupational knowledge	3.06[d]		4.87[c]	
Constant	−66.632	−10.192	26.698	48.894
R^2 (adjusted)	126	.073	.216	.088
F ratio	1.820	1.620	2.650	1.796
Sample size	126	126	133	133

[a] With intervening outcomes.
[b] Without intervening outcomes.
[c] Significant at the .01 level in a 2-tailed test.
[d] Significant at the .05 level.
[e] Significant at the .10 level.

TABLE B-17 Effects of Background Factors and Adolescent Outcomes on Adult Attitudes Regarding Women's Roles and Family-Related Outcomes of Young Men. Unstandardized Regression Coefficients (Married, Husband-Present Families)

Background Factors and Adolescent Outcomes	Dependent Variables			
	Number of Children by Age 24		Nontraditionalism of 1976 Attitudes (Short Series)	
	With Int.[a]	Without Int.[b]	With Int.	Without Int.
Family income	$.11 \times 10^{-5}$	$-.50 \times 10^{-6}$	$-.15 \times 10^{-4}$	$-.86 \times 10^{-5}$
Number of family members	$.18 \times 10^{-2}$	$.46 \times 10^{-2}$	.047	.048
Respondent is white	−.021	.047	$-.57 \times 10^{-3}$	−.078
Age of respondent	.012	.056	.074	.117
Percentage of years working 6 or more months between birth of first child and 1967	.279	.248	.311	.390
Respondent firstborn	.069	.018	−.491[d]	−.522[d]
Mother worked preschool	.111	.111	−.152	−.132
Nontraditionalism of mother in 1967	.020	.020	$-.35 \times 10^{-2}$	$.24 \times 10^{-2}$
Highest grade completed by mother	−.038	−.049[c]	.092	.111[c]
Highest grade × annual hours 1966	$.68 \times 10^{-5}$	$.97 \times 10^{-5}$	$.28 \times 10^{-4}$	$.24 \times 10^{-4}$
Annual hours worked in 1966	$-.22 \times 10^{-3}$	$-.24 \times 10^{-3}$	$-.15 \times 10^{-3}$	$-.78 \times 10^{-4}$
Mother has strong work ethic	−.029	−.017	.134	.201
Father's occupational status (Duncan) in 1966	$-.20 \times 10^{-2}$	$-.37 \times 10^{-2}$	$.50 \times 10^{-3}$	$-.18 \times 10^{-2}$
Nontraditionalism of father in 1967	−.019	−.034	−.040	−.067
Nontraditionalism of respondent in 1971	.014		.186[c]	
Extensiveness of respondent's high school extracurricular activities	−.012		−.041	
Respondent's educational goal in 1966	−.092[c]		$.29 \times 10^{-2}$	
Nontraditionalism of respondent's preferred high school curriculum	−.018		−.012	
Respondent worked in high school	.104		$-.86 \times 10^{-2}$	
Respondent's occupational knowledge	.188		.044	
Constant	1.921[d]	.281	3.811[c]	4.469[d]
R^2 (adjusted)	.080	.050	.053	.017
F ratio	2.397	2.209	1.889	1.405
Sample size	324	324	321	321

[a]With intervening outcomes.
[b]Without intervening outcomes.
[c]Significant at the .01 level in a 2-tailed test.
[d]Significant at the .05 level.
[e]Significant at the .10 level.

TABLE B-18 Effects of Background Factors and Adolescent Outcomes on Adult Attitudes Regarding Women's Roles and Family-Related Outcomes of Young Men in Families With Working Mothers: Unstandardized Regression Coefficients (Married, Husband-Present Families)

Background Factors and Adolescent Outcomes	Dependent Variables			
	Number of Children by Age 24		Nontraditionalism of 1976 Attitudes (Short Series)	
	With Int.[a]	Without Int.[b]	With Int.	Without Int.
Family income	$.13 \times 10^{-4}$	$.12 \times 10^{-4}$	$.60 \times 10^{-5}$	$.85 \times 10^{-5}$
Number of family members	.053	.044	.067	.040
Respondent is white	.252	.335	.592	.632
Age of respondent	.084	.103[c]	−.026	.103
Percentage of years working 6 or more months between birth of first child and 1967	.434[c]	.392	.555	766
Respondent firstborn	−.059	−.049	−.407	−.507
Mother worked preschool	.082	.102	−.204	−.241
Nontraditionalism of mother in 1967	.023	.027	−.160[c]	−.158[c]
Highest grade completed by mother	−.073	−.059	−.053	−.030
Highest grade × annual hours 1966	$.14 \times 10^{-4}$	$.15 \times 10^{-5}$	$.15 \times 10^{-3}$	$.16 \times 10^{-3}$
Annual hours worked in 1966	$-.31 \times 10^{-3}$	$-.32 \times 10^{-3}$	$-.16 \times 10^{-2}$	$-.16 \times 10^{-2}$
Mother's occupational status (Bose) on 1967 job	$-.21 \times 10^{-2}$	$-.36 \times 10^{-2}$	−.013	−.016
Typicality of mother's 1967 job	$.13 \times 10^{-3}$	$.16 \times 10^{-1}$	$.12 \times 10^{-2}$[d]	$.93 \times 10^{-3}$
Mother has strong work ethic	.073	.042	.423	.440
Father's occupational status (Duncan) in 1966	$-.22 \times 10^{-2}$	$-.21 \times 10^{-2}$	$-.74 \times 10^{-2}$	−.012
Nontraditionalism of father in 1967	25×10^{-2}	$-.54 \times 10^{-2}$	−.320[d]	−.304[d]
Nontraditionalism of respondent in 1971	$-.16 \times 10^{-3}$		.184[c]	
Extensiveness of respondent's high school extracurricular activities	−.071		.058	
Respondent's educational goal in 1966	−.052[c]		−.104	
Nontraditionalism of respondent's preferred high school curriculum	.103		−.333	
Respondent worked in high school	.060		.181	
Respondent's occupational knowledge	.056		$.61 \times 10^{2}$	
Constant	−.526	−1.088	10.218[c]	7.914[d]
R^2 (adjusted)	.040	040	.094	.068
F ratio	1.269	1.371	1.663	1.646
Sample size	143	143	142	142

[a]With intervening outcomes.
[b]Without intervening outcomes.
[c]Significant at the .01 level in a 2-tailed test.
[d]Significant at the .05 level.
[e]Significant at the .10 level.

TABLE B-19 Means and Standard Deviations of Background Factors, Adolescent Attitudes and Behaviors, and Adult Outcomes of Young Women (Married, Husband-Present Families)

Variable	Mean	Standard Deviation
Respondent is white	.931	.254
Family income	11056	7643
Number of family members	5.82	2.05
Age of respondent	15.94	.790
Percentage of years working 6 or more months between birth of first child and 1967	.241	.283
Respondent firstborn	.452	.498
Mother worked preschool	.397	.490
Nontraditionalism of mother in 1967	5.49	2.16
Highest grade completed by mother	11.94	2.27
Highest grade × annual hours 1966	9333	11737
Annual hours worked by mother in 1966	761	909
Mother has strong work ethic	.309	.463
Father's occupational status (Duncan) in 1966	40.48	25.28
Nontraditionalism of father in 1967	2.90	1.48
Nontraditionalism of respondent in 1968	5.40	2.06
Extensiveness of respondent's high school extracurricular activities	1.25	.998
Respondent's educational goal in 1968	14.70	1.75
Nontraditionalism of respondent's preferred high school curriculum	.277	.448
Respondent worked in high school	.380	.486
Respondent's occupational knowledge	7.60	1.82
Probability of not completing high school	.059	.237
Probability of college attendance	.481	.500
Probability of college completion	.261	.440
Highest grade completed	13.48	2.00
Number of children by age 24	.661	.860
Number of children expected	2.17	1.23
Nontraditionalism of daughter's attitude 1978 (short series)	7.44	1.94
Nontraditionalism of daughter's attitude 1978 (long series)	36.80	6.86
Occupational status (Bose) of 1978 job	52.33	15.11
Anticipated occupational status (Bose) of job planned for age 35	55.66	15.70
Probability of expecting to work at age 35	.767	.423
Typicality of occupation anticipated for age 35	217	312
Typicality of 1978 occupation	274	283

TABLE B-20 Means and Standard Deviations of Background Factors, Adolescent Attitudes and Behaviors, and Adult Outcomes of Young Women (All Families)

Variable	Mean	Standard Deviation
Respondent is white	.908	.292
Family income	10497	7628
Number of family members	5.82	2.10
Age of respondent	15.97	.789
Percentage of years working 6 or more months between birth of first child and 1967	.251	.286
Respondent firstborn	.424	.495
Mother worked preschool	.418	.494
Nontraditionalism of mother in 1967	5.51	2.13
Highest grade completed by mother	11.71	2.47
Highest grade × annual hours 1966	9287	11561
Annual hours worked by mother in 1966	770	908
Mother has strong work ethic	.305	.461
Father's occupational status (Duncan) in 1966	—	—
Nontraditionalism of father in 1967	—	—
Nontraditionalism of respondent in 1968	5.33	2.03
Extensiveness of respondent's high school extracurricular activities	1.23	.990
Respondent's educational goal in 1968	14.64	1.77
Nontraditionalism of respondent's preferred high school curriculum	.268	.443
Respondent worked in high school	.384	.487
Respondent's occupational knowledge	7.51	1.83
Probability of not completing high school	.061	.240
Probability of college attendance	.467	.500
Probability of college completion	.249	.433
Highest grade completed	13.41	1.97
Number of children by age 24	.698	.879
Number of children expected	2.17	1.27
Nontraditionalism of daughter's attitude 1978 (short series)	7.49	1.94
Nontraditionalism of daughter's attitude 1978 (long series)	36.85	6.73
Occupational status (Bose) of 1978 job	51.77	14.80
Anticipated occupational status (Bose) of job planned for age 35	55.47	15.11
Probability of expecting to work at age 35	.769	.422
Typicality of occupation anticipated for age 35	210	310
Typicality of 1978 occupation	283	281

TABLE B-21 Means and Standard Deviations of Background Factors, Adolescent Attitudes and Behaviors, and Adult Outcomes of Young Women in Families With Working Mothers (Married, Husband-Present Families)

Variable	Mean	Standard Deviation
Respondent is white	.928	.259
Family income	10333	4371
Number of family members	5.61	1.91
Age of respondent	15.85	.777
Percentage of years working 6 or more months between birth of first child and 1967	.402	.289
Respondent firstborn	.474	.501
Mother worked preschool	.522	.501
Nontraditionalism of mother in 1967	5.91	2.10
Highest grade completed by mother	12.16	2.36
Highest grade × annual hours 1966	17865	10834
Annual hours worked by mother in 1966	1456	780
Mother has strong work ethic	.600	.491
Father's occupational status (Duncan) in 1966	38.21	23.51
Nontraditionalism of father in 1967	3.66	1.24
Mother's occupational status (Bose) on 1967 job	46.81	16.50
Typicality of mother's 1967 job	296	276
Nontraditionalism of respondent in 1968	5.70	2.05
Extensiveness of respondent's high school extracurricular activities	1.33	1.06
Respondent's educational goal in 1968	14.68	1.76
Nontraditionalism of respondent's preferred high school curriculum	.231	422
Respondent worked in high school	.419	.495
Respondent's occupational knowledge	7.75	1.67
Probability of not completing high school	.065	.247
Probability of college attendance	.486	.501
Probability of college completion	.228	.421
Highest grade completed	13.33	1.85
Number of children by age 24	.692	.840
Number of children expected	2.20	1.39
Nontraditionalism of daughter's attitude 1978 (short series)	7.54	2.00
Nontraditionalism of daughter's attitude 1978 (long series)	37.10	7.00
Occupational status (Bose) of 1978 job	50.20	15.48
Anticipated occupational status (Bose) of job planned for age 35	54.88	16.18
Probability of expecting to work at age 35	.771	.421
Typicality of occupation anticipated for age 35	233	312
Typicality of 1978 occupation	263	290

TABLE B-22 Means and Standard Deviations of Background Factors, Adolescent Attitudes and Behaviors, and Adult Outcomes of Young Men (Married, Husband-Present Families)

Variable	Mean	Standard Deviation
Respondent is white	.942	.234
Family income	11358	6861
Number of family members	5.66	1.91
Age of respondent	15.48	1.00
Percentage of years working 6 or more months between birth of first child and 1967	.230	.276
Respondent firstborn	.513	.501
Mother worked preschool	.322	.468
Nontraditionalism of mother in 1967	5.38	2.19
Highest grade completed by mother	11.48	2.54
Highest grade × annual hours 1966	9441	11394
Annual hours worked by mother in 1966	792	921
Mother has strong work ethic	.307	.462
Father's occupational status (Duncan) in 1966	41.12	25.70
Nontraditionalism of father in 1967	2.86	1.46
Nontraditionalism of respondent in 1971	6.37	2.32
Extensiveness of respondent's high school extracurricular activities	1.73	1.42
Respondent's educational goal in 1966	15.05	2.09
Nontraditionalism of respondent's preferred high school curriculum	.585	.494
Respondent worked in high school	.408	.492
Respondent's occupational knowledge	7.09	1.64
Probability of not completing high school	.043	.204
Probability of college attendance	.613	.488
Probability of college completion	.350	.478
Highest grade completed	13.97	2.05
Number of children by age 24	.516	.833
Nontraditionalism of son's attitude 1976	7.40	1.93
Occupational status (Duncan) of 1976 job	44.00	24.29
Anticipated occupational status (Duncan) of job planned for age 30	52.50	23.66

TABLE B-23 Means and Standard Deviations of Background Factors, Adolescent Attitudes and Behaviors, and Adult Outcomes of Young Men (All Families)

