

Behavior and Status of Children, Adolescents and Young Adults

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Introduction

The desire to monitor, understand, and improve the well-being and behavior of children and youth has motivated a vast and ever-growing body of research in recent years. Much of the research, however, has been undertaken within the confines of national borders and with little cross-national comparison. The aim of this paper is to facilitate cross-national comparison and the insights it offers by collecting in an interpretative manner research on children and youth from both sides of the Atlantic and identifying important areas for further research. The most immediate use is to guide the United Nations Economic Commission for Europe's Population Activities Unit in its development of an international comparative study for its newly developing Generations and Gender Programme.

Why has interest in children and youth expanded in recent years? At least a partial answer is offered by a forthcoming book entitled The Well-being of Children and Families (Thornton, forthcoming), which reflects work engendered by the Family and Child Well-Being Research Network, a group of distinguished scholars assembled by the U.S. NICHD for a concerted focus on young people in the U.S.¹ The book states:

‘Family and child-well being are central concerns in America today. Almost every day brings an event or news story that focuses attention on the well-being of America’s children and the families in which they live. We hear disturbing stories of neglect, violence, abuse, illiteracy, disease, and family breakdown and disruption— anecdotes and statistics that make us wonder about the future of our children and families. At the same time, there are remarkable counter-balancing stories of educational and occupational accomplishment, pro-social action, commitment of family and community, and triumph over adversity--leading us to believe that the future of our families, communities, and country is in good hands.’²

To illustrate the messages that a modest-size, mostly middle to upper-middle class, relatively affluent, town in the U.S. (Ann Arbor, Michigan) now receives on an everyday basis, we draw examples from the headlines of the local newspaper during roughly a week’s time.³ The headlines voice concerns about violence and threats to children and youth:

¹ The book’s contributors represent a wide range of academic disciplines -- anthropology, biology, demography, economics, family science, genetics, medicine, psychology, public policy, and sociology – the philosophy being that a multidisciplinary approach is needed because child development and family life are very complex and multifaceted phenomenon that cannot be satisfactorily and completely described and explained by only one—or even a few—disciplinary perspectives or points of view.

² Thornton (forthcoming) page 2.

³ This list reflects a scan by the authors trying to capture stories in the Ann Arbor News, the town’s daily newspaper, directly pertaining to children and youth during 10-17 May 2000.

“Congressman’s son found dead”
“Violence in youth sports spreads beyond the field”
“Their childhood is shrinking in world of sexual pressures”
“Unstable teens should skip ‘Virgin Suicides’ [a film showing in town]”
“Children are easy marks for online snoops”
“Moms march in Washington for gun control”

The headlines also herald young people’s societal contributions and accomplishments and family togetherness:

“Volunteer crews give downtown a clean sweep”
“Students receive achievement award”
“Greenhills students earn state forensics honors”
“Gold is the goal for area athletes: Olympic Trials next step to Australia”
“Father, daughter share marathon”

News such as this draws attention to the great contradictions of life and where our children seem to fit in all of this. It raises questions about what the world is truly like, how it has come to be the way it is, how we would prefer it to be, and how to help it move in directions we feel are desirable. As The Well-being of Children and Families states:

“The dramatic mixture of negative and positive outcomes and the diversity of outlooks for family and child well-being in the future raise numerous scientific and policy questions about the factors influencing today’s children and families and what interventions might improve the prospects for current and future generations of children and parents. Scientists, policy makers, and the general public are increasingly asking about the underlying cultural, social, psychological, economic, and political forces creating family and child well-being.”⁴

These issues are monumental. Add to this the realization that they are issues for a society that has attained greater material comfort than most any preceding it and the vast majority of the rest of the world. Clearly a comprehensive review and analysis of these issues are beyond the scope of this paper. The quest here is to focus most carefully on topics of particular relevance to the developing UNECE-PAU Generations and Gender Programme in its objective of promoting an international comparative study of behavior, relationships, and well-being of different generations and genders.

The motivation for the Generations and Gender Programme’s international comparative study is a desire to improve the well-being of and solidarity between generations as well as enhance gender relations and equity, all in a context which facilitates monitoring and understanding changes in the UNECE Region and provides a knowledge base for social policy.⁵ With this in mind, we concentrate on certain key

⁴ Thornton (forthcoming), pages 2-3.

⁵ This project is planned to supercede the Fertility and Family Surveys (FFS) with as much continuity across the two programs as possible. The Generations and Gender

aspects of children's and youth's lives which provide important demographic, economic, and social perspectives – living arrangements, care and time use issues; economic issues; and social development and behaviors. We attempt to review what is known, pose the salient unanswered questions, and provide suggestions for ways to investigate these unanswered questions with an eye toward policy-relevance. The recommendations growing out of this endeavor are couched in the context of the research approach the Generations and Gender Programme is planning -- reliance on up-coming censuses and a moderate-length survey, possibly supplemented with additional data, in UNECE countries.

This paper relies heavily on a number of publications and works in progress that summarize the state of the art with regard to research on children and youth and point toward promising new directions. We draw together this literature and then attempt to step beyond mere compilation to a distillation and interpretation that shapes the questions and research approaches for addressing them that we feel are most relevant given the Generations and Gender Programme's goals and strategy.

This paper slants strongly toward a U.S. perspective on the issues because that is where the bulk of the expertise of the authors lies. This, no doubt, has an influence on the issues designated as important and the ideas about data collection. The U.S. is notably richer than many, especially Eastern European, UNECE countries, as well as notably more unequal than many in its income and wealth distribution. Its public sector traditions also differ from those of other UNECE countries. However, we have attempted to incorporate at least a moderate collection of relevant research representing the world more generally.

The paper further reflects the perspective of two demographers with considerable experience in the design and analysis of large, national panel surveys, one a family economist and one a family sociologist. Although such a background cannot yield full representation of all the social sciences or data collection and analysis perspectives, it facilitates a broad interdisciplinary perspective geared to surveys.

Programme, drawing on lessons from the Fertility and Family Surveys (FFS), intends to anchor data collection in two statistical sources, the latest round of population and housing censuses and a new round of comparable household/family sample surveys. Information to be drawn from the former and to be collected by the latter will pertain to members of different generations and, wherever appropriate, of both sexes.

The Generations and Gender Programme is intended to yield data, information and knowledge, which are comparable across the ECE region. Continuity with the FFS as well as comparability across countries and over time will permit an uninterrupted monitoring of several key demographic developments that began in the 1960s and 1970s and, in some parts of the region, accelerated in the 1980s and 1990s. However, new developments and new research questions arising since that time open the pathways to new research issues.

The paper begins with important contextual material that addresses issues relevant to data collection and analysis of children's quality of life. We then turn to discussion of the state of knowledge, promising new directions, and recommendations for moving in those directions.

Methodological Issues in Studies of Children and Youth

Before reviewing the state of knowledge and attempting to identify promising new directions and strategies for getting there, it is important to consider key methodological issues that arise in studies of children, adolescents, and young adults.

Age Variation in Topics of Interest

Although well-being, living conditions, and relations with parents are prime concerns for young people of all ages – young children, adolescents, and young adults -- other aspects tend to be of special relevance at particular ages. Care and parental time available for childcare are topics of special concern to young children, with key aspects somewhat different for very young children (roughly birth to age 5) and school-age children (roughly ages 6-10). Topics of special concern shift to life goals and, in many countries, transitions to adulthood when age shifts to adolescence (roughly ages 11-14) and young adulthood (roughly ages 15-25). Important among the transitions to adulthood are early behaviors relating to fertility and family formation. Gender role development can arguably be in process from birth onwards throughout life.