Variable	Mean	Standard Deviation
Respondent is white	.921	.271
Family income	10784	6848
Number of family members	5.66	1.93
Age of respondent	15.53	1.02
Percentage of years working 6 or more months between birth of first child and 1967	.247	.290
Respondent firstborn	.498	.501
Mother worked preschool	.344	.476
Nontraditionalism of mother in 1967	5.38	2.21
Highest grade completed by mother	11.26	2.72
Highest grade × annual hours 1966	9640	11331
Annual hours worked by mother in 1966	822	926
Mother has strong work ethic	.313	.464
Father's occupational status (Duncan) in 1966	—	—
Nontraditionalism of father in 1967	—	—
Nontraditionalism of respondent in 1971	6.32	2.32
Extensiveness of respondent's high school extracurricular activities	1.71	1.43
Respondent's educational goal in 1966	15.00	2.13
Nontraditionalism of respondent's preferred high school curriculum	.577	.495
Respondent worked in high school	.397	.490
Respondent's occupational knowledge	7.02	1.65
Probability of not completing high school	.052	.223
Probability of college attendance	.589	.492
Probability of college completion	.321	.468
Highest grade completed	13.85	2.05
Number of children by age 24	.571	.866
Nontraditionalism of son's attitude 1976	7.40	1.93
Occupational status (Duncan) of 1976 job	42.59	24.10
Anticipated occupational status (Duncan) of job planned for age 30	51.10	23.81

TABLE B-24 Means and Standard Deviations of Background Factors, Adolescent Attitudes and Behaviors, and Adult Outcomes of Young Men in Families With Working Mothers (Married, Husband-Present Families)

Variable	Mean	Standard Deviation
Respondent is white	.923	.267
Family income	11649	5864
Number of family members	5.31	1.77
Age of respondent	15.38	1.01
Percentage of years working 6 or more months between birth of first child and 1967	.390	.283
Respondent firstborn	.479	.501
Mother worked preschool	.434	.497
Nontraditionalism of mother in 1967	5.85	2.07
Highest grade completed by mother	11.92	2.37
Highest grade × annual hours 1966	18925	10292
Annual hours worked by mother in 1966	1577	783
Mother has strong work ethic	.688	.465
Father's occupational status (Duncan) in 1966	43.77	24.98
Nontraditionalism of father in 1967	3.71	1.17
Mother's occupational status (Bose) on 1967 job	46.19	16.03
Typicality of mother's 1967 job	280	292
Nontraditionalism of respondent in 1971	6.45	2.45
Extensiveness of respondent's high school extracurricular activities	1.76	1.42
Respondent's educational goal in 1966	15.24	2.04
Nontraditionalism of respondent's preferred high school curriculum	.615	.488
Respondent worked in high school	.391	.490
Respondent's occupational knowledge	7.04	1.61
Probability of not completing high school	.050	.220
Probability of college attendance	.629	.485
Probability of college completion	.367	.484
Highest grade completed	14.02	2.04
Number of children by age 24	.377	.652
Nontraditionalism of son's attitude 1976	7.66	1.89
Occupational status (Duncan) of 1976 job	44.96	23.42
Anticipated occupational status (Duncan) of job planned for age 30	55 05	22.25

TABLE B-25 Interactive Effect of Mothers' Employment and Presence of Two Parents on Sons' and Daughters' Intervening and Education Outcomes: Unstandardized Regression Coefficients

	Intervening Variables				
	Educational Goal	Extensiveness of High School Extracurricular Activities	Worked in High School	Occupational Knowledge	Nontraditionalism of Preferred High School Curriculum
Daughter					
Early childhood					
Two parents present preschool	−.765 (1.37)	−.234 (0.73)	−.074 (0.47)	2.00 (3.86)[a]	.063 (0.44)
Mother worked preschool	−.762 (1.19)	−.349 (0.95)	−.038 (0.21)	1.57 (2.63)[a]	.141 (0.87)
Two parents—mother-work interaction	.802 (1.24)	.445 (1.20)	.138 (0.75)	−1.85 (3.07)[a]	.028 (0.17)
Adolescence					
Two parents present in 1967	.486 (0.99)	.210 (0.75)	−.326 (2.34)[b]	.147 (0.32)	.038 (0.31)
Mother hours worked in	$-.38 \times 10^{-3}$ (0.73)	$.32 \times 10^{-4}$ (0.11)	$-.31 \times 10^{-3}$ (2.14)[b]	$-.81 \times 10^{-4}$ (0.17)	$.11 \times 10^{-3}$ (0.87)

Two parent—hours worked interaction	$-.31 \times 10^{-3}$ (0.86)	$-.44 \times 10^{-4}$ (0.22)	$.30 \times 10^{-3}$ (2.94)[a]	$.22 \times 10^{-3}$ (0.68)	$-.92 \times 10^{-4}$ (1.03)
Son					
Early childhood					
Two parents present preschool	−.295 (0.47)	−.385 (0.86)	.007 (0.05)	.053 (0.11)	.245 (1.58)
Mother worked preschool	−.270 (0.35)	−.233 (0.43)	−.050 (0.26)	.666 (1.16)	.177 (0.94)
Two parents—mother-work interaction	.088 (0.11)	.288 (0.51)	.127 (0.65)	−.379 (0.64)	−.032 (0.17)
Adolescence					
Two parents present in 1967	.440 (0.59)	.947 (1.76)[c]	.177 (0.95)	−.711 (1.25)	−.272 (1.46)
Mother hours worked in 1967	$.45 \times 10^{-3}$ (0.70)	$.403 \times 10^{-3}$ (0.88)	$-.60 \times 10^{-4}$ (0.09)	$-.44 \times 10^{-4}$ (0.09)	$-.18 \times 10^{-3}$ (1.13)
Two parent hours worked interaction	$-.58 \times 10^{-3}$ (1.29)	$-.87 \times 10^{-3}$ (2.69)[a]	$.74 \times 10^{-4}$ (0.66)	$.42 \times 10^{-3}$ (1.23)	$.19 \times 10^{-3}$ (1.70)[c]

TABLE B-25 (Continued)

	Intervening Variables				
	Probability of Dropping Out of High School	Probabilty of College Attendance	Probability of College Completion	Highest Grade Completed	Nontraditional Attitude
Daughter					
Early childhood					
Two parents present preschool	−.150 (1.88)[c]	−.038 (0.26)	−.106 (0.80)	−.134 (0.24)	.493 (0.76)
Mother worked preschool	−.115 (1.27)	−.023 (0.14)	−.136 (0.90)	−.032 (0.05)	1.56 (2.11)[b]
Two parents—mother-work interaction	.132 (1.42)	.057 (0.34)	.112 (0.73)	.180 (0.27)	−1.71 (2.27)[b]
Adolescence					
Two parents present in 1967	.026 (0.38)	−.034 (0.27)	.024 (0.21)	−.065 (0.13)	.693 (1.22)
Mother hours worked in 1967	$.10 \times 10^{-3}$ (1.32)	$.33 \times 10^{-4}$ (0.25)	$-.33 \times 10^{-4}$ (0.28)	$-.38 \times 10^{-4}$ (0.07)	−.001 (2.49)[b]

Two parent—hours worked interaction	$-.22 \times 10^{-4}$ (0.44)	$.52 \times 10^{-4}$ (0.57)	$.19 \times 10^{-4}$ (0.23)	$.12 \times 10^{-3}$ (0.35)	$.24 \times 10^{-3}$ (0.58)
Son					
Early childhood					
Two parents present preschool	.020 (0.31)	−.073 (0.58)	−.056 (0.44)	−.427 (0.88)	.925 (1.25)
Mother worked preschool	.038 (0.49)	−.311 (2.05)[b]	−.172 (1.12)	−1.31 (2.23[b]	.805 (0.89)
Two parents—mother-work interaction	$.58 \times 10^{-3}$ (0.01)	.352 (2.25)[b]	.181 (1.14)	1.38 (2.28)[b]	−.749 (0.80)
Adolescence					
Two parents present in 1967	−.049 (0.62)	.025 (0.17)	−.036 (0.23)	−.127 (0.21)	−.920 (1.03)
Mother hours worked in 1967	$-.40 \times 10^{-4}$ (0.61)	$-.12 \times 10^{-4}$ (0.09)	$-.26 \times 10^{-3}$ (1.97)[b]	$-.32 \times 10^{-3}$ (0.65)	$-.44 \times 10^{-3}$ (0.57)
Two parent hours worked interaction	$-.21 \times 10^{-4}$ (0.44)	$-.58 \times 10^{-4}$ (0.63)	$.10 \times 10^{-3}$ (1.10)	$.90 \times 10^{-4}$ (0.25)	$.83 \times 10^{-3}$ (1.56)

NOTE. In addition to the variables listed above, these ordinary least square equations also included all of the variables listed in Table A-3 with the exception of the father's occupational status and father's attitude variables; "t" values are in parentheses.

[a]Significant at the .01 level in a 2-tailed test.
[b]Significant at the .05 level.
[c]Significant at the .10 level.

7
Conclusions and Recommendations

The Panel on Work, Family, and Community was established to explore what is known about the relationship between parents' employment, especially that of mothers, and children's socialization and education and to identify directions for future study. The report of phase one of the panel's study (Kamerman and Hayes, 1982) focused on how families, employers, and various formal and informal community institutions have adapted to changing patterns of labor force participation—and with what effects on children. This volume, the report of phase two of the panel's study, focuses on children's experiences and educational outcomes. In this second phase the panel was interested in determining whether there were variations that could be traced in any systematic way to differences in the everyday lives of children with working and nonworking parents.

The fundamental conclusion of our first report is that work—i.e., paid employment—cannot be viewed as a single, uniform condition experienced the same way by all parents, with consistent effects on all children (Kamerman and Hayes, 1982:vii.) Contrary to strong popular opinion on both sides of the issue, employment—by mothers or fathers or both parents—cannot be viewed as simply all good or all bad for children in different social, economic, and cultural circumstances. Children's development is a consequence of multiple factors, only one of which—and not necessarily the most important—is the employment status of their parent(s). Results vary depending on how the many aspects of employment (e.g., occupation, earnings, work schedules) interact with family processes, with the roles of other formal and informal support systems, and

with the particular attitudes, values, and characteristics of the child and the parent(s). After further investigation, this remains our primary and most salient conclusion.

The panel's two reports, *Families That Work* and *Children of Working Parents*, should be read and interpreted as a cumulative product. The findings, conclusions, and recommendations of phase two of the panel's study support and build on those of phase one. The central chapters in this volume are an extension of those in *Families That Work*; they assume a familiarity with the research, the data bases, and the analyses discussed in the earlier report. Many of the findings of phase one are cited in support of the conclusions of phase two as well.

Again and again in the preparation of both volumes, the panel was frustrated by the limitations of existing data and research and their inability to provide decisive answers to questions concerning the direct and indirect consequences of parents' work patterns and work status on children's experiences and development. Because of the relatively short time frame in which these issues have become pressing, many studies have simply not addressed the most salient questions, others have produced findings on the basis of very small and often unrepresentative samples, and still others have failed to take account of the many intervening factors that influence how mothers' and fathers' work affects children. Another significant problem is the relative lack of longitudinal data to show how this and other major changes in society affect families and children over time. The existing knowledge base is indeed frail. A decade or more from now, we will undoubtedly know more. However, given the dynamic nature of the phenomenon we are addressing, the situation may be different still.

The panel's specific conclusions and recommendations are discussed below under two headings. (1) the relationship between changing patterns of parents' work and children's educational outcomes and (2) issues in the use of existing data to address these questions.

CHANGING PATTERNS OF PARENTS' WORK AND CHILDREN'S EDUCATIONAL OUTCOMES

Existing research has not demonstrated that mothers' employment per se has consistent direct effects, either positive or negative, on children's development and educational outcomes.

The panel has found that there is no conclusive research evidence to suggest that mothers' employment per se (by single mothers or mothers in two-parent families) has consistent, direct effects, either positive or negative, on children's development and educational outcomes. Generally, in children's development of personal relationships, in their attitudes to-

ward and aspirations for educational achievement and attainment, in their attitudes toward work and their career choices, and in their expectations about family formation and family roles, we have discovered that variations in children's socialization are less often associated with whether their mothers work outside the home than with other social, cultural, ideological, and economic factors (race, income, family structure, parents' attitudes toward work and housework, etc.). The available evidence bearing on this matter, however, is not experimental, and therefore it is not possible to draw firm conclusions concerning any direct causal relationship between mothers' employment and child outcomes. Although there may be important indirect effects, these have not emerged from the research to date.

Children's social, emotional, and cognitive development is the net result of their everyday experiences. Existing studies suggest that there are few differences in children's patterns of daily activity—the things they do, the places they go, and the people with whom they interact—that can be attributed directly and solely to their mother's employment, except that working mothers and their children spend less time together (but not necessarily less time actively involved in shared activities). The major factors influencing children's activities and associations, especially those of school-age children, appear to be such factors as race, income, family structure, and urban/suburban/rural residence—and not mother's work. Indeed, we draw attention to the striking similarity among the daily experiences of children with working and nonworking mothers. A growing number of children, regardless of their mothers' employment status, for example, are enrolled in preprimary education programs and after-school enrichment programs. It seems likely that although growing up in the 1980s may be different than it was a decade or two ago, there is less difference today in the experiences of children with working and nonworking mothers than one might expect. Unfortunately, the consequences of this similarity have not been clearly documented. Therefore, we cannot conclude that mother's work is irrelevant to children's development; we can conclude only that it has not been shown to significantly alter their patterns of activity.

We have discovered, for example, that children's development of peer relationships, especially the formation of friendships, seems largely unaffected by mothers' labor force participation per se. As Berndt notes (Chapter 2), there is substantial continuity between parent-child and peer relationships. Children who have good relationships with their parents usually have good relationships with their peers as well (and vice versa), regardless of whether their mothers work. To the extent that maternal employment creates stresses that are reflected in family processes and interactions, parent-child relationships may suffer and, in turn, children's

relationships with other children may also be adversely affected. Furthermore, although working mothers usually have less time to foster their children's friendships, there is no definitive evidence to suggest that children are more or less susceptible to negative peer influences (e.g., delinquent behavior) simply because their mothers work or that they are more or less likely to develop friendships or seek acceptance from "the wrong crowd." In sum, it is the quality of parent-child relationships, not parents' (and especially mothers') work patterns and work status, that is most important for children's development of positive peer relationships.