Contextual environment is an important element regardless of age, although here, too, there is some age differentiation in terms of what is relevant. From birth through young adulthood the parental home, school (or daycare), friends and peers, and neighborhood are all important elements of the environment that potentially influence, and may be influenced by, the individual. Somewhere around adolescence, though, at least in countries such as many in the UNECE, the contextual environment expands to include potential and actual partners, the possibility of the individual's own household taking shape, and the world beyond family, school and neighborhood. At these upper reaches of childhood and beginnings of adulthood regional, national, and even international opportunities and constraints become relevant.

Measuring Quality of Life

The generally accepted approach to assessing quality of life and is to identify and measure relevant dimensions of well-being that serve as indicators. This is a complex task, and there is as yet no consensus regarding which measures best assess the quality of life for children (see, for example, the discussion in Micklewright and Stewart, 2000; Thornton, forthcoming, and several of Child Trends' recent reports). Some recent efforts at international, national or within-country levels, however, have identified certain major dimensions of children's lives as crucial to consider. (In addition to those referenced below, see the British government's list of indicators of child well-being for a series of

annual reports on poverty and exclusion⁶ and the first in a series of UNICEF Innocenti Research Centre reports on child poverty in rich countries.⁷)

The choice of indicators in part reflects the purpose of the studies, different development of the concept of children's well-being in different parts of the world, and, to a large extent, data availability. The relevant dimensions differ at the individual, family, and societal level, and each level entails a broad array of components. In addition, level and quality of well-being are reflected in both positive and negative (problem) aspects of life, with the positive dimension more than just an absence of problems but often more difficult to define than are problems. In the context of children and youth, important positive aspects are ones that contribute, at least ultimately, to development in desirable directions.

At the individual level quality of life is frequently differentiated into five domains:

- economic well-being (financial issues such as employment, income, assets, and standard of living);
- physical well-being (such factors as weight, height, fitness, diseases, immunizations, substance use, and physical abilities and limitations);
- cognitive and educational well-being (a range of factors such as mental ability, knowledge, and school attendance and achievement);
- social well-being (the quality of people's relationships with their social environments, including interactions with others, social coping skills, delinquency, and pro-social behavior); and
- psychological and emotional well-being (factors that include dimensions of mental health such as happiness; self-esteem, autonomy, security, and stress).

Not all of these domains are included or equally well measured in relevant data bases. Measures for the first three domains are most likely to be included in relevant data bases whereas social well-being and, especially, psychological well-being are often not even considered. There seems to be less agreement about what constitutes adequate measurement of social and psychological well-being than there is of what constitutes adequate measurement of economic, physical, and cognitive well-being.

At the family level, well-being is reflected in such things as family structure, family or household income, the nature of dyadic relationships important to children and youth, transitions that start and end those dyadic relationships, and the well-being of the family system as a whole. Among the dyadic relationships, parent-child relationships, parent-parent relationships, and sibling relationships are of paramount importance.

⁶ The report is entitled 'Opportunity for All' and is described at the website: <http://www.dss.gov.uk/hq/pubs/poverty/sum/sumf.htm>

⁷ Full text and supporting documents can be downloaded from the UNICEF Innocenti Research Centre website at: www.unicef-icdc.org

At the societal level, children and youth contribute to and are affected by such things as good social relations and level and quality of social capacity in terms of ability to live and work peacefully and productively with one others. Children and youth impact society's quality of life through their character, civility, spirituality, and tolerance as well as their activities in terms of environmental lifestyle and voluntary community involvement. Children's and youths' well-being is influenced by a number of conditions at the societal level, including the society's standard of living, income distribution, health care system, and child care system.

Measures of well-being, or quality of life, are often used in two distinct ways. One use focuses on micro-level analysis of factors associated with well-being in an effort to identify the determinants and mediators of well-being. The other use is to document current or past conditions at the aggregate level, with well-being measures serving as social indicators. Research papers and projects often combine the two perspectives.

Considerable effort has gone into recent work in the U.S. building a system of child and family indicators to monitor the condition of children and families over time. An inventory of over 90 projects of indicators of child, youth and family well-being produced by Child Trends can be found at http://www.childtrends.org/r_invres.cfm. One such example is a collaborative effort by 18 Federal agencies and prepared by the Federal Interagency Forum on Child and Family Statistics - *America's Children: Key National Indicators of Well-Being*. The forum was founded in 1994 to foster the coordination and collaboration of the collection and reporting of Federal data on children and families. Three reports have been produced since then. Included in the reports are 6 contextual measures that describe the changing population and family context in which children are living and 23 indicators of well-being in the areas of economic security, health, behavioral and social environment, and education. A special feature in its third report is the addition of an indicator of the prevalence of children who have difficulties performing everyday activities. See Appendix A for description of detailed indicators in the 1999 reports.

Another effort in the U.S. is the collection of an array of indicators at both the national and state level in a series entitled *KIDS COUNT Data Book* produced by a private foundation (Annie Casey Foundation). The data book series is intended to illuminate the status of America's children and to assess trends in their well-being. The choice of indicators in these data books reflects both the foundation's mission of helping highly vulnerable children who live in challenging neighborhoods and the constraints of comparable cross-state time series data. Six key measures are identified: (1) child is not living with two parents; (2) household head is high school dropout; (3) family income is below the poverty line; (4) child is living with parent(s) who do not have steady, full-time employment; (5) family is receiving welfare benefits; and (6) child does not have health insurance. See Appendix B for a list of indicators and the criteria for selecting the indicators in the data book.

Probably the most comprehensive collection of the well-being of America's children and youth can be found in the annual report series put out by the U.S. Department of

Health and Human Services. These reports have drawn upon a large number of data sources, including censuses and surveys, some of them long-running longitudinal surveys. Appendix C presents a summary table of the measures included in the report series. As this list indicates, the number of indicators of child well-being is substantial, and no combination of a census and moderate-size survey, even a longitudinal one, can hope to cover the entire territory even for the demographic, economic, and social dimensions we are focusing on in this paper. In addition, even for a country such as the U.S. with a relative abundance of data, many of the indicators can be traced for only short historical periods and there is considerable variation in coverage by age of children.

Considerable effort has also been extended in other parts of the world to develop and measure child well-being. Some of these projects attempt to make international comparisons of child well-being, which is even more challenging. UNICEF's *The State of the World's Children* reports have drawn together data from the world bank, UN population division, UNICEF, and UNESCO to compile comparative statistics for 193 countries. Measures in these reports include basic indicators, nutritional status, health status, educational levels, demographics, economic indicators, the status of women and the rate of progress since 1960. The choices of the indicators reflect the adoption of the UN Convention of Rights of Child and focus heavily on the survival of children and less on other domains of children's well-being. The basic indicators are infant and under-5 mortality, life expectancy at birth, GNP per capita, adult literacy rate, primary school enrolment, total population, annual number of births, and % share of household income for lowest 40 % and highest 20%. Appendix D presents a list of all indicators used in this report, definitions of indicators and their data sources.

In an effort to measure child well-being across industrialized countries, Micklewright and Stewart (2000) drew together data from Eurostat, WHO, OECD and UNESCO to assemble indicators which covers various aspects of children's well-being. As the authors note, their selection of indicators was restricted by data constraints for international comparison and do not consist of all the aspects they would like to consider. Their effort illuminates the lack of useful data in understanding children's welfare and the need for developing measures for international comparison. Micklewright and Stewart (2000) also note that no consensus exists about the best set of indicators to use in comparisons of child well-being across the industrialized world. They consider four potentially overlapping domains of children's quality of life that they believe a child needs to lead a "good life" in Europe: material well-being (M), health and survival (H), education and personal development (E), and social inclusion/participation (S). The following indicators form the basis of their UNICEF report:

Economic well-being

- GDP per capita (M)
- Child poverty rate – children living in households with income below 50% of the national median (M,S)
- Prevalence of worklessness among households with children (M,S)
- Unemployment among all 20-24 year olds (M,S)

Mortality

- Under-5 and young persons' mortality (H)
- Death rate from motor vehicle accidents, 5-14 year olds (H,E)
- Suicide rate among young men aged 15-24 (H, S)

Education

- Percentage of 16 year olds in education (E)
- Expenditure on education as % of GDP, adjusted for age-structure (E)

Teenage fertility

- Birth rate to 15-19 year olds (E,S; perhaps also a risk factor for H,E,M,S)

Life satisfaction

- Percentage of 15-19 year olds who classify themselves as "satisfied" or "very satisfied" with their life (H,E,M,S)

More recently, release of *Innocenti Report Card* No. 1 (UNICEF Innocenti Research Centre, Florence, Italy, 2000) has attracted considerable attention. Focused on child poverty in rich nations, and with figures and statistics drawn from the Luxembourg Income Study, this publication is the first in a series designed to monitor the performance of the industrialized nations in meeting the needs of their children. The next Innocenti Report Card will focus on childhood injuries.

Approaches to Studying Children and Youth

Children and youth represent a unique life stage in that they have traditionally been viewed more as 'human becomings' than as 'human beings' (see Qvortrup, 1994, for a comprehensive discussion of this issue). There is a life stage seen as preparatory to integration into society subsequently as adults, a time of dependency on adults as they make their way through layers of developmental transitions on the way to adulthood. While this is unarguably the case, childhood is also a structural form in its own right, not just a transitory state, and children and youth merit attention as distinct research subjects.⁸ There are, however, a number of methodological and ethical challenges to

⁸ The importance of children and youth as research subjects and political entities is highlighted by the U.N. Convention on the Rights of the Child, which has made standards for children important concerns in international law. The Convention is designed to protect and ensure rights considered inherent to the human dignity and harmonious development of every child (every human being under the age of 18 years). These include: non-discrimination; best interests of the child as the primary consideration in all actions concerning children; inherent right to life, survival, and development; and the right to participate in all matters affecting them by expressing their views and having those views given due weight.

The Convention offers a vision of the child as an individual *and* as a member of a family and community, with rights and responsibilities appropriate to his or her age and

studying children and youth, especially if it involves self-reporting (see Scott, 2000, for a thorough discussion and extension of the points noted below).

Gearing survey instruments to children and youth. Research involving children as respondents must take account of the wide range of cognitive and social development that depends primarily on the child's age, but also on gender, socio-economic background, and ethnicity. Standard adult questionnaire techniques, with no adaptation, are inappropriate with preschool children. However, questionnaires can be adapted for children as young as ages 6-8, as demonstrated by the Population and Family Study Centre in Brussels' survey on 'The Living Conditions of Children,' a study of childhood and parent-child relations in Flanders. Indeed, the 1997 Child Development Supplement to the Panel Study of Income Dynamics in Michigan (USA) in studying child development and parent-child relations illustrates how to adapt questionnaires for children as young as age 3.

Hypothetical questions are problematic for preschool children, and less structured methods of interviewing are best suited to them. Once children reach age 7, it is possible to use both individual and group semi-structured interviews. By adolescence, though, young people are wary of revealing their secrets to an adult and are adept at controlling what they reveal.⁹ For children under 11, visual stimuli can be especially useful in the questioning process because pictures make the issue far more concrete than verbal representation alone. Aids to memory can also be used to good effect, as children tend to forget even a relatively limited set of response options. Often a simple modification of question format is sufficient, however.¹⁰ Children's performance on memory tasks improves markedly with age and, by 11, children's ability to remember is not so different

stage of development. The Convention refers to the family as the fundamental group of society and the natural environment for the growth and well-being of its members, particularly children, and States are obliged to respect parents' primary responsibility for providing care and guidance for their children and to support parents in this regard, providing material assistance and support. The safeguards for life, survival and development are not limited to a physical perspective but also aim at "full and harmonious development of the child, including at the spiritual, moral and social levels, where education will play a key role."

⁹ This is well illustrated in a study of children aged 7 upwards investigating the strategies used to persuade parents and other adults to buy them things (Middleton et al., 1994). Using group discussion in school, the researchers found that children reported using begging, repetition, direct action, bribery, part-payment, negotiation, threats and actions, each with varying degrees of success. The range of techniques reported by 7-8 year olds was already large and not much was added to the persuasion repertoire after the age of 11.

¹⁰ For example, the standard Likert type response (agree strongly, agree, neither agree nor disagree, disagree strongly) can be unfolded by first asking 'Do you agree or disagree?' and then probing for strength of feeling.

from adults (although the information content of memory is much more limited). Most children of 11 and older are fully able to articulate their perceptions, opinions and beliefs and, with relatively little adaptation, surveys designed for adults can be used with adolescents.

Although by adolescence it is possible to use a standard questionnaire instrument, problems of literacy, confidentiality and context have to be taken into account. Pretesting the survey instrument is crucial for identifying problems with understanding and ambiguities in question working, detecting flippancy and boredom, and discovering discrepancies between the children's understanding and the researcher's intent. A variety of pretest methods can be useful, including cognitive techniques such as asking the child to 'think aloud', coding of non-verbal behaviors, and even video analysis of the interview interactions. Certainly, most questionnaires developed for adults or older children will need some adaptation before they are suitable for younger children.

Adapting interview practices. It is also sometimes necessary to adapt standard interview practices. For example, interviewers may need more leeway than is normal, as children tend to ask for more guidance than adults, especially when they are unsure what a question means. In such circumstances, it is preferable for interviewers to paraphrase the questions than give the standard response 'whatever it means to you.' Standard interview practice might also have to be modified to protect children's privacy and confidentiality, especially in settings where children are likely to worry about their responses being reported to the adult authorities. Unfortunately, confidentiality issues can also become real ethical dilemmas if children reveal self-actions or adult behaviors that put them at risk.

Context is also important for interviewing children. The child's personality, in terms of behavior and attitudinal preferences, is often very context dependent. The same child could be boisterous and outspoken at home, but shy and reserved at school. Hence, where interviews are carried out is quite likely to influence the way children respond. Also, the interviewer setting is important because the social meaning children will attach to concepts such as work or honesty may differ depending on whether children are at home or at school. The mode of interview is also very important in terms of data quality. Whether the interview is face to face, by telephone, or self-completion may enhance or reduce the likelihood of difference response biases such as social desirability or response contamination.

Interviewing children at home and in-person is relatively expensive but has several advantages over self-completion methods and/or telephone interviewing: more complex routing through the questionnaire is possible when interviewers administer the questionnaire than with self-completion, visual aids and show cards are best adapted to in-person interviews, interviewers can prompt for further information, something difficult to obtain in self-completion approaches. These advantages are especially pronounced in gathering information from children. New interviewing techniques using computer assisted personal interviewing (CAPI) can add further enhancements by making complex routing, when well-programmed, relatively effortless for interviewers and providing

opportunities to incorporate videos and other visual and audio stimuli that reduce the need to rely on verbal questions and answers. One relatively novel method of collecting sensitive information from children is the diary method. Diaries, especially those with simple formats, are also good for collecting information that is too detailed for retrospective reports to be reliable. In U.S., the Child Development Supplement of the Panel Study of Income Dynamics collected such data in 1997. In the U.K., the Family Expenditure Survey includes expenditure diaries for children, and the new panel study Home On-Line uses a time-use diary with children aged 9-15.