Similarly, children's TV viewing habits and their exposure to television are generally unaffected by mothers' labor force participation in and of itself. As Messaris and Hornik suggest (Chapter 3), the fact that mothers are employed does not make it more likely that their children will be frequent television viewers or that television viewing will have unusually negative effects on their social or intellectual development. Other factors are more likely to influence the amount of time children spend during the course of a day or a week watching television. For example, mothers' own television viewing habits seem particularly important. In families in which the mother herself watches a lot of television, regardless of her work status, children are also likely to be frequent viewers. Similarly, mothers who watch little television have children who watch little television. Better-educated mothers in families at higher income levels tend to spend less time watching television than poorly educated mothers in lower-income groups. In addition, children in female-headed families tend to watch more television than those in two-parent families. Indeed, single mothers themselves tend to spend more time watching television than their married counterparts (Medrich et al., 1981).

Evidence concerning the positive and negative effects of television viewing on children's school achievement is limited and inconclusive, although it has been shown to have seriously negative effects on some children's social development (Park and Slaby, in press). As Messaris and Hornik point out, these and other outcomes probably have less to do with the amount of time spent watching television than with other factors in children's lives—their individual characteristics, their other activities, their viewing habits, and the nature of their relationships with parents and peers, for example. Mothers' work patterns and work status seem to be significant only insofar as they positively or negatively influence these other factors.

The lack of direct effects of maternal employment is also apparent in children's access to and use of neighborhood resources during their out-of-school time. As Rubin notes (Chapter 5), data from the Children's Time Study suggest that there are few differences in activity patterns

among school-age children that are attributable directly to mothers' work patterns and work status. Where and with whom children play and their activity choices alone and with friends seem to be more closely linked to age, gender, ethnicity, and family income level than to mothers' employment. For example, children in lower-income families are more likely to participate only in free, publicly sponsored programs and facilities, whereas children from middle-income and upper-middle-income families use both public and fee-based private programs. Boys were observed to be somewhat more adventurous, or at least far-ranging, than girls in their choices of out-of-school activities. Boys are more likely to leave their immediate neighborhoods and to play in public parks, recreation centers, and school yards. Black children are generally more mobile than white children, in part because of the relative scarcity of private yards in low-income, predominantly black neighborhoods. In sum, parents' work patterns do not seem to have any significant effect on children's participation in out-of-school activities independent of these other factors.

We conclude that how school-age children spend their time, where, and with whom may have more to do with other social, economic, cultural, and ideological factors than with whether their mothers are in the paid labor force. Clearly, patterns of activity have changed over the past several decades for all children as American families have become smaller and as they have changed in function. Families no longer (if in fact they ever did) assume full responsibility for meeting all of their children's health, education, vocational training, and recreation needs (Keniston and the Carnegie Council on Children, 1977:12-17). These are shared with a variety of other formal and informal institutions in the community, including schools, churches, social service agencies, and neighborhood organizations, and with other individuals outside the family, including teachers, scout and team leaders, and alternative caretakers. Although changing patterns of parental employment have reinforced and perhaps even accelerated the changing relationship between families and their communities, there is little if any evidence to suggest that the experiences of today's children, especially school-age children, are radically different depending on whether their mothers are employed or not. To the extent that differences do exist, the available data do not indicate whether they are significant for children's development or whether working parents are finding ways to compensate for their absence during part or all of the work day or work week.

It is important to emphasize the inconclusiveness of existing research findings concerning effects on children's socialization and education. As Bronfenbrenner and Crouter point out, almost all of the related examinations have been cross-sectional in design and as a result have overlooked

the possibility of effects that may not become apparent until adulthood. Longitudinal studies are required to assess longer-range effects, and unfortunately few have been done to date (Bronfenbrenner and Crouter, 1982:66). Many existing studies fail to distinguish between full-time and part-time work, shift work, etc., leaving open serious questions concerning the consequences for children of having their mothers "available" to them during a greater or lesser number of hours each day or week. Moreover, much of the existing research on the effects of maternal employment on children has sought to isolate the work variable. What appears in sum to be a lack of direct effects may reflect that fact that researchers have generally failed to take into account the variety of factors in children's lives that interact with parents' work and influence development. The indirect effects of employment have not been adequately examined, although they may be quite significant.

School-age children of working parents spend less time in the presence of their parents than children of nonworking parents, although the amount of time they spend in actively shared activities does not vary significantly.

Studies of children's time use have focused primarily on school-age children (ages 6-17); our conclusions concerning children's daily routines and parent/child time together and apart are therefore limited to that age group. The data suggest that, in general, parents' work patterns and work status have little effect on the allocation of their children's time to various activities. For example, few differences have been noted in the activities of children in this age group on their own (both alone and with friends), in activities shared with their parents, in participation in household chores and jobs outside the home, in organized activities supervised by adults, and in television viewing (Medrich et al., 1981). The only major differences in patterns of time use by school-age children of working parents are that they tend to spend somewhat more time on household chores, especially baby-sitting, and that they spend less time in their parents' company. Working parents are less available to their school-age children, if hours spent together is the measure of availability. However, the amount of time those children spend actively involved in activities with their parents (e.g., doing homework, television coviewing, reading, attending cultural events outside the home), both at home and away from home, does not vary significantly with parents', especially mothers', labor force participation. As both Messaris and Hornik (Chapter 3) and Rubin (Chapter 5) indicate, the activities that school-age children engage in and the amount of time allocated to them are influenced more by factors of income, family structure, ethnicity, and parents' educational levels than by parents' work patterns. In the case of parent-child activities, for example, children in

single-parent families tend to go fewer places outside the home with their parent. This may in part be due to the fact that single-parent families generally have a lower level of financial resources; it may also be due in part to the difficulties for a single parent with more than one child of managing and supervising a group of youngsters away from the household setting. Among two-parent families the total number of places children go with their parents does not seem to vary significantly. Parents' education and income levels do, however, affect where they go. As Rubin suggests, better-educated, upper-middle-class parents are more likely to take advantage of libraries, museum programs, and cultural events; parents who are less well educated and in lower-income groups are more likely to go to public parks or pools.

In sum, the available evidence suggests that patterns of time use outside the home among school-age children are generally unaffected by parents' labor force participation. The time they spend in activities with peers and other adults as well as the time they spend in shared parent-child activities remains relatively constant. Children of working mothers spend neither more time in organized activities nor less time visiting community institutions with their parents. At home, their play patterns and television viewing patterns are very similar to those of other school-age children, although they are generally expected to assume somewhat more responsibility around the house.

Although patterns of time use among children ages 6-12 have been documented by the Children's Time Study in some detail, the direct effects of these patterns on children's long-term social, emotional, and cognitive development are not as clearly understood. Several studies suggest that the imposition of household responsibilities can have positive effects on development (Elder, 1974; Johnson, 1969; Woods, 1972). Beyond this, however, we know very little. As Elkind (1981) suggests, the extent to which children's time is scheduled and allocated may have significant effects on the nature of their childhood experiences and the pace of their growing up. Whether children of working parents are more "hurried" than other children remains an important question. In addition, the consequences of parent-child time together (time spent actively and/or passively with mothers, fathers, and both parents) or the lack of it have not been carefully studied. Although available time budget data suggest that working mothers (especially those who are employed part time) and nonworking mothers spend about the same amount of time actively involved in activities with their children, they do not explain the consequences of that time spent together, nor do they explain the consequences of time spent apart. There are major unanswered questions about the role of supervision and about the social development of latch-key children—those

who are not enrolled in any regular after-school program and who either return to an empty house after school or who roam freely without parental monitoring. Existing research has not addressed this matter in any systematic way.

Patterns of time use by parents seem to vary significantly according to their work patterns and work status.

Although children's time use seems relatively unaffected by parents' labor force participation, parents' time use seems to vary significantly. Working parents are time poor (Medrich et al., 1981:94). The integration of employment and family responsibilities often creates time pressures on parents that may be a significant source of personal and family stress. How working parents, both single and those in two-earner families, manage their time is not well documented. Based on studies of children's time use, however, we conclude that what the parent who works gives up, more often than not, is his or her own personal leisure time. To the extent that community institutions have not taken the initiative, working parents, especially working mothers, spend an extraordinary amount of time and effort minimizing the consequences of their absence. Many working mothers actually spend more time carpooling and driving children between home, school, and after-school or weekend activities (e.g., athletic teams, dance classes, music lessons, play groups) than their nonworking counterparts. Rubin notes that in the Children's Time Study sample, most mothers with part-time jobs arranged to be home after school and to volunteer in school activities at a higher rate than nonworking mothers. Mothers employed full time managed in their remaining time to volunteer, to help with organized out-of-school activities, and to visit places with their children at the same rate as nonemployed parents, other circumstances being equal (income, education level, etc.). Indeed, a variety of existing studies document the fact that many mothers who work make a special effort to compensate for their absence by setting aside time to be with their children and by planning activities for them (Jones et al., 1967; Kamerman, 1980; Kliger, 1954; Rapoport and Rapoport, 1971; Yarrow et al., 1962).

The overall consequence of this time crunch for the personal schedules of working mothers and fathers, however, is not clearly understood. Undoubtedly these heavy time commitments entail costs that every family meets in its own way. Robinson (1977a, 1977b, 1980) shows that many mothers have opted for part-time employment rather than full-time employment. Some parents are choosing to work different shifts (Nock and Kingston, 1982; Pleck and Rustad, 1980; Presser and Cain, forthcoming). In some households, especially among young professional couples, there

is some evidence that husbands are beginning to play a greater role in household and childrearing tasks. Existing research has not adequately addressed the nature of changing patterns of time use among working parents, the extent to which the stress that many parents inevitably experience spills over into other aspects of family relations and interactions, and the ultimate consequences for children's socialization and education.

The primary locus of adaptation to changing patterns of labor force participation is the family.

From our review of existing research during both the first and second phases of our study, we conclude that the major accommodations and adjustments in attitudes, roles, and routines are being made within households and family units. Some large employers have taken steps to implement innovative policies on work schedules and leave to help employees meet their family responsibilities. Benefits and services provided by employers can offer significant supports to the family (Kamerman and Kingston, 1982). There also has been some growth in the provision of child care services directly and indirectly supported by public subsidy. In contrast, however, we have found little evidence of initiatives on the part of other community institutions, in particular the schools, and no systematic development of the wide range of child care services many parents are requesting.

Schools are the major institutions outside the family that share responsibility for the socialization and education of children. Nevertheless, there seem to be few alterations in school routines and roles or in the attitudes and values of teachers and school administrators as a direct response to the changing work patterns of parents. As Linney and Vernberg (Chapter 4) suggest, parents' participation in the school and in a child's school activities (e.g., using home-based curriculum materials, participating in parent-teacher conferences, volunteering as a teacher aid, attending PTA meetings) makes important contributions to positive educational outcomes, the major burden of maintaining involvement with the school falls on working mothers or fathers or both. Similarly, although schools in some communities have developed extended-day programs to meet the before-school and after-school care needs of children of working parents, these initiatives are unusual, especially in public schools. For the most part, it is up to parents to locate, arrange, barter for, or purchase necessary services outside school.

Virtually all studies we reviewed of the consequences of changing work patterns concerned how parents are adapting. They show that parents are making adjustments in the division of household labor (cooking, cleaning, other household chores), in their work scheduling (part time versus full

time, flexitime, staggered or alternating shifts), in the performance of parenting responsibilities (participating in the schools and in extracurricular activities, supervising and managing children's out-of-school lives, facilitating children's involvement in out-of-school activities), in arranging for children's care (cooperative baby-sitting, sharing care, purchasing or bartering in-home and out-of-home care, packaging some combination of these alternatives), in consumption patterns (saving and spending decisions, the purchase of goods and services), and in the nature of spousal relationships and interactions.

Although the evidence is limited, it suggests that these kinds of alterations vary significantly according to parents' levels of income, education, and occupations. Well-educated fathers in upper-middle-class families who hold professional or mid-level management positions, for example, seem more likely to actually participate in household labor and child care. In low-income families, more often than not, the mother is expected to manage a full-time job outside the home as well as to assume the entire burden of housework and child care (Kamerman and Hayes, 1982:315-316). Children's own participation in household chores, especially baby-sitting, is shown to be greater in families with a working mother. Surprisingly, however, with the exception of firstborn children, available data suggest that there is little difference in levels of responsibility for chores among preadolescent children in one-parent and two-parent families (Medrich et al., 1981:142).

The extent of these types of adaptations is not well documented, nor is their impact on family processes and interactions and children's socialization and education, especially on their sex-role development, clearly understood. Questions remain concerning the effects on children of living with parents who depart from traditional sex roles, both in the performance of housework and child care tasks and in the assignment of chores to their sons and daughters. Questions also remain concerning the consequences for children of other types of adjustments by parents to accommodate changing work patterns—for example, their decreasing role as volunteers in organized out-of-school activities or their choice of staggered shifts in order to manage child care responsibilities. All such initiatives inevitably have some consequences for parents and for their children. For example, in a study of shift work, Mott et al. (1965) found that afternoon-shift workers, away from home from 3:00 pm to 11:00 pm, rarely saw their school-age children during the work week. The job of discipline fell solely to the parent at home (generally the mother) and the paucity of shared time produced family conflicts over what to do with that time. Night-shift workers, away from home from 11:00 pm to 7:00 am, reportedly were able to spend time with their children, although the arrangement frequently

produced tension between spouses. As Bronfenbrenner and Crouter point out (1982.63), although alternating shifts may facilitate some aspects of family life, they can seriously alter the pattern of intrafamilial relationships. Indeed, the extent to which many such adaptations within families influence the nature of family functioning and whether they have negative, positive, or neutral effects on children's development are unclear from existing studies.

A variety of intervening factors seem to be significant in determining children's educational outcomes and may confound any effort to isolate work-related effects.