A relatively new interview method used in some studies (e.g., the U.S. Youth Risk Behavior Surveillance System Questionnaire and the Young People's Survey of the British Household Panel Survey) is one involving pre-recording the questionnaire on a personal recording device (such as a Walkman). With this approach, the respondent can listen to the questions without those around him or her hearing them; hence to others present at the time of interview (e.g., parents in the child's home) it is unclear what the child's response indicates. When accompanied by an answer booklet containing only response categories, the method ensures complete privacy. This approach also circumvents problems with literacy.

Reporters of information. Special attention should be paid to matching the reporter of the information with the type of information being gathered, and for many types of information children and youth's voices need to be heard. For some types of measures, such as their family's income and parents' education, this is desirable because adults heading the family are likely to provide more accurate reports of these contextual aspects than are the children themselves. However, for other types of measures, such as children's and youth's attitudes and expectations, their own voices need to be heard to get an accurate assessment of their perspective. And for some types of measures, such as children's behavior and level of development, reports from both the children and the adults responsible for them can be desirable because each potentially provides a relevant but different assessment.

Studies of children have expanded in recent years to cover a wide variety of venues, methodological approaches, and types of reporters. They include national studies¹¹ as well as local studies.¹² The local studies in particular, but more recently the

¹¹ For example, national studies of children and youth in the U.S. include such studies as National Longitudinal Study of Youth (NLSY), Panel Study of Income Dynamics Child Development Supplement (PSID-CDS), Monitoring the Future (MTF), National Longitudinal Study of Adolescent Health (Add HEALTH), Early Childhood Longitudinal Studies (ECLS) program, and Fragile Family and Child Well-being Study. In Canada they include the National Longitudinal Survey of Children and Youth (NLSCY). In the U.K. they include such studies as the national birth cohort studies and the Young People's Survey of the British Household Panel Survey. The U.K. also has studies of children and youth focused on particular age ranges. The ESRC Research Programme on Children 5-16 (<http://www.hull.ac.uk/children5to16programme/>) envisions compulsory school-age children as social actors and tries to shed light on effects of social change on their family and social lives, their sense of belonging and contributions to society, and their

national studies as well, encapsulate a large number of venues (homes, schools, day-care facilities) as well as different types of reporters (children and youth, mothers, fathers, absent parents, teachers, day-care attendants, relatives and neighbors serving as secondary care givers). In so doing the studies make use of a wide assortment of types of instruments (e.g., various types of standardized assessments in addition to standard questioning), each specialized to particular content and a particular type of reporter in a given type of venue.

Timeuse. Both standard closed-end questions about activities engaged in and time diaries have been used to gather time use information on behavior and its context from children as well as adults. The time diary is the instrument of choice for comprehensive assessment of time use, and that is the instrument being used in the studies afoot with time use as their central focus.

Time diaries for children are central to the 1997 Child Supplement to the Panel Study of Income Dynamics, a U.S. national panel study on-going for about 30 years, and funding has been secured for a second wave of data collection in 2001 (Hofferth et al., 1997). The supplement focuses on children ages 3-12 in 1997. The format for the children's time diaries involves open-ended chronological reporting of activities for two days per child, one a weekday and one a weekend day. Type of activity and length of time engaged in it are reported along with contextual information about what else they were doing at the same time, who it is done with, where it takes place. Time diaries were collected by interviewers as a mail-ahead, face-to-face edited instrument, with a parent providing assistance for young children. Coupled with the vast amount of developmental assessments and contextual information on family environment, primary and secondary caregivers, and schools, as well as substantial historical information about the family, this study offers substantial potential for analysis of children's and youths' issues relating in some way to their use of time.

understandings, expectations, and aspirations for the future. The ESRC Youth, Citizenship, and Social Change study (<http://www.tsa.uk.com/YCSC/index.html>) focuses on ages 16-25 and transitions to adult life. This study reflects concern about extended time for transitions and vulnerability to alienation and social exclusion. Occupational aspirations are of central interest along with ways to bridge support of young people in school and between school and work.

¹² For example, local studies of children and youth in the U.S. include such studies as Thornton's Detroit Intergenerational Panel Study of Parents and Children, Eccles et al. projects in Michigan and Maryland, and many state-level evaluation studies for the new welfare programs such as the New Hope project by the MDRC. In other countries they include the Population and Family Study Centre in Brussels' survey on 'The Living Conditions of Children,' a study investigating childhood and parent-child relations in 11 Flemish schools in Belgium and involving separate questionnaires for children, parents and teachers designed to record objectively and subjectively perceived features of families, living environment, school, friends and leisure time.

The time diary has also been the focus of the Jerusalem initiative focused on child social indicators (Ben-Arieh and Wintersberger, 1997) and is currently the instrument being used in the European Harmonised Time-Use Study, which is being co-ordinated by Eurostat but with separate national funding. This study offers substantial opportunity for viewing, across diverse cultures, children's and youths' time use in the context of the time use of other family members. Efforts are being made from the start to optimize comparability across the sizable number of countries; however, coordination relies on voluntary compliance with common guidelines. Recommendations for design include reliance on national random samples of households, with time diaries being completed by all household members over a certain age (recommended as age 10 but with some countries setting the minimum age considerably lower). Two diaries per person, one for a weekday and one for a weekend day, are to be completed, with the specific diary days the same for all members of a household. The format for the diary is a chronological reporting of type of activity within 10-minute intervals, with related contextual questions about whom the activity is done with and where it takes place. It is administered as a leave-behind, paper instrument.

The time diary is an excellent instrument for studies with a central focus on time use. However, it tends to be a more time-consuming instrument for collecting time-use information than more standard approaches using a series of closed-end questions about specific activities. Much of what is known about children's and youths' time use has relied on sets of questions addressing specific types of activities rather than the more flexible and comprehensive, but time-consuming, time diary approach. For example, Zill, Nord & Loomis (2000) rely on several national studies in the U.S. that use this more standard approach in their examination of trends in adolescents' time use and the extent to which participation in extracurricular activities reduces the chances that young people will engage in risky behaviors. They found that the time-use patterns of 10th graders were predictive of whether they would engage in a variety of risky behaviors, with most types of extracurricular participation reducing chances of engaging in most types of risky behaviors. They also found that the time-use patterns of 10th graders were predictive of what they would be doing one year after high school, with those who were 'homework-focused' much more likely to be enrolled full time in post-secondary school than those who were focused on paid employment as 10th graders. Hence, information on time use derived from standard approaches to data collection less comprehensive and flexible than the time diary approach do yield valuable insight into important issues relating to children and youths' quality of life and behaviors.

Qualitative approaches. Researchers studying children must also confront generational issues underlying the goals and methods of research about children and childhood: children are the subject of the research that is being undertaken by adults. Much research is *on* children, viewing them from the perspective of adults as detached observers. A different data collection approach, within anthropological traditions, advocates working *with* children by watching, listening, reflecting and also engaging with the children in conversation geared to the naturally occurring events that potentially illuminate the topic of the research (see Mayall, 2000, for a thorough discussion). This approach, termed a 'conversations' approach, seeks to acquire from children their own

unique knowledge and assessment of what it means to be a child, and it asks children, directly, to help the researcher, an adult, to understand childhood. Mayall (2000) argues that analysis of children's own understandings of the social conditions of childhood can be an important precondition for considering what policies are appropriate to enable children to lead satisfying lives.¹³

Advocates of qualitative approaches to studying issues relating to children and parents also argue for approaches commonly used in human and cultural studies (see, for example, Garbarino, 2000). The human studies approach concentrates on life stories told in the narrator's own words (e.g., the words of children or parents) that impart the subjective detail that, when interpreted by human studies specialists such as literary experts, allows everyone, including policy makes, to relate statistical findings to real life. Cultural studies can focus on the objects, symbols, images, and sounds that surround people in their personal and public space to obtain the subjective detail that, when interpreted by cultural specialists in the arts or humanities, facilitates insight into the culture in which people (children, parents, grandparents) live. Expanding data collection and analysis design to include approaches such as this offers an even more comprehensive perspective on the generations and genders than does interdisciplinary research confined to the social sciences.

Family and Household

An important context for and determinant of children and youth's quality of life is the family. Furthermore, the family is often the focal unit for policy design and implementation and can form the foundation for policies ranging from income taxes to child and dependent care, child support, welfare, family leave, social security, and family planning. Exactly what constitutes 'family,' however, can differ depending on the aspect of life or policy program under consideration. Despite being a basic unit of social and economic organization, 'family' has no fixed meaning. It can vary from culture to culture and from one research topic to another. Determining how the relevant definition of 'family' differs from 'household' is often far from straightforward and particularly problematic for gathering information relevant to children and youth in censuses or surveys designed to focus on adult issues as well as child issues.

While 'household' refers to the collection of people residing in the same dwelling, the term 'family' can take on different meanings in different contexts. In studies of economic decision-making it tends to refer to the collection of persons pooling and

¹³ An illustration of the usefulness of this approach derives from a personal experience of one of the co-authors tutoring a 4th grade boy with his reading. Only by engaging the boy in causal conversation about his experiences in school with care of his eye-glasses did it become apparent that something as simple as an eye-glass-cleaning cloth being handy would guarantee his use of the eye-glasses. The presumption of adults was that the *wearing* the eye-glasses was an embarrassment whereas the reality was *that walking through the classroom to the sink to clean the glasses was the true embarrassment that blocked using the eye-glasses.*

dividing income, who generally share the same dwelling, but for studying child development or genealogy the relevant collection of persons can be parents of a child whether or not they share the same dwelling. For studying family assistance patterns ‘family’ can take on an even broader definition of the entire collection of the person’s kin, and for studying participation in public programs the relevant definition of ‘family’ can vary from program to program. This argues for gathering data in ways that facilitate a variety of definitions of ‘family’ (see Hill, 1992, for a related discussion).

For studying children and youth it is important to gather sufficient information to be able to construct a variety of different aggregations of people associated with them (see Hill, Servais & Solenberger, forthcoming, for an example of problems encountered trying to construct relationships from disjoint, incomplete information). The collections of the data about the following people are all relevant.

- co-resident individuals (‘household’),
- co-resident related members (often the U.S. definition of ‘family’),
- parents and dependent children (“nuclear family”),
- related nuclear family members co-resident in a household containing other related members (usually the U.S. definition of ‘subfamily’), and
- related members whether or not they are co-resident (usually the U.S. definition of ‘extended family’)

Hence, co-residency and ties of blood, adoption, and marriage (or cohabitation) are important aspects for defining relevant aggregations; however, they are not necessarily the only distinctions needed. To portray economic dependency accurately, it can be necessary to define economic units by making distinctions about who pools or divides resources with whom. This latter set of distinctions, though, is rarely made in data collection efforts.

Flexibility in defining families is often restricted both by the omission of information about pooling and distributions of resources and because little information is collected about close kin living in other locations. Household-based studies will tend to focus on definitions of family derived more from living arrangements than kinship ties. Yet important flows of interaction can take place across household boundaries. For children and youth these cross-household flows of interaction can include absent parents living apart from their young children as well as youth establishing residences separate from their parents.

The level of detail available about relationships within households can also be important to research on children and youth. High divorce rates coupled with substantial remarriage have made blended families with step relations relatively common in many countries. Cohabitation also can add complexities in identifying household relations. In addition, relatives other than parents present in the homes of children and youth can play important roles in their lives. Many studies of the relationship between childhood living arrangements and children’s and youth’s behavior and achievements have focused exclusively on presence of parents only but recent findings (Hill, Yeung & Duncan, forthcoming) suggest that presence of other relatives, most notably grandparents, can be

important. Hence, complete characterization of living arrangements in terms of type of relationship among all household members can prove valuable.

It is also important to recognize that neither ‘family’ nor ‘household’ are stable units through time. Members enter and leave these units over time. This presents challenges for studying change over time at the micro-level (Duncan and Hill, 1985). It also presents challenges for sampling based on a prior study, as in the proposal to draw samples of households from the censuses to constitute the sampling units of the surveys. Time lags between the censuses and the surveys will, from natural forces of population reconfiguration, mean that members of the census households will not be identical to members of those same households in the surveys, and the extent of difference will no doubt vary considerable across countries due to differentials in fertility, mortality, and migration patterns.

State of Knowledge

Relevant Trends and Major Challenges Facing UNECE Countries

Recent socio-economic-demographic trends differ in many ways across the UNECE countries. Eastern European trends have been distinct from Western European trends, with problems of economic, social, and political transitions more pronounced and economic development at lower levels in Eastern Europe. However, even in Western Europe there has been substantial diversity. However, there are some relatively common threads that apply to sizable portions of the countries and are important to consider. These include trends that have tended to separate parents, or adults more generally, from children:

- Increased employment outside the home by mothers, especially those with young children (exceptions include Germany)
- Rise in lone-parent living situations (often with father absent but still living)
- Residential separation of the generations (with, in some UNECE countries, families with children often living apart from households without children)
- Separation of work from home (with, in some UNECE countries, labor market work places often located some distance from the residences of families with children)

They also include trends that have changed the population age distribution and increased the overlap in lives of different generations as well as altering the nature of fertility and children’s experience of siblings:

- Decrease in mortality resulting in longer life expectancy at the upper age ranges for adults (with grandchildren [even great-grandchildren] more likely to be concurrently alive while grandparents [great-grandparents] are still living)
- Decrease in overall fertility (and children, consequently, having fewer siblings)
- Rise in teenage fertility (in some UNECE countries)

Additional trends in many UNECE countries include:

- Shifts in partnering, with later marriage and cohabitation more socially acceptable
- Increased inequality in family income and earnings
- Rise in child poverty (Bradbury & Jantti, 1999, find this to be the dominant pattern for recent years across the 20 industrialized countries they examine, with most dramatic increases in Russia, Hungary, Italy and the UK.)
- Immigration increasing diversity and raising issues of racial and ethnic inequality in many countries
- Increased exposure to mass media, especially TV
- Information technology growing as a new source of inequality

The trends also reflect some shifts bringing divergent UNECE countries closer in line to similar patterns. A case in point concerns transitions of youth to adulthood. In countries such as the U.S. recent years have seen delayed transitions to adulthood, bringing ages of transition out of the parental household closer to the traditionally higher ages of some Southern European countries, such as Spain and Italy. This is not necessarily, though, a shift to identical patterns. In the delayed transitions to adulthood in the U.S., much of the delay reflects intermediate but transitory departure from the parental household followed by return to it. The traditional pattern in Southern European countries, on the other hand, is for later first departure from the parental household.