In two years of study we have discovered that a variety of other intervening factors seem to be more important in shaping children's development than parents' work itself. Among the most significant of these are low-income status, race, single-parent family status, special characteristics of the child (e.g., age, sex, handicapping conditions), and the attitudes, values, and behavior of the parent(s) both toward work and toward parenting. As the papers presented in this volume and in *Families That Work* consistently show, children's development of peer relationships, their television exposure and viewing habits, their involvement in out-of-school activities, and their educational aspirations and career choices are all more directly influenced by these other factors than by the simple fact of their mothers' employment. For example, a poor black child from an inner-city, single-parent family in which the mother works is statistically more likely to be a low academic achiever, to drop out of high school, to become a teenage parent, to become involved in delinquent activity, and to become dependent on public assistance than his or her middle-class counterpart in a traditional two-parent family living in a suburban neighborhood. Nevertheless, it is not so much the fact of their mothers' working or not working as it is all the other conditions of these children's lives that account for the disparities in their social and intellectual development.

Research on the direct and indirect consequences of parents' labor force participation often has failed to take account of these types of antecedent factors. Researchers have also not taken into account mothers' motivation and reasons for work, their attitudes about work and housework, and their energy levels. As we suggested in *Families That Work*, this is partly due to the fact that researchers have not adequately clarified the complex and interactive relationships between status variables (race, education level, family structure), work variables (part time versus full time, shift work, motivations for working), family process variables (the distribution of labor for household tasks, childrearing), and ultimately child outcome variables. As Bronfenbrenner and Crouter note (1982:71). "Studies that

are limited to searching for differences in the characteristics of children solely as a function of the mothers' employment status have clearly reached the point of diminishing returns. The focus of investigation must shift to the exploration of intervening processes both within and outside the family. This shift, in turn, requires the use of more complex research paradigms. . . ."

DIRECTIONS FOR FUTURE RESEARCH

Researchers should develop more sophisticated research paradigms and employ diverse research methods to study the consequences of changing patterns of parents' labor force participation for children's social and intellectual development.

In the course of our two-year study, we have reviewed an enormous number of studies from a variety of disciplinary perspectives. Consistent with the findings of phase one of our study, the work of phase two shows that there is no evidence to suggest that parents' employment has consistently negative or positive effects on children's educational outcomes as those outcomes are shaped by their activities, the settings in which they spend time, and the individuals with whom they interact. What we found is that a variety of other factors concerning parent's work, the characteristics of children and their parents, the dynamics of family processes, and the availability of outside supports and services can significantly mediate work-related effects. We conclude from this finding that parents' employment status should not be the driving variable in studies of the relationship between parents' labor force participation and child outcomes.

The panel therefore recommends that researchers should develop more sophisticated research paradigms to address these questions. Rather than concentrating on the dichotomous relationship between working and not working, they should instead examine the consequences of changing patterns of labor force participation in the context of other associated conditions and changes in society. Future studies should address "the progressive, mutual accommodation between an active growing human being and the changing properties of the immediate settings in which the developing person lives, as this process is affected by relations between these settings and the larger contexts in which these settings are embedded" (Bronfenbrenner, 1979:21). Understanding the consequences of changing patterns of labor force participation for children's educational outcomes requires that a child's life be regarded not as a series of distinct and unrelated experiences at home, at school, and in the community but as a cohesive whole, with attitudes, values, and behaviors related to and affecting one another.

Such a framework for future study would clearly distinguish status variables from work variables from family process variables from child outcome variables and would suggest the interactions between and among them (see Fig. 7-1).

Existing research has provided a strong knowledge base for understanding the relationship between various kinds of family processes and children's socialization and development. Fewer studies have addressed questions concerning the relationship of status variables to work variables, and in turn to family processes and child outcomes. In seeking to discover whether it is good or bad for children to have mothers or fathers or both parents in the paid labor force, researchers have all too frequently become embroiled in an ideological debate. Data have been marshalled on both sides of the dispute. As we suggested in *Families That Work*, however, the important questions to be addressed are. Under what circumstances do the children of working parents do well, and under what circumstances do they have problems? Which characteristics of children, parents, the school, the workplace, and the neighborhood enhance the positive development of children, and which exacerbate or attenuate negative development? Such an approach allows researchers to begin to understand how work affects families and children and to identify which elements in the framework are controllable.

The panel recommends that researchers develop more complex models for analysis in order to carry out this research strategy. Such models should include attention to such factors as the characteristics of the work experience, income, race, and family size and structure, as well as characteristics of the parent and child as significant antecedent variables. Other factors, such as spousal attitudes, child care arrangements, and availability of and access to other community supports and services, represent important intervening variables. Because many of these variables are so strong and because they are often so closely linked, they may in fact have confounded past analytic efforts to isolate work-related effects.

In addition, the panel recommends that researchers employ diverse research methods in addressing issues concerning the consequences of parents' labor force participation for children. Analyses of large-scale survey data are one important means available to the researcher. Such analyses can provide an indication of important relationships that cut across institutional domains as well as time spans. They can also suggest commonalities and differences between different social, economic, and geographic sectors of society. Perhaps most important, they can help to specify variables that are likely to have the greatest predictive or explanatory potential. Other kinds of studies are needed to supplement such analyses, including ethnographies, small scale observational studies, and planned

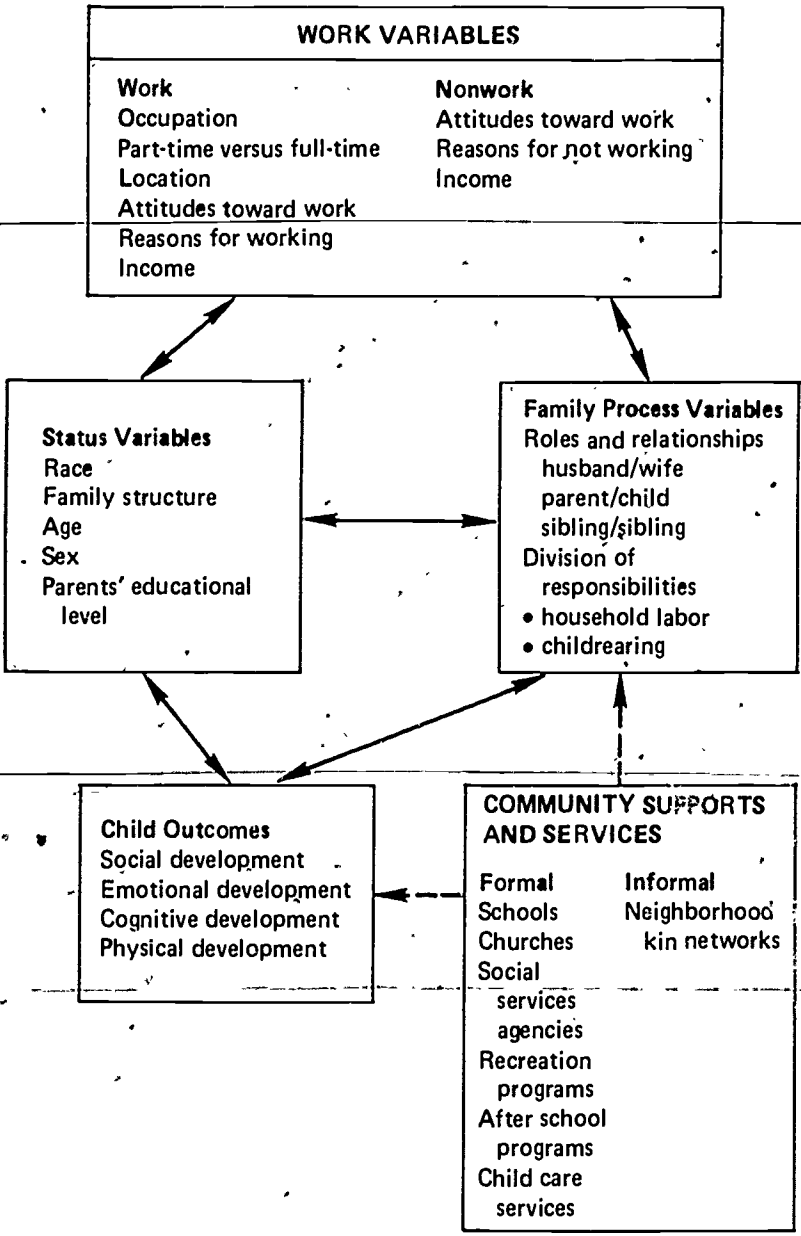

FIGURE 7 1 Direct and indirect effects of parents' work on children's educational outcomes.

variation experiments designed to uncover specific aspects of behavior and outcomes as they systematically differ under controlled conditions. Such studies could help investigators understand the complex patterns of relationships between life conditions; the social, psychological, cultural, and economic characteristics of individuals; and developmental outcomes over time.

More specifically, the panel recommends that researchers should examine the ways in which families are adapting to changing patterns of labor force participation, with special attention to patterns of time use by working mothers. We have observed that the greatest burden of adaptation is borne by families, especially mothers seeking to integrate employment and childrearing responsibilities. Yet there has been little effort on the part of researchers to document systematically the varying patterns of organization and functioning in families living in different circumstances. In particular, the panel recommends that studies be conducted to examine how characteristics of the work experience, characteristics of parents and children, family size and structure, race, and income level interact and affect the definition of roles, responsibilities, and routines within the household and the nature of interactions and relationships among family members. In addition, other studies should explore how various patterns of family dynamics affect children's educational outcomes.

Much of the stress associated with parents' employment results from the time pressures that it creates, yet precise and detailed information on how working parents allocate their time has not been systematically gathered. We know very little about how families in different circumstances spend time or about the relative influences of factors such as family structure, family size, age and sex of children, income level, and work patterns (including work scheduling). Therefore the panel recommends that future research should focus on parents' time use. In particular, because of the importance placed on parent-child interactions and time together, we underscore the need for future studies to address this issue in greater depth. Assumptions concerning the quality of time are open to question because of the lack of relevant data on the details of parent-child interactions, the nature of shared activities, the issue of active versus passive time together, and the importance for children of time with mothers, fathers, and both parents. Such information would shed light not only on whatever differences exist between parent-child relationships in working families and nonworking families and the extent to which they matter, but also on the changing values, attitudes, and parenting behaviors of our society.

The panel recommends that researchers should devote greater attention to identifying which children are more vulnerable to negative effects of

changing patterns of parents' employment by virtue of differences in their intelligence, emotional and psychological characteristics, and physical conditions, as well as differences in their families' income, race, size and structure, and geographical location.

Researchers should devote more attention to examining the consequences of parents' unemployment, underemployment, and nonemployment on children's educational outcomes.

As we noted in *Families That Work*, issues concerning unemployment, underemployment, and nonemployment of parents have generally not been addressed in existing research. Nevertheless, the consequences of parents' not working may be even more significant than the consequences of their working, both for family functioning and interactions and for children's development. The loss of a paycheck may seriously disrupt the family economy, yet we know very little about what difference it makes for a single wage earner to lose his or her job or what difference it makes if the unemployed wage earner is the father or the mother. Do alterations result in family roles and responsibilities? Do unemployed fathers adapt and take over household chores while their wives work? Are children's perceptions of authority and role models, their goals and aspirations, and their attitudes about work and family affected? Are children of different ages and sexes differently affected? These are for the most part unanswered questions. The panel recommends that future research focus more systematically on the consequences of parents' unemployment, underemployment, and nonemployment on children living in different social, economic, and cultural circumstances.

Researchers should devote greater attention to examining the role of schools in providing needed supports and services to children of working and nonworking parents.

As we noted in *Families That Work*, schools are the single most prominent institution in almost all children's lives outside their families. Yet as Linney and Vernberg (Chapter 4) suggest, there is very little in the way of systematic information on what schools do to provide needed supports and services to children of working and nonworking parents, in particular on the relationship between families and the schools as cocontributors to children's social and intellectual development.

Public schools in the United States, and private schools as well, are experiencing significant challenges and changes. Declining enrollments have led to school closings and teacher layoffs. Voter resistance to school bond issues and property tax increases has produced financial difficulties for schools in some areas and the restructuring of school budgets in others.

Other changes in elementary schools are the result of state and federal antidiscrimination laws and the political movements that led to the passage of these laws—for example, the Bilingual Education Act of 1968 and the Education for All Handicapped Children Act of 1975. Proposed future policies, such as vouchers and tuition tax credits that are intended to provide parents and their children with a broader educational choice, would significantly affect the role and operations of both public and private schools. Traditional school practices have also been challenged by legislation and litigation dealing with sex discrimination (Kamerman and Hayes, 1982:304).

As we suggested in *Families That Work*, there has been considerable publicity and debate over the decline in average College Board scores and other indicators of academic achievement, especially among minority children from low-income families. After years of searching for scapegoats, such as television, family background, and other forces external to the educational system, there is a growing inclination to hold the schools accountable for the failure of students to master fundamental skills. This new accountability is occurring at the same time that resources for schools are becoming still more scarce, regulatory constraints are continuing, major changes in childrearing practices are extending to a larger portion of the population, and recognition of the complexity of factors that affect the ultimate outcomes for children is growing. Clearly, the role of schools must be examined within this larger context (Kamerman and Hayes, 1982:333-335).

We have found in our reviews no systematic profile of changes over time in the policies and practices of U.S. schools. Despite the plethora of educational research studies done in the United States each year, there is no current survey program that provides a national picture of educational policies and practices broadly defined in a representative sample of schools. Therefore the panel recommends that future research monitor what is occurring in the schools, with a particular focus on the impact of these changes on children. Such a survey, focusing on the whole range of school activities, not just narrowly defined academic curricula, could provide a systematic view of the variety of extracurricular programs (including special programs provided in some schools that link parents and the school, the workplace and the school, and local social service organizations and the school), their relationships to families and the communities in which they are located, and the role these play in children's social and intellectual development. Such information would be of use to parents, teachers, school administrators, and policy makers at local, state, and federal levels, as well as to researchers. Monitoring changes in elementary and secondary school programs should be aimed at (1) developing a systematic picture

of what schools are now providing and how they relate to families and other formal and informal community institutions and (2) assessing the factors accounting for differences in school policies and practices as well as the consequences for children's education and socialization.

Research Using Existing Large-Scale Data Sets

A variety of existing data sources containing information on aspects of work, family life, and the role of institutions within the community offer a rich opportunity for researchers to explore the relationship between parents' labor force participation and children's educational outcomes.

Rapid social change, both in the structure of family life and in patterns of participation in the world of work, has raised many questions for researchers and policy makers concerned with the well-being of children. The questions raised are numerous and complex, since reverberations are felt and adaptations are made in a variety of settings that affect children either directly or indirectly. As social scientists seek to define issues warranting investigation and attempt to explore systematically the implications of work and family life, it is important to ask what information already exists that might shed light on the questions of interest. It is customary for researchers to review the existing literature on their topic before proceeding with further investigation. There is another, less universally considered source of existing information: large-scale data sets.

There is a wealth of data on family and work that has already been collected, albeit by other investigators and for other purposes; still other data sets were developed primarily for public use, without particular guiding hypotheses. These data are frequently available to interested researchers for analysis. In some disciplines, such as economics, quantitative research relies principally on analyses of existing data sets. Sociologists and political scientists also are accustomed to tapping existing data to corroborate or test new hypotheses. In such other fields as psychology, researchers customarily plan to collect their own data, often on a small-scale basis. Unfortunately, as Zill et al. (1982) note in their discussion of the development of social indicators for children, graduate training in child development research seldom includes a focus on techniques of secondary data analysis. It is becoming increasingly clear across academic disciplines that large-scale existing data sets may contain valuable and rich information about the implications of work and family life for children. As the importance of these kinds of data is being recognized (Babbie, 1975; Lazarsfeld and Rosenberg, 1955; Sellitz et al., 1975), archives specifically designed to preserve and enhance the availability of data sets are growing rapidly. Researchers are making use of well-known archives

like the Inter-University Consortium for Political and Social Research at the University of Michigan, the Roper Center at the University of Connecticut, the National Opinion Research Center at the University of Chicago, the Henry A. Murray Research Center at Radcliffe College, and the International Data Library and Reference Center at the University of California, Berkeley.

Interest in analysis of existing data sources stems from several factors, some simply practical, others conceptual. Both the cost and the logistics of collecting the kind of data that will answer questions about work and family life can be prohibitive. Clearly, the entire network of interactive and mediating variables that form the jigsaw puzzle of outcomes for children cannot be contained within any given data set. It therefore becomes necessary to adopt the scientific model of converging evidence, gleaning findings from a variety of methodologies and sources, in seeking answers to complex questions. Data that cut across institutional domains, that provide information about interrelationships as they develop, or that sample diverse social, economic, and geographic sectors of the population may be expected to provide the largest pieces of the puzzle. Such data are especially costly to collect. Large-scale survey data, census data, time series reports, and data sets on income and employment, often collected at the national, regional, or metropolitan area level by federal agencies, become especially useful when viewed from this perspective.

Sociologist Charles Glock (1967:57-58) describes the cost considerations of survey data, highlighting the utility of existing data sources: "The cost of survey research has been a significant element restricting its use, but the growing recognition that it is not always necessary to collect new data for every problem—that creative use can be made of existing survey data—promises to be a partial solution to the problem of cost." Beyond the cost factor there is another, perhaps more powerful, argument for reexamining existing data sources (Massarik, 1967:415): ". . . secondary analysis can help to specify variables which seem to have the greatest predictive or explanatory power in a research problem other than the one(s) originally under study." Massarik (1967:415) describes one study that reformulated the variables under investigation in this fashion:

> In a survey of volunteers working in a United Fund Campaign, intended primarily to assess their effectiveness as campaign solicitors, the question may be posed later as to what factors in their background and attitude relate to their own levels of philanthropic giving. Here the data may be reanalyzed in a manner different from that employed in the test of the initial hypothesis. Now attention shifts to establishing the degree and nature of association between such factors as the volunteer's age, length of involvement in the United Fund Campaign, annual income and religion, on one hand, and giving level on the other. Though a given

sample may permit only limited and tentative measures of the patterns of association, this kind of secondary analysis may provide clues pointing to significant empirical relationships and theoretic constructs which in turn lay the groundwork for more definitive studies.

Under these circumstances, it is indeed true that no one survey remains an island unto itself. In the classic tradition of scientific inquiry, carry-over of hypothesis and data from one investigation to another becomes possible, and data increase their effective life span with future retrieval and reanalysis continuously possible. There is nothing very new about this strategy; it is simply surprising—and depressing—that, though considerable bodies of . . . data . . . have been accumulated, there has been little skillful reanalysis, particularly in search of explanation and prediction.

Analyses of existing data sources can provide important insights into issues other than those the data were originally intended to address.

It is often the case that those initially involved with particular data neither consider nor attempt to assess their relevance to other issues. For instance, James Coleman's (1966) pathbreaking study of equal educational opportunity has been reanalyzed in a great variety of ways over the past 13 years. While its initial impact was significant in its own right, reanalysis contributed to an important reformation of matters ranging from school desegregation research to school finance research (see Mosteller and Moynihan, 1972). Similarly, data from the Panel Study on Income Dynamics has been reexamined to yield important insights into questions of fertility—an unanticipated analytical opportunity. Data from the Children's Time Study, collected for quite a different purpose, was used to estimate the impact of the loss of children's services on families of different backgrounds following the enactment of Proposition 13 in California (Rubin and Medrich, 1981). And while it is not possible to review the large amount of work based on Bureau of the Census data, the Bureau is part of a long tradition of encouraging reanalysis and the application of existing data to a wide range of research and policy questions.

Existing data sources can serve in a number of ways as fundamental resources for the social scientist interested in studying work and family life. Large-scale data sets may provide a picture of social conditions affected by work and family changes. For example, the Consumer Expenditure Survey, conducted nationally by the Bureau of the Census, provides data on family spending for child care services. Such information can help inform the framing of future research questions, as well as offer an understanding of how various segments of the population are responding to the increase in the number of working mothers.

Existing data sources also may be harnessed to directly address research

questions other than the one they were originally designed to answer. Two notable examples of such reanalysis of data are included in this volume. In Chapter 5, Victor Rubin uses data from the Children's Time Study to explore children's access to community services outside school. Rubin's focus on various family constellations and maternal work arrangements was not an original impetus guiding the research design and data collection; however, because the data set was broad enough to contain the relevant parental work variables, Rubin was able to use it to answer questions of interest to the panel.

Chapter 6 is another example of the reanalysis of existing data. Ronald D'Amico, Jean Haurin, and Frank Mott have taken a new look at data from several components of the extensive National Longitudinal Surveys of Work Experience. The National Longitudinal Surveys were originally designed to provide data on the unique problems associated with the transition to retirement for older men, the reentry into the labor force for middle-aged women, and the transition from school to the work world for young men and women. D'Amico and his colleagues have used this broad data base to answer a specific question about the interface of work and family life, asking how maternal employment affects outcomes for sons and daughters when they reach adolescence and early adulthood. This study highlights the richness that such large-scale longitudinal data sources offer the researcher because it includes information on a variety of aspects of the respondents' lives at different points in time. Because these data were broadly conceived, the data base lends itself to a wide range of research inquiries. In addition, the large-scale nature of data collection provides the researcher an unusual opportunity to look across geographic, racial, and income groups. Finally, the longitudinal dimension of the National Longitudinal Survey affords an opportunity to examine the causal direction of observed relationships.

Reanalyzing existing data poses a variety of potential problems for researchers of different disciplines, addressing different questions, at later points in time.

Making use of existing data often involves cohort problems, and reanalyzing data collected by other researchers—perhaps guided by the perspectives of a different scientific discipline or collected with very different hypotheses or purposes in mind—can present a host of problems as well as advantages. Several of these difficulties warrant brief mention here. The reanalysis of National Longitudinal Survey data in Chapter 6 provides an illustration. The implications of maternal employment for school-age children growing up in the 1960s may be quite different from those for

school-age children in the 1980s, when a majority of such children have mothers who work outside the home. The adolescent and adult outcomes studied by D'Amico and his colleagues cannot necessarily be generalized to children today. The validity of findings based on reanalyses of existing data thus may be circumscribed. This problem is particularly acute in studying work and family, since social change in this area is so rapid. By the time children grow up, the conditions prevailing during their childhood may have changed, thus making predictions to the next generation extremely risky.

Another inherent difficulty stems from the fact that existing data may not be specifically designed to answer the particular question the new investigation is interested in exploring. Relevant variables may have been omitted. For example, the National Survey of Children contains a great deal of unique and valuable data regarding child outcomes but lacks critical information about mothers' work patterns. For our purposes it would have been useful to know when in the child's lifetime the mother was working, how she felt about working, and so forth. Thus, existing data sources may lack the desired breadth or may simply frame interview questions differently from the way the new analysis requires.

Indeed, it has been said that in the social sciences, no two studies define the same variable in the same way. For example, it is rare to find a common definition of the family across data sets. Some researchers treat the family and the coresident household as synonymous; some distinguish the nuclear or the extended family unit while others do not; and some analyze family variables without clearly defining them at all. Definitions of employment are just as inconsistent, making it difficult to interpret or generalize findings. Variable construction necessarily changes as our view of particular social phenomena becomes more sophisticated; a definition of family in a study at one point in time may be less useful at a later date. But in order to use existing data well, researchers must know what it is they want and need in terms of variable structure and definitions (and determine whether a particular study can meet those requirements). This conceptual dilemma, of course, is also confronted by the primary researchers themselves as they design a study and, later on, during analysis. It is particularly problematic, however, for those undertaking secondary analyses.

Another limitation of using data that have been collected for other purposes is that it may not be possible to conduct follow-up studies of the original subjects. In addition, the measures available for secondary analysis may be less rich, since the original investigators' central focus was elsewhere, detailed coding and open-ended questions addressing the

current issues are less likely. Furthermore, large-scale studies lack the special richness of ethnographies or in vivo observational data. In many large existing data sets, as in small-scale studies, variable constructs may be highly collinear, making it difficult to disentangle the separate influences of, for example, divorce and income. Again, even with very large samples, there may not be enough subjects in any particular category to enable the researcher to measure simple effects. This problem is especially acute in studying work and family outcomes, which we believe are determined by a very complex constellation of factors.

The relevant domains of work, family, school, and community are rarely tapped in any one study, even those that are broadly based. Even more rarely are data on the nonfamily context of children available. Thus, analysis of existing data cannot be expected to contribute much to our understanding of the role of peers, extended family, caretaker characteristics, community supports, and family adaptations such as informal bartering arrangements.

Data, simply because they exist, are not necessarily helpful. While there are those who argue that having some data is better than having no data at all, a word of caution on data quality is required. Most researchers are very careful to describe their samples in detail, particularly insofar as this affects the degree to which results may be generalized confidently to larger populations. Questions of sample size, representativeness, and validity must be considered before existing data are used to generate new hypotheses or explore new areas of inquiry. This is especially important because very often secondary analysis provides a rationale for new data collection or the generation of new policy issues. Any number of biases and procedural considerations may affect the interpretation of existing data and statistical comparability across data sets (Kish, 1959).

On a similar note there is the matter of the unit of analysis. Some studies organize data at the individual level. For example, a study of 3,000 families may permit the analysis of 3,000 data collection units, or it may permit aggregation by particular variables—e.g., parent's work status, income, or education. A study of eligibility for Aid to Families with Dependent Children (AFDC) in 100 cities may provide only the city as a unit of analysis, in this case it might be possible to explore regional differences or trends, but researchers will probably not be able to look at patterns *within* the cities from which data were collected or examine any issues that require the differentiation of individual families.

Typically the organization of field research serves the requirements of the primary analysts. Those who wish to use the data sets at a later time either may have to derive strategies to make the data meaningful to *their* problem, or they may have to find ways to supplement the existing data

set with other relevant material, or they may find that design constraints make reanalysis of the data too difficult to undertake.

Once again, it is necessary to emphasize the strategy of piecing together information from studies surveying different content areas (e.g., work-family, family-school, family-community) and using different methodologies (large-scale survey, experimental, ethnography, etc.). Because of the paucity of information about the relationship between work and family life and despite the difficulties delineated, analysis of existing data sets must be considered as as important strategy in the researcher's repertoire.

Future Perspectives for the Analysis of Existing Data Sources

In recognition of the call for additional information suggested time and again by the panel's study, the Appendix to this report lists relevant existing data sources, with information concerning their availability, and details concerning their substance. It is intended to be useful to those interested in pursuing analyses as well as to those concerned with identifying issues requiring new data collection and further study.

In addition, we make several recommendations for researchers on the use of existing data.

Researchers should design studies with the possibility of future use by other investigators in mind.

The panel's most central recommendation is to encourage researchers to design studies with the idea that their data may be used again, by others, for purposes tangential to the hypotheses guiding the initial inquiry. This suggests that a standard set of background variables be included. These have been detailed in several chapters and are also suggested by the domains of the data sources in the Appendix. These background variables include family structure, income, parental work patterns, ethnicity, etc. These variables must be adequately specified; for example, the single designation "working/nonworking mother" is insufficient. It is also helpful to supplement descriptive variables like mother's work status with important intervening variables. For example, in their path model of factors affecting early childbearing, Moore and Hofferth (1980:87) found that "the total effect of a working mother is to lower age at family formation; however, several contradictory indirect effects make up the total effect." The complex chain of indirect or opposing effects documented by researchers studying maternal employment can be sorted out only if data concerning crucial intervening links are considered (reasons for work, spouse's attitudes toward work, type of job, etc.).

In constructing data sets, researchers should include retrospective or historical information.