During this time as well, new technologies and globalization of economy have redistributed employment opportunity world wide. Demand for low-skilled labor in industrial countries has declined (McFate, Lawson and Wilson, 1995). In both Europe and North America, sluggish and uneven growth has left groups of unemployed ethnic minorities in declining industrial centers. Many young adults find it difficult to find opportunities for economic security and career advancement. Youth unemployment rates were twice the national average in France, Sweden, the United States, and Italy at the end of the 1980s. Among young people with few educational qualifications, unemployment rates were often three times the national average (McFate, Smeeding and Rainwater, 1995).

These trends shape not only adult life but the lives of children, adolescents, and young adults as well, and they do so, in part, by affecting family functioning and the ways various public policies impinge on everyday life. The end result is a set of major challenges facing many of the UNECE countries:

- High child poverty
- High rates of depression, social maladjustment, and suicides among adolescents and young adults
- Safety concerns for children and youth
- Rising socio-economic inequality, with similar expectations across classes but socio-economic exclusion of lower from higher socio-economic classes
- Rise in consumerism, media influence, and emphasis on technology in everyday life

Children's Socio-economic Status and Care

The trends of recent decades have had profound effects on the life styles of families in ways that are reflected in living arrangements, resources available to children, and how those resources are used. It is crucial to understand how these changes have affected children's well-being.

Child poverty and deprivation. Child poverty is a major concern in many industrialized countries. Eradication of child poverty currently is a high-priority policy objective in the U.K., where the government is putting policies in place to try to eradicate child poverty within 20 (now 19) years (Walker, 1999). Similar goals have been set in other countries (Australia in the 1990s and the U.S. in the 1960s) but later dropped.

A cross-sectional examination of 25 countries with recent data available in the LIS database indicates considerable variation across the industrialized countries. Defining poverty as family income below half median income, relatively low rates are found in the Nordic countries and relatively high rates (3 to 4 times those of the Nordic countries) in Canada, Australia, Italy, the UK, the US, and Russia (Bradbury & Jantti, 1999). There is evidence that, at least in industrialized countries with sufficient panel data to examine the issue, long run poverty experiences are also varied, dividing into temporary versus persistent poverty as well as more complex distinctions regarding patterns of poverty and non-poverty over the course of childhood (see, for example, Leisering & Walker, 1998, and Bradbury, Jenkins & Micklewright, forthcoming, for analyses of these issues for Europe and North America and Walker with Ashworth, 1994, for issues and policy-relevant examples for the UK). In a number of countries, including Britain (Hill & Jenkins, forthcoming), Germany (Schluter, forthcoming), Russia (Klugman & Kolev, forthcoming) and Hungary (Galasi & Nagy, forthcoming), it is the youngest children who are most susceptible to persistent poverty. Although arguments have at times been made dismissing child poverty as a concern, an examination of what low income means in the UK in terms of ability to secure the things parents consider to be bare essentials for children shows many children in Britain growing up in families which cannot afford to spend the minimum recommended by parents (Middleton, Ashworth & Walker, 1994). This study also reports that it is apparent that, from a very early age, less affluent children learn to limit their aspirations for things their families can ill afford, such as opportunities to benefit from trips outside the home with their parents.

Family structure and children's well-being. Family structure, although highly correlated with income, appears to have an independent effect on children (see, for example, McLanahan, 1997; and Hill, Yeung, & Duncan, forthcoming). Theories about the mechanisms underlying family structure influences on children's development hinge on the impact through various resources available to children in different family types (Seltzer, 1994). Children in intact families often have more adequate economic resources and greater time input from parents (McLanahan, 1985). Growing up with only one parent, in particular, frequently deprives children of important economic resources, time spent with parents, and emotional support from both parents. McLanahan and Sandefur (1994) and Hill and Duncan (1987) found that parental income differences account for

between one-third and two-thirds of the estimated impact of living in a single-parent family on completed schooling. According to Robinson and Godbey (1997), single mothers spend about three hours a week less than married mothers providing child care. In addition, due to fathers' absence, children in fatherless families lose about six hours of care per week.

Change in family type also impacts the resources available to children. Family dissolution is often accompanied by dramatic drops in living standards (Duncan & Hoffman, 1985; Duncan, Yeung, & Rodgers, 1994), movement to different residences (McLanahan & Sandefur, 1994; Hill, Yeung, & Duncan, forthcoming) and a reduction in the time parents spend with children and their ability to monitor children's behavior (Seltzer, Schaeffer & Charng, 1989). And parental remarriage, with consequent formation of step-families, appears to affect child well-being both immediately and far into the future. Aspects of family structure other than just presence or absence of both parents also can influence child well-being. Hill, Yeung, & Duncan, forthcoming, for example have suggestive evidence of important long run consequences of grandparents being present in the lone-parent families of children. Furthermore, the influence of change in family types on children appears to be sensitive to children's age at the time of the change (Hill, Yeung & Duncan, forthcoming).

Resources available to children. Much empirical research demonstrates that parents' socioeconomic status and other childhood family circumstances affect children's level of achievement and psychological well-being (Haveman & Wolfe, 1994; Featherman & Hauser, 1978; Duncan et al., 1998). Research on the effects of family structure, for example, shows that children who grow up in intact families tend to attain a significantly higher level of education and wages, have a lower risk of child abuse and neglect, and be less likely to have nonmarital births in adulthood than those who live in non-intact families (McLanahan & Sandefur, 1994; Wu, 1996). Most of these studies, however, do not address the intervening mechanisms through which these family characteristics affect children's well-being.

Resources provided by parents have a more direct influence on children than those provided by the community or government (Haveman & Wolfe, 1994). Family resources during childhood are particularly important for children's development because children's social and intellectual development is more malleable than it is in later life stages. Profound social and economic changes in the past several decades have affected how families function. The implication of these changes on family resources for children is far from clear. On the one hand, children may have access to more resources because today's average family size is smaller, the family income and educational level of parents are higher, and men are gradually taking greater family responsibilities (Pleck, 1997; Yeung, Duncan, & Hill, 2000). On the other hand, family resources for children may become more limited because more mothers now participate in the labor force, more low-skilled fathers are unemployed, real incomes have declined for less educated parents, and more children are living without one (especially the father) or both of their biological parents during their childhood (Bumpass, 1984; Hill, Yeung & Duncan, forthcoming).

Today's families are less homogeneous than they were before. Not only has the structure of families become more diverse, the allocation of time and financial resources within families has taken a wider spectrum of forms. The responsibility of child rearing, though still resting mainly with mothers, has gradually diversified to other adults and institutions. Fathers, grandparents, schools and neighbors are expected to play a role in raising today's children, in part to compensate for the "lost time" when mothers are in the labor force. However, as Goldscheider and Waite (1991) observe, emergence of 'new families,' in which men and women share family economic responsibilities as well as domestic tasks, is a gradual process. Parents juggle home and employment duties by adopting various strategies such as having more diversified work schedules (Presser, 1989), arranging child care and after-school activities for children (Hofferth & Phillips, 1987), involving men in domestic labor (Gershuny & Robinson, 1988; Spain & Bianchi, 1996), relying more on relatives and neighbors, or managing children's activities 'remotely' by telephone or e-mail. More affluent parents are able to choose dual work schedules that permit the joint availability of parents for tasks, including the care of young children (Hammermesh, 1998).