A focus on implications for children suggests that researchers be aware of the need to include some historical data about the childhood years. When a longitudinal design is either unwarranted or unfeasible, retrospective information such as when in the child's life the mother was employed can be quite useful. While these data are difficult to collect and are subject to distortion, they can nevertheless provide important new insights. In addition, the growing recognition that parents are not the sole shaping influence on the child's socialization suggests that researchers collect data on a broader range of developmental inputs. These are discussed in some detail by Watts and Santos (1978) in a theoretical framework accompanying their inventory of data resources related to child and family policy issues.

Several other strategies can facilitate analysis along new dimensions.

The ideas discussed above relate to broadening and better specifying variables in new data collection efforts to increase their usefulness for subsequent reanalyses. In working with existing data a few other strategies may be useful. The researcher can merge macro- and micro-level data. For example, the micro-level data from a quasi-experimental study of maternal employment effects could also be analyzed in relation to the availability of child care services or extended school programs. Along similar lines, contextual variables, such as the community's rate of unemployment or AFDC benefit levels, could provide policy-relevant information related to the substantive issue under study. Such local-, county-, or state level data may be made available in an existing data bank or could be added by subsequent researchers. In some cases, however, locational data are not available to outside researchers.

One last possibility is the idea of piggybacking variables. At relatively low cost, a researcher concerned with a particular topic can contract with a large scale data collector to include an additional variable of interest beyond the standard overall inventory of items. Specific information on work or family could thus be gleaned from a project not originally designed to gather such data.

The analysis of existing data is one way of building new knowledge about the interrelationships of work and family life. Because the work, family, and community nexus is a relatively uncharted research territory, casting fresh glances at existing data in this area may be especially helpful. Given that cost considerations are an increasingly important factor in the conduct of social science research, reanalysis of existing source materials will be essential to the continued growth of research knowledge.

CONCLUSION

The two reports, *Families That Work* and *Children of Working Parents*, represent the culmination of the efforts of the Panel on Work, Family, and Community over a two-year period. Their primary message is that, like most dramatic social change, the phenomenon of changing work patterns and work status is exceedingly complex, and for this reason it is impossible to identify any simple causal relationship between parental employment and child outcomes. As we have stated repeatedly, work by itself is not a uniform condition, experienced in the same way by all adults with the same effects on all children. It is neither all good nor all bad. The only answer to the question of what difference it makes for mothers to work is that it depends. It depends on the parents, on the children, and on the circumstances of their lives. Some children live in families in which parents need to work for economic reasons, some children live in families in which parents choose to work for other reasons; and some children live in families in which both monetary and nonmonetary concerns are involved in the decision to work or not to work. The outcomes for children vary and are not definitively determined by any single factor.

In sum, that is what the existing social science research tells us. While it is a salient finding, however, it is of little help or comfort to the many mothers and fathers who are weighing the costs and benefits of combining paid employment and parenting responsibilities in the context of their own families. Aggregate data are important to understanding the dimensions of social change, but they are not useful in assessing the implications for individual families. In fact, we still know very little about which parents and children, living under what kinds of social, economic, and cultural circumstances will be positively affected or negatively affected or will not really be affected in any significant way at all. That remains the task of future research.

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APPENDIX

Compendium of Existing Data Sources for Researchers

Sally Bloom-Feshbach

In this volume as well as in *Families That Work,* we have examined the complexity of the work-family-community nexus and noted the many questions that remain unanswered. Given this complexity and the rising costs of data collection (especially for studies with longitudinal designs and ecologically valid methodologies), it may be useful to reexamine data already collected, perhaps from a perspective that is different from that of the original investigator. However, many interested researchers remain unaware of data sets that contain information relevant to the questions they are posing. Data sharing is made difficult by the lack of systematic information about the content and availability of data collected by other investigators, particularly those of other disciplines. (See Chapter 7 for an extensive discussion of the benefits and problems of secondary data analyses.)

The compendium that follows provides an extensive listing of research investigations that examine various dimensions of work, family, and community. In an effort to select from among the vast array of studies, we applied several criteria. All of the studies in the compendium meet the first criterion and satisfy one or more of the others. Criteria for selection were:

Kirby A. Heller and Suzanne S. Magnetti participated in various stages of the preparation of this compendium, providing invaluable assistance.

(1) *Inclusion of data in more than one domain of interest* Data sets all contain information on work *plus* at least one other area—e.g., work and family; or work, family, and education.

(2) *Large sample size* In order to facilitate the possibility of reformulating variables in secondary analyses, a large sample was deemed desirable.

(3) *Emphasis on varied or special populations* Studies of low-income, minority, or one-parent families, as well as studies that include data on children and adolescents, were of particular interest.

(4) *Samples drawn from more than one political jurisdiction or geographic location*

(5) *Longitudinal or cross-cohort designs* By cross-cohort designs, we mean repeated cross-sectional studies of similar populations.

(6) *Machine-readable data*

It is important to note that a measure of data quality is not included in the selection criteria. A comprehensive evaluation of this important factor would have posed formidable difficulties. By and large the studies listed here appear to be methodologically sound and to meet conventional standards of data collection.

Data sets in the compendium are listed in alphabetical order by title of investigation. The listing of data availability and of whom to contact for further information about a given study was accurate as this volume went to press. Most of the compendium's column headings, such as "Special Population" and "Geographic Range," are self-explanatory.

The heading "Data Level," included with "Sample Size," refers to the unit of analysis of the study. Some studies organize data at the individual level. For example, a study of 3,000 families may permit the analysis of 3,000 data collection units or it may permit aggregation by particular variables—e.g., by the parent's work status, income, or education. Such studies are referred to as providing "individual data." A study of AFDC eligiblity in 100 cities may provide only the city as a unit of analysis. In this case, it might be possible to explore regional differences or trends, but researchers will probably not be able to look at patterns within the cities from which data were collected or to examine any issues that require differentiating individual families. Such studies are referred to as providing "aggregate data." In some data sets, both individual and aggregate data are available.

The "Respondent/Subject" heading refers to the persons or organizations who have provided the data (i.e., the source of the data), while the heading "Data Provided About" indicates whom the respondent's data describe. In some data sets, respondents report on themselves and thus

are subjects in the typical experimental sense. However, because in some investigations respondents provide data about others—for example, about their students or their children—we have differentiated the two categories.

The "Data Description" category contains information about the kinds of variables included in the study. This complex information has been condensed in two ways:

(1) *Boldface letters* These letters refer to the major kinds, or domains, of data. **D** refers to demographic variables, **W** refers to work variables, **F** refers to family variables, **E** refers to education/school variables, **C** refers to community variables, **P** refers to variables describing personal characteristics, **A** refers to attitude variables, and **H** refers to health variables.

(2) *Numbers* Within each of the eight domains, we have designated a specific set of variables that work/family researchers are likely to find useful. Each of these variables has been assigned a number; the complete set of variables and the numbering system is explained in the key that follows this discussion.

Thus, a glance at the boldface letters in the "Data Description" column indicates whether the data set contains information that cuts across the particular domains of interest to the researcher. For example, one can easily see that the Family and Child Care Policy Project includes extensive data on work, family, and education, some personal and attitudinal data, and no data regarding health. More specific information about the availability of particular variables within each domain requires consulting the key along with the compendium listing.

Key To Data Description

ITEM	DOMAIN	VARIABLE DESCRIPTION
D1	Demographics	Socioeconomic status
D2	Demographics	Ethnicity
W1	Work	Present occupation
W2	Work	Income
W3	Work	Labor force status
W4	Work	Work schedule
W5	Work	Work history
W6	Work	Unemployment history
W7	Work	Employment before age 18
W8	Work	Reentry into the labor force
W9	Work	Adaptations made by employers to workers' family responsibilities
W10	Work	Job benefits
W11	Work	Job satisfaction
W12	Work	Vocational goals, aspirations
F1	Family	Present family structure
F2	Family	Desired family structure, size
F3	Family	Child care arrangements
F4	Family	Division of responsibilities at home
F5	Family	Marital satisfaction, quality of marital relationship
F6	Family	Quality of parent-child relationships
F7	Family	Quality of sibling relationships
F8	Family	Childrearing style
E1	Education/School	Characteristics of the school
E2	Education/School	Level of education attained
E3	Education/School	Level of achievement, including grades and standard educational assessments
E4	Education/School	Adaptations made by schools to parental labor force participation
E5	Education/School	Adult education, reentry into education
E6	Education/School	Educational goals, aspirations
C1	Community	Characteristics of the neighborhood or community

Key To Data Description *Continued*

ITEM	DOMAIN	VARIABLE DESCRIPTION
C2	Community	Availability of local and/or state services
C3	Community	Availability of federal services
C4	Community	Use of state and/or local services
C5	Community	Use of federal services
C6	Community	Perception of service needs at local, state, and/or federal levels
C7	Community	Satisfaction with local, state, and/or federal services
P1	Personal characteristics	Extent of social network
P2	Personal characteristics	Quality of social or peer relationships
P3	Personal characteristics	Sex-role
P4	Personal characteristics	Self-esteem
P5	Personal characteristics	Personality
P6	Personal characteristics	Values
P7	Personal characteristics	Use of leisure time
P8	Personal characteristics	Media use, including television, radio, newspapers, magazines, etc.
P9	Personal characteristics	Satisfaction with life in general
P10	Personal characteristics	Deviant behavior, including drug use, delinquency, etc.
A1	Attitudes	Attitudes about employment
A2	Attitudes	Attitudes about family life, marriage
A3	Attitudes	Attitudes about education, achievement, schools
A4	Attitudes	Attitudes about sex roles, women's issues
A5	Attitudes	Attitudes about family policy
H1	Health	Physical health
H2	Health	Mental health
H3	Health	Fertility
H4	Health	Use of health care services

Title	Contact	Availability	Sample Size and Data Level
Alternatives to the Usual High School Curriculum (1978)	David Stern, University of California, Berkeley, CA 94720	Tape available at cost	3,531, individual data
American Women's Opinion Poll (2 surveys: 1974, 1979)	William Gemmell, Roper Center, University of Connecticut, Box U-164R, Storrs, CT 06268	Public use tape available at cost	1974, 3,880; 1979, 3,844; aggregate data
Americans View Their Mental Health (replication study, 1976)	Joseph Veroff, Elizabeth Douvan, Richard Kulka, Survey Research Center, Ann Arbor, MI 48106	Data available from the Data Archive of the Inter-University Consortium for Political and Social Research, Ann Arbor, MI 48106	2,264, individual data
Attitudes of America's Youth Toward the Public Schools (1978)	James Shriver, Gallup Organization, 53 Bank Street, Princeton, NJ 08540	Tapes are not available, reprints of the report available from James Shriver	1,115, aggregate data
Barriers to Home-School Collaboration: Two Case Studies in Junior High Schools (1981)	Laura Leitch, The Urban Institute, 2100 M Street, NW, Washington, DC 20037	Contact Laura Leitch	Two schools, 60 parents, 30–35 teachers & administrators; individual & aggregate data
The Business and Family Life of Self-Employed Women (1977)	Nancy Bowers, Henry A. Murray Research Center of Radcliffe College, 77 Brattle Street, Cambridge, MA 02138	Raw and computer-accessible data available, follow-up possible	230, individual data
CBS News Poll, Education (June, 1978)	Kathleen Frankovic, CBS News, Director of Surveys, 524 West 57th Street, New York, NY 10019	Data available from the Data Archive of the Inter-University Consortium for Political and Social Research, Ann Arbor, MI 48106	1,622, individual & aggregate data

Special Population	Method	Respondent/ Subject	Data Provided About	Geographic Range	Data Description
Adolescents	Cross-sectional, questionnaire	High school juniors & seniors, school counselors	Self, parents, students	Regional	D 1, 2, W 3–5, 7, 12; E 1–3, 5, 6; C 1
Women	Opinion poll	Women aged 18 & over	Self, family	National	D 1, 2; W 1, 2; F 1, 2, 4, 8; E 2; P 6–9; A 1, 2, 4, 5
	Replication, interview	Persons aged 21 & over	Self	National	D 1, 2; W 1, 11; F 1, 2; E 2; C 4–6; P 1, 2, 4–7, 9; A 1, 2; H 1, 2
Adolescents	Cross-sectional, interview, opinion poll	Persons aged 13–18	Self, parents, school	National	D 1, 2, W 1, 12; E 1–3; C 1; P 6; A 3
Adolescents, one-parent families, low-income	Cross-sectional, interview, records	Teachers, parents, principals	Self, students, school, community	Local	D 1, 2; W 1–3, 9; F 1; E 1, 2, 4, 6; C 1–7; P 1, 6; A 3
Employed women	Cross-sectional, interview	Self-employed women	Self	State	D 1, 2; W 1–5, 11, 12; F 1–4; E 2; P 1, 6, 9; A 1–4
	Opinion poll	Adults	Self, child	National	D 1; W 1–3; F 1, 6; E 2; P 6, 8; A 3

Title	Contact	Availability	Sample Size and Data Level
Children's Time Study (1976)	Elliott Medrich, School of Law, University of California, Berkeley, CA 94720	Tapes and codebooks available	764 sixth graders & one of their parents; individual & aggregate data
Consequences of Childbearing and Childspacing (1957–58, with follow-up in 1973–74)	Margaret Marini, Population Study Center, Battelle Human Affairs Centers, Seattle, WA 98105	Data not yet available	6,338, individual data
Consumer Decisions and Asset Management (Decatur/Peoria: several waves from 1968 through present; Chicago: several waves from 1972 through present)	Linda Lannom, Survey Research Laboratory, University of Illinois, 105 West Nevada Street, Urbana, IL 61801	Public use computer tapes available at cost	Decatur/Peoria: 209 households, Chicago, 198 households; individual data
Consumer Expenditure Survey (June, 1972 to June, 1974)	Michael Carlson, Bureau of Labor Statistics, U.S. Department of Labor, Washington, DC 20212	Public use tapes available at cost from Bureau of Labor Statistics, contact Ray Giesman	1972–73: 11,065; 1973–74, 12,121, aggregate data
Corporations and Two-Career Families: Directions for the Future (1980–81)	Susan Lund, Catalyst Career and Family Center, 14 East 60th Street, New York, NY 10022	Data available on a limited basis	374 corporations, 815 couples, individual & aggregate data