Research has shown a 'time squeeze' phenomenon for today's parents, especially for mothers, in fulfilling their family and labor market responsibilities (Juster & Stafford, 1991; Hewlett, 1991). While a number of studies of maternal employment have found few, if any, adverse effects on children (National Research Council, 1990) and some (Haveman and Wolfe, 1994) suggest that the effect of maternal employment on children's achievement is predominantly positive, there are also indications of adverse effects. Research in Belgium suggests that children both perceive and are affected by a parental time squeeze potentially attributable to employment. Sizeable portions of Flemish children in early years of school report parents not having enough time for them and feeling a lack of satisfaction with parents' work situation (Van den Bergh, 1996), and children's sense of self-esteem appeared to be impaired by feeling that their parents did not have enough time for them. Children reporting feeling that their parents had enough time to spend with them scored significantly higher on the standardized self-perception scale (Van den Bergh, 1996).

Perhaps more important than the level of resources available to the family are the differential resource allocation patterns and tradeoffs between different types of resources. Decisions on intra-family resource allocation often involve tradeoffs between investing in children and in parents themselves, and between investing in the husband and in the wife. There is evidence that parents, mothers especially, mediate between household income and child poverty, sacrificing themselves to protect the consumption levels of their child. Parents are known to express this in terms of social exclusion, not wanting their children to 'stand out' or 'to be left out' in dealings with their peers and at school (Middleton, Ashworth, & Brithwaite, 1997; Dobson, Beardsworth, Keil & Walker, 1995).

Key in parental investment behavior are the strategies parents adopt to manage resources. Hill, C.R. and Stafford (1985), using time use data from the 1970s, suggest that highly educated women devoted both a larger amount of time to the labor market and as much or more time per child to child care in the mid-1970s than they did in the 1960s.

They managed to achieve this by spending less time in passive leisure and sleep. In effect, these young mothers were subject to a “time squeeze.” Based also on early data, Bryant and Zick (1996) found that mothers who spend more time in market work spend less time as a primary care giver. However, as a mother’s employment time increases, both mother-child and father-child shared housework and shared leisure time increase.

It is important to understand how today’s families are managing their resources that could contribute to the successful development of children. Little is known about the resource allocation patterns of today’s parents and children. However, research in the U.K. confirms that children are active agents in family budgeting (Shropshire & Middleton, 1999; Middleton, Shropshire & Croden, 1998). Children in poor families are often aware of budget constraints and moderate their demands accordingly (‘learning to be poor’), and children, notably wealthier ones, are conscious of financial services early in life and engage in choices about interest earning accounts well before age 10.

Studies that report problems such as the “latchkey children” (Cain & Hofferth, 1989) and the increasing incidence of child abuse and violent crimes among youth have raised great concern over the adequacy of the resources that today’s children are receiving (Hernandez, 1993). How adequate these resources are is crucial for all children. For children in disadvantaged families, these issues may be particularly urgent. The rate of child poverty in America is now higher than two decades ago and 1.5 to 4 times the rate in Canada and Europe (Rainwater & Smeeding, 1995), largely as a result of an increasing number of single-mother families and nonmarital births. A recent report showed that the child poverty rates in U.S. remain high despite the booming U.S. economy (National Center for Children in Poverty, 1998).

In addition to major social and economic changes, public policies also have implications for family resources that are available to children. Recent welfare reform in U.S. eliminated the federal entitlement program of AFDC. In its stead, the new law instituted a five-year lifetime limit for cash assistance, a two-year work requirement, and reduced in-kind assistance. Research has shown that reduction in public benefits and services may severely threaten the basic needs of many low-income families (Smith & Yeung, 1998; Boisjoly et al., 1997). With the new work requirements, many of these families with children may become not only poor in monetary resources but also in time (Vickery, 1997). Time use in low-income single-parent households is a crucial aspect of research that will help us understand the implications of the recent welfare reform legislation for the well-being of families and children (Edin & Lein, 1997).

Information technology as a new resource. One uniquely recent way that family resources have come to influence children's development is via children's access to new technology at schools and at home (e.g., computers, Internet connections, and associated participation in extracurricular activities). Technology literacy will influence children's readiness for the labor market in adulthood. Access to technology and the knowledge and skills to understand and use it are emerging as issues of tremendous importance to America's children (Kraut et al., 1997; Greenfield & Cocking, 1996). Recent reports by the Children's Partnership (1994, 1996) suggest that affluent parents are supplementing

the information technology education their children receive at school. Concern has been raised that there is a new kind of inequality generated by the new technological revolution in that low-income families are left behind. The report also shows a gap between computer use by boys and girls, with boys tending to use computer and video games than girls.

Benefits of parental investment in children. Family economic resources clearly affect what experience parents can afford to provide for their children. High-quality daycare, schooling, and a more stimulating home environment all can contribute to a child's healthy development. Recent studies show that a low income puts children at risk intellectually, emotionally, and physically because they are likely to experience a less stimulating home environment during a critical developmental period (Duncan & Brooks-Gunn, 1997). Economic distress is also likely to limit the psychological resources parents can bring to bear on raising their children. A substantial body of research shows that sociopsychological resources provided by parents are important to children's development. Parental warmth, involvement, and consistent parental supervision provide children with a sense of security and facilitate their adjustment and achievement (Baumrind, 1966; Maccoby & Martin, 1983; Bradley et al., 1994).

Of all the resources from parents, we know the least about the time parents spend with children and how time input from parents affects children's well-being. The precious little we know about this in the U.S. is based either on data that are almost two decades old or on studies limited to a local sample. Research has shown that productive use of children's time tends to contribute to successful development in children. Stafford (1987) found positive developmental consequences of parental time spent in direct learning activities, such as reading to children, on children's academic achievement. In addition to direct interaction with parents, the time children spend with siblings, peers, and relatives is indicative of the quality of the social support network surrounding the child. Timmer et al. (1985) showed that children's television viewing time was strongly related to parental viewing habits and that the hours children spent watching TV related negatively to their reading achievement scores. The amount of time children spend on class work and homework is shown to correlate positively with their academic performance (Leone & Richards, 1989). Although time spent on cognitive outcomes is important to children, research has documented a positive association between participation in extracurricular activities and various indicators of children's development such as a lower probability of engaging in risky behaviors, having better academic outcomes, and achieving a higher education and income in adulthood (Landers & Landers, 1978; Eccles & Barber, 1998; Zill, et al., 1995).

Parental investment behavior. Early sociological research has shown that parents with different levels of socioeconomic status attach different values to children, have different child-rearing practices, and vary in their aspirations for children (Kohn, 1969; Rubin, 1976; Brazer and David, 1962). Parents' sex-role ideology is shown to have some effect on the extent and nature of parents' participation in the childrearing responsibilities: Goldscheider and Waite (1991) found that fathers with less traditional views about household labor and working mothers have significantly higher levels of

participation in household tasks, including child care, than do more conservative fathers. Since more educated men and those in high-status occupations are more likely to be in the forefront of gender role change, they are expected to perform more household work (Farkas, 1976; Geerken & Gove, 1983).