Special Population	Method	Respondent/ Subject	Data Provided About	Geographic Range	Data Description
Children	Cross-sectional, interview, time diary, records, questionnaire	Sixth graders aged 11–12, parents, community sources	Self, family, community	Local	D 1, 2; W 1–4; F 1, 3, 6–8; E 1–3; C 1, 2, 5–7; P 2, 4, 7, 8; A 3
Adolescents	Longitudinal, interview, records, questionnaire	Persons in high school & 15 yrs. later, parents	Self, family	State	D 1, 2; W 1–8, 12; F 1–6; E 1–3, 5, 6, C 1; P 1, 2, 4, 6–8; A 1, 3, 4; H 3
Couples	Longitudinal, interview	Married couples, divorced persons	Self	Local	D 1, 2; W 2–4, 6, 10, 12; F 1, 2; E 2, 5, 6; P 5, 7–8; A 4
	Longitudinal & cross-sectional, interview, time diary	Household member	Self, family	National	D 1, 2; W 1–4, 6, 7, 10; F 1, 2; E 2; C 1, 4, 5; P 7; H 4
Two-career families	Cross-sectional, questionnaire	Two-career families, employers	Self, family, employee	National	D 1, W 1–4, 9, 10; F 1–5; E 2; C 6; P 5, 10; A 1, 2, 4; H 1, 2

Title	Contact	Availability	Sample Size and Data Level
Current Population Survey (March Annual Demographic file 1968–present; May Current Population Survey files 1968–present; November survey in even-numbered years 1968–present; and selected other months)	Janet Vavra, Survey Research Center, Ann Arbor, MI 48106	Data available from the Census Bureau or the Data Archive of the Inter-University Consortium for Political and Social Research, Ann Arbor, MI 48106	Approximately 150,000 households each month, aggregate data
Disadvantaged Children and Their First School Experiences (1969–1974)	Virginia Shipman, Educational Testing Service, Princeton, NJ 08540	Contact Virginia Shipman	1,875, individual data
Edmonton Area Study (annually since 1977)	L. W. Kennedy, Director, Population Research Laboratory, Department of Sociology, University of Alberta, Edmonton, Canada T6G 2H4	Machine readable data available at cost	400–500 households each year, individual data
The Effects of Flexible Work Schedules on Urban Families with Young Children: A Quasi-Experimental Longitudinal Study (1978)	Richard Winett, Department of Psychology, Virginia Polytechnic Institute and State University, Blacksburg, VA 24061	Contact Richard Winett	100, individual data

Special Population	Method	Respondent/ Subject	Data Provided About	Geographic Range	Data Description
	Cross-sectional, interview	Persons aged 16 & over	Self, family	National	D 1, 2; W 1–8, 10; F 1–3; E 1, 2, 5; C 1, 4–6; A 4; H 1, 3, 4
Children	Longitudinal & cross-sectional, experimental, interview, records	Children aged 3–8; parents	Self, child, family, school, community	National	D 1, 2, W 1–5, 12; F 1, 3, 6, 8; E 1–3, 6; C 1–5, 7; P 1, 2, 5, 7, 8; A 3; H 1, 2, 4
	Cross-sectional, interview	Persons aged 18 & over	Self, household	Local	D 2; W 1–3, 5, 9, 11; F 1, 3, 5; E 2; C 1, 2, 6; P 1–3, 6–10; A 2, 4, 5; H 1, 2
	Longitudinal, quasi-experimental, interview, time diary, questionnaire	Federal employees with children	Self, family	Local	D 1, 2; W 1–4, 9; F 1, 3, 4, 6; E 2, 5; C 1; P 7–9

Title	Contact	Availability	Sample Size and Data Level
European Men and Women (1975, 1977)	Washington Office of the European Community Information Service. 2100 M Street. NW, Washington. DC 20037	Contact Washington Office of the European Community Information Service	8,791, individual data
Europeans and Their Children (1979)	Washington Office of the European Community Information Service, 2100 M Street. NW, Washington, DC 20037	Contact Washington Office of the European Community Information Service	8,936, individual data
Family and Child Care Policy Project (1980–81)	Karen Hill-Scott. Crystal Stairs. Inc.. 111 North LaBrea Avenue. Suite 201, Inglewood. CA 90301	Data currently being analyzed	370 black families, subset of 82 first-time teen mothers and their mothers
Family & Individual Coping Following Job Loss (1980)	Ramsey Liem. Department of Psychology. Boston College. Chestnut Hill. MA 02167	Data currently being analyzed	160 families; individual data
Family Use of Time & Children's Development (1981)	F. Thomas Juster. Jacquelynne E. Parsons. Martha S. Hill. Survey Research Center. Institute for Social Research. Ann Arbor. MI 48106	Data available from the Data Archive of the Inter-University Consortium for Political and Social Research. Ann Arbor, MI 48106	500 children. 800 adults. constituting 300 families; individual data
General Mills American Family Study 1974–75. The American Family and Money	Research Department. General Mills. Minneapolis. MN 55460	Machine readable data available at cost from the Roper Center. University of Connecticut. Storrs. CT 06268	1,247 heads of families, 947 second family members. aggregate data

Special Population	Method	Respondent/ Subject	Data Provided About	Geographic Range	Data Description
Europeans	Cross-sectional, interview	Persons aged 15 & over	Self, family	International	D 1, 2; W 1–3, 6, 11, 12; F 1, 4; E 2; C 1; P 6, 9; A 1, 2, 4; H 1
Two-worker European families	Cross-sectional, interview	Persons aged 15 & over	Self, family	International	D 1, 2; W 1–4, 6, 7, 9, 10; F 1, 3, 6, 8; E 2, 6; C 1, 3, 5–7; P 1, 6, 9; A 2, 5
Adolescent mothers; one-parent families	Cross-sectional, interview	Mothers, fathers, grandmothers	Self, family, caregivers	Local	D 1, 2; W 1–6, 8–12; F 1, 3–6, 8; E 1, 2, 5, 6; G 1, 2, 4, 6, 7; P 1, 2, 5, 6; A 1, 4, 5
Unemployed	Cross-sectional, interview, questionnaire	Employed & unemployed workers	Self, family	Local	D 1, 2; W 1–3, 5, 6, 10; F 4, 8; E 2; C 1, 5; P 1; H 1, 2
Children	Cross-sectional, interview, time diary	Parents, children aged 5–18	Family	National	D 1, 2; W 1–5; F 1, 3, 4, 6, 8; E 2, 3; C 1; P 2; H 1, 2
	Cross-sectional, interview, opinion poll, questionnaire	Adults, another family member	Self, family	National	D 1, 2; W 1, 2, 10, 12; F 1, 5, 8; E 2, 6; C 6, 7; P 6, 9; A 1, 4, 5

Title	Contact	Availability	Sample Size and Data Level
General Mills American Family Study 1976–77. Raising Children in a Changing Society	Research Department, General Mills, Minneapolis, MN 55460	Machine readable data available at cost from the Roper Center, University of Connecticut, Storrs, CT 06268	1,234 family members (403 parents, 469 children aged 6–12), aggregate data
General Mills American Family Study 1978 79. Family Health in an Era of Stress	Research Department, General Mills, Minneapolis, MN 55460	Machine readable data available at cost from the Roper Center, University of Connecticut, Storrs, CT 06268	1,247 families (including 664 spouses, 263 adolescents), aggregate data
General Mills American Family Report 1980 81. Families at Work. Strengths and Strains	Research Department, General Mills, Minneapolis, MN 55460	Machine readable data available at cost from the Roper Center, University of Connecticut, Storrs, CT 06268	1,503 adults, 253 teenagers, 261 community leaders, aggregate data
General Social Survey (1972–78, annually, 1980, 1982, biannually)	Tom W Smith, National Opinion Research Center, 6030 South Ellis Avenue, Chicago, IL 60637	Data available at cost from the Roper Center, University of Connecticut, Storrs, CT 06268	Approximately 1,500 each year, individual data
Harris 1970 Suburbia Study No. 2052	Diana McDuffee, Louis Harris Data Center, University of North Carolina, Manning Hall 026A, Chapel Hill, NC 27514	Data tape and materials available at cost from Louis Harris Data Center, Chapel Hill, NC 27514	1,650 individuals in 100 communities, aggregate data
Health Interview Survey (annually since 1969)	Pob Weinzimer, Office of Information, National Center for Health Statistics	Public use tape available at cost from National Technical Information Service and National Center for Health Statistics	40,000 households (including 140,000 persons) each year, aggregate data

Special Population	Method	Respondent/ Subject	Data Provided About	Geographic Range	Data Description
Children	Cross-sectional, interview, opinion poll	Parents, children aged 6–12	Self, family	National	D 1, 2; W 1–3, 12; F 1, 4, 6–8; E 2; C 3, 7; P 1, 2, 6; A 2, 4, 5
Adolescents	Cross-sectional, interview	Parents, adolescents aged 12–17	Self, family	National	D 1, 2; W 1, 2, 10; F 1; E 2; C 1, 6, 7; P 6, 7, 9; A 4, 5; H 1, 4
Adolescents	Cross-sectionl, interview	Adults aged 18 & over; adolescents aged 13–18; executives, labor leaders, family tradition-alists, feminists	Self, family, organization	National	D 1, 2, W 1–4, 6, 9, 10; F 1–6, 8; E 2; C 1; P 6–9; A 1–5
	Cross-sectional, interview, questionnaire	Persons aged 18 & over	Self, family	National	D 1, 2; W 1–3, 5, 6, 10–12; F 1, 2, 5, 8; E 2; C 1, 4, 5; P 1, 2, 5–9; A 2, 4, 5; H 1
Suburbanites	Opinion poll	Suburban adolescents & adults	Self, family	National	D 1, 2; W 1–3; F 1, 8; E 2; C 1, 3; P 1, 6; A 3
Disabled	Cross-sectional, questionnaire	Adults, children aged 12–17	Self, family	National	D 2; W 1, 2, 5, 10; F 1, 3; E 2, 3; C 1, 4, 5; P 9, 10; H 1, 2, 4

Title	Contact	Availability	Sample Size and Data Level
Health and Nutrition Examination Survey (Cycle I: 1971–74; Cycle II: 1976–80)	Rob Weinzimer, Office of Information, National Center for Health Statistics	Public use tape available at cost from National Technical Information Service and National Center for Health Statistics	Detailed exam, 7000, nutrition survey, 30,000; individual & aggregate data
High School and Beyond (1980, with follow-ups anticipated)	Samuel Peng, National Center for Education Statistics	Data tape available at minimal cost from National Center for Education Statistics; contact Jeffrey Owings	Approximately 58,000 sophomore and senior high school students, 1,000 schools, 7,200 parents; individual data
Income Survey Development Program (1979)	Marian Altman, Demographic Services Division, Census Bureau	Data not yet available	9,300 households; individual data
Inflation Recession Study (1976)	David Caplovitz, Graduate School, City University of New York, New York, NY 10036	Contact David Caplovitz	1,982 families, individual data
Job Mobility & Job Loss: A Study of the Effects of Unemployment & Underemployment among Blue Collar Working Women in New England (1980)	Ellen Rosen, Nichols College, Dudley, MA 01570	Data not yet available	414, individual & aggregate data
Level of Benefits Study (annually since 1979)	John Thompson, Office of Wages and Industrial Relations, Bureau of Labor Statistics, Washington, DC 20212	Magnetic tapes available at cost from George L. Stelluto, Assistant Commissioner, Office of Wages and Industrial Relations, Bureau of Labor Statistics	1,500 medium & large size business establishments employing 23 million workers; aggregate data

Special Population	Method	Respondent/ Subject	Data Provided About	Geographic Range	Data Description
Children; adolescents	longitudinal, interview	Mothers of children aged 6–17	Self, spouse, child	National	D 1, 2; W 1, 2; F 1, 8; E 1–3, 6; C 1; P 1, 2, 5–8, 10; H 1, 2
Adolescents	Longitudinal & cross-sectional, questionnaire	High school sophomores & seniors; parents; teachers	Self, parents, children; students	National	D 1, 2; W 1–3, 5, 7; F 1, 2; E 1–4, 6; C 5; P 2, 4–8; A 2–4
	Longitudinal & cross-sectional, interview	Persons aged 16 & over	Self, family	National	D 1, 2; W 1–3, 5–7, 10; F 1, 3; E 2; C 4, 5; P 9, 10
Low-income	Cross-sectional, interview	Blue & white collar workers, retirees	Self, family	National	D 1, 2, W 1–4, 6, 7, 10; F 1, 2, 5, 6; E 2, 6; C 1, 4, 5; P 2, 4–7, 10; H 2, 4
Women, blue collar, unemployed	Experimental, interview, records, questionnaire	Employed & unemployed blue collar women	Self	Local	D 1, 2; W 1–6, 9–12; F 1, 3–5; E 2; C 2–5; P 2; A 1, 2, 4; H 1, 2, 4
	Cross-sectional, questionnaire	Businesses with 100+ employees	Benefits	National	W 1, 3, 9, 10; C 1; H 4

Title	Contact	Availability	Sample Size and Data Level
Life Experiences in Married Couples (pilot study, 1974)	Karen E. Paige, Department of Psychology, University of California, Davis, CA 95616	Computer-accessible data available from Nancy Bowers, Henry A. Murray Research Center of Radcliffe College, 77 Brattle Street, Cambridge, MA 02138	61 couples, aggregate data
Mexican Origin People in the United States: National Survey (1980)	Carlos H. Arce, Survey Research Center, Institute for Social Research, Ann Arbor, MI 48106	Data not currently available	991, individual data
Monitoring the Future (annually since 1975)	Gerald Bachman, Institute for Social Research, Ann Arbor, MI 48106	Data available from the Data Archive of the Inter-University Consortium for Political and Social Research, Ann Arbor, MI 48106	18,000 each year, individual data
National Longitudinal Study of the High School Class of 1972 (1972, with several follow-ups)	Andrew Kolstad, National Center for Education Statistics	Public use tape and manuals available at minimal cost from National Center for Education Statistics; contact Jeffery Owings	Approximately 24,000; individual data
National Longitudinal Surveys of Labor Market Experience (1966–68, with follow-ups through 1981–83)	Ellen Mumma, User Services Center for Human Resources Research, Ohio State University, Columbus, OH 43210	Public use tape and documentation available at cost	5 cohorts, older men—5,020, younger men—5,225; middle-aged women—5,083; young women—5,159; youth—12,886; individual & aggregate data
National Study on Child Neglect and Abuse Reporting (annually since 1974)	Pat Schene, Project Director, American Humane Association, 5351 South Roslyn Street, Englewood, CO 80111	Contact American Human Association for special analysis at cost (no public use tape)	376,895, aggregate data

Special Population	Method	Respondent/ Subject	Data Provided About	Geographic Range	Data Description
Couples	Cross-sectional, interview	White middle-class couples	Self, spouse	Local	D 1, 2; W 1, 2, 5, 8, 11, 12; F 1–5, 8; E 2; P 1–4, 6, 7, 9; A 1–4; H 1, 2
Mexican Americans	Cross-sectional, interview	Adults of Mexican descent, half English-speaking and half Spanish-speaking	Self, family	Regional	D 1, 2; W 1–6, 10–12; F 1, 3–6, 8; E 2, 6; C 1, 4–6; P 1, 6, 9; A 1, 2, 4; H 1, 2, 4
Adolescents	Longitudinal & cross-sectional, questionnaire	Public & private high school seniors	Self	National	D 1, 2; W 2, 3, 7, 11, 12; F 1, 2, 6; E 1–4, 6; C 1, 6, 7; P 1–10; A 1–4; H 1
Adolescents	Longitudinal & cross-sectional, questionnaire	High school seniors; school counselors	Self, students	National	D 1, 2, W 1–5, 7, 11, 12; F 1, 2; E 1–3, 6; C 1; P 3–6; A 1, 3
Hispanics, blacks; low-income; adolescents	Longitudinal & cross-sectional, interview	Adult men aged 45–59 women aged 30–44, adolescents aged 14–24	Self, family	National	D 1, 2; W 1–8, 10–12; F 1–3; E 1–3, 5, 6; C 1–7; P 2, 5–8, 10; A 1 4 [illegible] 1
Children	Case records	State agencies	Child, caregivers, abusers	National	D 2; W 3; F 1; C 4, 5; H 1, 2

Title	Contact	Availability	Sample Size and Data Level
National Study of Social Services to Children and Their Families (1977–79)	Vardine Carter, Children's Bureau, Box 1182, Administration for Children, Youth, and Families, Department of Health and Human Services, Washington, DC 20013	Limited tapes available	9,597, aggregate data
National Survey of Children (Wave I, 1976–77, Wave II: 1981)	Nicholas Zill, Child Trends, 1990 M Street, NW Washington, DC 20036	Tape for Wave I available at cost from Child Trends, limited access to Wave II data	Wave I, 2,301 children; Wave II, 1,377 children; individual data
National Survey of Family Growth (2 cycles: 1973, 1976)	Rob Weinzimer, Office of Information, National Center for Health Statistics	Public use tape available at cost from National Technical Information Service and National Center for Health Statistics	1973, 9,797, 1976, 8,611, individual data
National Survey of Working Women (1978)	Nancy Bowers, Henry A. Murray Research Center of Radcliffe College, 77 Brattle Street, Cambridge, MA 02138	Computer accessible tape available	111,000, aggregate data
New Jersey Income-Maintenance Experiment (1968–72)	John Flesher, Director of Computer Services, Institute for Research on Poverty Data Center, University of Wisconsin, Madison, WI 53706	Analysis tape and code books available at cost	1,127 families; individual data
New York City Infant Day Care Study (1973–76)	Penny Liberatos, Medical and Health Research Association of New York City, Inc., 40 Worth Street, New York, NY 10013	Data not available	259 children and their families (36 month cross-sectional), 318 children and families (36 month longitudinal); individual data

Special Population	Method	Respondent/ Subject	Data Provided About	Geographic Range	Data Description
Children	Cross-sectional, questionnaire	Child welfare service agencies	Child, caregivers	National	D 1, 2; W 2, 3, 5; F 1, 3; E 2; C 4–6; P 10
Children	Longitudinal & cross-sectional, interview, time diary, questionnaire	Parents, children; teachers	Child, family, self, neighborhood	National	D 1, 2; W 1–4, 11, 12; F 1, 3, 5–8; E 1–3, 6; C 1, 7; P 1, 2, 4, 5, 7, 8, 10; A 2, 3; H 1–4
One-parent families	Cross-sectional, interview	Married or single mothers aged 15–44	Self, child	National	D 1, 2, W 1, 2, 5; F 1, 2; E 2; C 5; H 3, 4
Women	Cross-sectional, questionnaire	Paid, volunteer & unemployed women	Self	National	D 1, 2; W 1–3, 6, 11, 12; F 1, 3; E 2; P 9, A 1
Low-income	Longitudinal, experimental	Family members aged 16 & over	Self	State	D 1, 2; W 1–8, 10–12; F 1–6, 8; E 1–3, 6; C 1, 4, 5; P 1, 4–9; H 1, 4
Children, low-income	Longitudinal & cross-sectional, interview, records	Parents, child, physicians	Child, family, caregivers	Local	D 1, 2, W 1–3 F 1, 3, 5–8; E 1–3; C 1, 2, 4–6; P 1, 2, 5; H 1, 2, 4

Title	Contact	Availability	Sample Size and Data Level
Panel Study of Income Dynamics (annually since 1968)	Greg Duncan, James Morgan, Survey Research Center, Institute for Social Research, Ann Arbor, MI 48106	Data available from the Data Archive of the Inter-University Consortium for Political and Social Research, Ann Arbor, MI 48106	1980, 6,533 families, 19,746 individuals, individual & aggregate data
Philadelphia Social History Project (historical, from 1800s)	Theodore Hershberg or Henry Williams, Center for Philadelphia Studies, School of Public and Urban Policy, 4025 Chestnut Street, Suite 600, University of Pennsylvania, Philadelphia, PA 19104	Data tape copies available at cost	500,000 individuals, 144,000 families, 127,000 business firms, 4,500 community institutions; individual & aggregate data
Project Talent (1960, with several follow-ups)	Lauress Wise, American Institute for Research, P.O. Box 1113, Palo Alto, CA 94302	Public use file available at cost from Laurie Steel, AIR or Data Archive of Inter-University Consortium for Political and Social Research, Ann Arbor, MI 48106	400,000+, individual data
Quality of American Life (1971, 1978)	Phillip E. Converse, Center for Political Studies, Institute for Social Research, Ann Arbor, MI 48106	Data available from the Data Archive of the Inter-University Consortium for Political and Social Research, Ann Arbor, MI 48106	1971, 2,164, 1978, 3,692, individual data
Quality of Employment Survey (1972–73, 1977)	1972–73, Robert P Quinn, Stanley E. Seashore, Thomas W Magione, Survey Research Center, Ann Arbor, MI 48016 1977 Robert P Quinn, Graham Staines, Survey Research Center, Ann Arbor, Mi 48106	Data available from the Data Archive of the Inter-University Consortium for Political and Social Research, Ann Arbor, MI 48106	1972–73, 1,455, 1977: 1,515, individual data

Special Population	Method	Respondent/ Subject	Data Provided About	Geographic Range	Data Description
Low- & middle-income	Longitudinal & cross-sectional, interview	Household heads aged 18 & over	Self, spouse	National	D 1, 2; W 1–5, 10, 12; F 1–4; E 2, 6; C 1, 4, 5; P 4, 5, 7–9; A 1, 4
Immigrants, blacks	Longitudinal & cross-sectional, records	Household head; business; institution	Self, family; firm; agency, neighborhood	Local	D 1, 2; W 1–3, 6, 7; F 1, 4; E 2; C 1; P 1, 2, 6, 7; H 1, 3
Adolescents	Longitudinal & cross-sectional, interview, questionnaire	Students in grades 8–12	Self, family	National	D 1, 2; W 1–3, 5, 11, 12; F 1, 2; E 1–3, 5, 6; C 1; P 2, 5, 7, 9; A 1, 3; H 1, 3
	Replication, interview	Persons aged 18 & over	Self	National	D 1, 2; W 1–3, 5, 11; F 1, 5; E 2, 6; C 1; P 1, 2, 7, 9; A 1–3; H 1
	Cross-sectional, interview	Persons aged 16 & over, working 20 hrs./wk or more	Self, spouse	National	D 1, 2; W 1–5, 7, 9–12; F 1, 3–5; E 2; C 4–7; P 4, 7, 9; A 1, 4; H 1, 2

Title	Contact	Availability	Sample Size and Data Level
Seattle and Denver Income Maintenance Experiments (1970–76)	Robert Spiegelman, Research Center, SRI International, 333 Ravenswood Avenue, Menlo Park, CA 94025	Public use tape available at cost from National Technical Information System or SRI International	818 single mothers (4,800 families), individual data
Stress in Single Black Employed Mothers of School-Aged Children (1981)	Harriette McAdoo, Columbia Research Systems, Inc , Family Research Project, 406 Wilde Lake Village Green, Columbia, MD 21044	Tape available at cost	318 mothers, 100 significant others; individual data
The Study of Recipients of Federal Supplemental Benefits and Special Unemployment Assistance (1975)	Walter Corson, Mathematica Policy Research, Princeton, NJ 08540	Public use file available through National Technical Information Service	10,861, aggregate data
A Study of the School Needs of Children from Single Parent Families (1979–80)	Frank Brown, Institute for Development of Educational Activities, P.O. Box 446, Melbourne, FL 32901	Data tapes available at cost	26 schools, 16,000 students, aggregate data
Survey of Child Care Needs of Lower-Paid Personnel (1979)	Nancy Bowers, Henry A Murray Research Center of Radcliffe College, 77 Brattle Street, Cambridge, MA 02138	Computer accessible data available	371, aggregate data
Survey of Company Personnel Practices (1979)	Harriet Gorlin, The Conference Board, 845 Third Avenue, New York, NY 10022	Tabular reports of data available at cost	4 samples of companies 525, 523, 541, 543; aggregate data
Survey of Income and Education (1976)	Paul Siegal or Wendy Bruno, Population Division, Census Bureau	Public use tape available at cost from Census Bureau, Data Users Services Division	151,171 households, individual data

Special Population	Method	Respondent/ Subject	Data Provided About	Geographic Range	Data Description
One-parent families, low-income	Longitudinal & cross-sectional, experimental, interview	Single mothers with children under 13, family heads aged 18–58	Self, family	Regional	D 1, 2; W 1–6, 8, F 1, 3; E 2, 5; C 1, 4, 5
One-parent families	Cross-sectional, interview	Mothers, significant others	Self, family	Local	D 1, 2, W 1–3, 11; F 1, 6; E 2, 6; C 4, 5; P 1, 3, 4, 9; H 1
Unemployed	Cross-sectional, interview	Unemployed persons receiving special benefits	Self, spouse	National	D 1, 2, W 1–6, 10; F 1, 3; E 2; C 2–6; H 1, 4
Low-income one-parent families	Longitudinal, case records	School records	Child, family	National	D 1, 2; F 1; E 1–3, C 5; P 10; A 3; H 4
Low-income	Questionnaire	Harvard workers earning under $15,000/yr.	Self	Local	D 1, W 1–4, 9; F 1, 3; C 4–7; P 2
	Cross-sectional, questionnaire	Companies in 5 industries	Business	National	W 1, 3, 4, 9, 10; F 3; H 4
Low-income, handi-capped; minorities	Cross-sectional, interview	Persons aged 14 & over	Self, spouse, children under 14	National	D 1, 3, W 1–7, 10; F 1; E 2, C 2–5; H 1–4

Title	Contact	Availability	Sample Size and Data Level
Survivor Families with Children (1978)	Robert Hastings, 1133F Universal North, Social Security Administration, Department of Health and Human Services, 1875 Connecticut Avenue, NW, Washington, DC 20009	Data will be available soon through National Technical Information Service; contact Robert Hastings	5,752 families, individual data
Three Generational Family Study of Black Americans (1980–81)	James Jackson, Research Center for Group Dynamics, Institute for Social Research, Ann Arbor, MI 48106	Data not currently available	2,443; individual data
Time Use in Economic and Social Accounts (1975–76)	F. Thomas Juster, Survey Research Center, Ann Arbor, MI 48106	Data available from the Data Archive of the Inter-University Consortium for Political and Social Research, Ann Arbor, MI 48106	1,519 individuals plus 887 spouses, individual data
Women in Clerical Work: Impacts of Job Conditions (1980)	Evelyn Glenn or Roslyn Feldberg, Department of Sociology, 96 Cummington Street, Boston, University, Boston, MA 02215	Data not yet analyzed	178, individual data

Special Population	Method	Respondent/ Subject	Data Provided About	Geographic Range	Data Description
One-parent families	Cross-sectional, interview	Widowed mothers	Self, children	National	D 1, 2; W 1–8, 10; F 1, 3; E 2, 6; C 2–5, 7; P 9, 10; H 1, 2, 4
Blacks	Cross-sectional, interview	Three generations of black family members aged 14 & over	Self, family	National	D 1, 2; W 1–7, 9–12; F 1, 3, 5–7; E 1, 6; C 4, 5; P 1, 7, 10; A 2, 3; H 2
	Longitudinal, interview, time diary	Persons aged 18 & over, spouses	Self, spouse	National	D 1, 2; W 1–4, 6, 10; F 1–4; E 2; C 1; P 9; A 2, 4; H 2, 4
Employed women	Cross-sectional, interview	Female clerical workers	Self, spouse, employer	Local	D 1, 2; W 1–3, 5, 10, 12; F 1, 3; E 2; C 6; P 1–3, 6–8; A 1, 4; H 1, 3