Economic analysis by Becker and Lewis (1973) demonstrates that an increase in parental income would lead to a relatively large increase in parental expenditures on children. The increase in expenditures for each child would reduce parents' demand for number of children. Becker's (1965) theory of allocation of time would lead one to expect that high-wage parents substitute "goods intensive" childcare for their own time. However, there is also an income effect that can operate to offset the price effect, resulting in richer families consuming more of both time and high quality services of childcare. The tradeoffs between different forms of resources that parents provide to children are not always straightforward. Maternal employment may reduce the time mothers spend with children. One would expect that extra income from maternal employment would compensate in part for spending less time with their children if parents are able to purchase better quality child-care services or that fathers would be able to contribute more time to children. However, some studies have shown that the loss of time due to working is not offset by high-quality child care for low-income or single-parent families (Phillips, 1987).

Studies based on time use data from the 1970s and early 1980s showed that parents with different socioeconomic status allocated different levels of time to child-related activities that have a significant impact on children's development. Timmer et al. (1985) showed that patterns of time use vary by mother's marital status and employment status and by parents' educational attainment. The education of parents is often used as an indicator of the quality of time children spend with their parents. It has been hypothesized that more educated parents spend more time with their children, especially in achievement-related activities, because they are more concerned with their children's academic development and they are more aware of children's developmental need for positive parental involvement (Bailey, 1993). Stone (1972), Juster and Stafford (1985), and Robinson (1989) found that men of higher social status are likely to spend significantly more time in child-rearing activities than those of lower social status. Studies by Hill, C.R. and Stafford (1985) and Leibowitz (1972) show that high socioeconomic status mothers, despite their relatively high potential wages, spend significantly more time caring for their preschool children than do low status mothers. Bianchi and Robinson (1997), based on a California study, indicated that children of highly educated parents study and read more and watch TV less.

Developmental psychologists have contributed to this literature by addressing how parents' attitudes, beliefs, and perceptions about their children's abilities affect the kinds of experiences parents provide (Huston, 1984; Eccles, 1992). Two types of parental attitudes can operate in the process of investment decisions. The first type is parents' general values linked to sex-roles and cultural ideologies (Crandall & Battle, 1970; Goodnow & Collins, 1990; Sameroff & Feil, 1985), parental locus of control, and personal efficacy. Empirical research has shown that parents' gender-role stereotypes

affect their perceptions of children's abilities in domains such as sports, math, and reading independent of their actual performance (Parsons, Adler & Kaczala, 1982; Eccles & Jacobs, 1986). Boys and girls are treated differently by their parents from a very early age. The more parents feel that they have control over their lives and have high self-esteem, the more likely they will plan and invest in their children (Maccoby & Martin, 1984). The second type of attitudes is specific to child rearing. This includes the extent to which parents feel it is important to have children and to be involved in their lives and what they expect children to accomplish. Wentzel and Feldman (1991) found that parents' expectations about children's performance had a direct effect on children's commitment to school work. The more parents feel it is important to have children and to be involved, and the more they enjoy parenting and expect from children, the more likely they are to allocate resources to children (Palkovitz, 1984). Parents' views about their partners' role may also be important. For example, mothers' perceptions of fathers' roles and fathers' ability to care for children may affect fathers' level of involvement with their children. The more mothers feel it is important for fathers to be involved and the more confident mothers feel about fathers' ability, the more likely it is that fathers will be involved (Lamb et al., 1985).

Intra-family resource allocation. Family economists have been investigating how decisions about intra-family resource allocation are made. Early economic models of the family such as the "consensus model" of Samuelson (1956) and the "altruist model" of Becker (1974, 1981) assume that a family maximizes a single utility function or that one member makes all resource allocation decisions. These economic models have evolved into the more recent cooperative or non-cooperative "bargaining models" that allow individual family members to differ in their objectives and to bargain for resources available within the family based on the composition of the family income (Lundberg & Pollak, 1997). In these bargaining models, no family members can be made better off without making another worse off. The time parents, particularly mothers, invest in caring for children carries an opportunity cost of both the wages foregone and the human capital accumulation foregone. Empirical work shows that women who leave the labor market to care for their children earn less upon return to the labor market than do women with uninterrupted labor market careers (Mincer & Polacheck, 1974; Gustafsson, 1981).

Work by Becker and Tomes (1976) showed that the ability ("endowment") of children affects parental investment behavior in siblings. Gustafsson and Stafford (1997) argued that when parents make their choices about human capital investment, there are a number of equity/efficiency tradeoffs within a generation and across generations that they have to consider. These tradeoffs may be those between investing in siblings with different learning abilities, between investing in children and in themselves, or between investing in the market career of the husband or the wife. The authors maintained that parents spend time in discovering and developing particular talents and abilities in their individual children for two motivations. The first motivation for such a search is to put resources in a direction where a higher payoff is expected, i.e., an efficiency motivation. The other motivation is to realize a type of fairness: each child will be regarded as successful in some realm, i.e., an equity motivation. An extreme illustration of the equity factor is with Down Syndrome children. It has been shown that their normal siblings

receive less parental care time, i.e. the “normal” child is subject to an “intersibling equity tax” (Stafford, 1996).

In sociology, the relative participation of spouses in domestic labor, including child care, has also been discussed in the context of gender relation. The roles fathers and mothers play are negotiated by the couple. How egalitarian the intra-family relation is affects the negotiation process for the levels and forms of investment from the mother and the father. Extreme examples are the view that both parents have equal responsibilities for care and a right to a market job (a Swedish model) versus the view that parenting is a full-time job for the mother. Parents in families with a more egalitarian relationship tend to have a more equal level of involvement in children’s lives. A body of literature posits that the power relation between spouses affects the household division of labor (Farkas, 1976; Coverman, 1985; Kamo, 1988). In economists’ models the relative power of partners derives mainly from their command over resources, which is often measured by the earnings of the husband and the wife. The central hypothesis is that wife’s wages tend to increase her relative power in the relationship, thus inducing a more equal division of domestic labor and childcare responsibilities between the partners (Goldscheider & Waite, 1991).

In sum, based on the literature in sociology, psychology, and economics, the determinants of parental investment are multi-dimensional. The socioeconomic status of parents and presence or absence of parents in children’s homes set boundaries on available resources and constraints that affect parents’ decisions to invest directly. In particular, parents with higher educational attainment are expected to have a higher quality investment in children, while the wage rates of parents are expected to have a negative effect on their time involvement with children due to the opportunity costs they carry. The socioeconomic characteristics of parents can also affect the investment behavior through indirect effects on their parenthood ideology, sex-role orientation, self-efficacy, and their aspirations for children’s achievement. The power relation between parents can mediate the effects of parents’ socioeconomic characteristics on the nature of their involvement with children and affect the relative contribution from the spouses. In addition, from a developmental perspective, children’s age, gender, aptitude and health, as well as the life cycle stage in which the parents are in and the living arrangements of parents and children relative to one another will affect the nature of interactions between them as well as parents’ expectations for their children.

Orientation to and Behaviors in Major Life Domains

Work, family, and gender roles. There is a notable literature on youth’s attitudes and orientation to major aspects of life, with work, family, and gender roles as major topics. A full review of the literature is not possible but we can provide a flavor for recent relevant U.S. findings. Two recent analyses that focus on U.S. historical trends in the orientation of young men and women to family and work (Thornton and Young-DeMarco, in process, and Hill and Yeung, 1999) are based largely on a U.S. national longitudinal study of high school seniors on-going since 1976 (Monitoring the Future, MTF). Another recent study (Fan and Marini, 2000) focuses on the micro-level

processes of attitude formation and change by which macro-level change in gender-role attitudes occurs by studying change in gender-role attitudes of young women and men during the course of their transition to adulthood. This study is based on a U.S. national longitudinal study covering the period 1979-1987 for individuals initially ages 14-22 regardless of educational level (National Longitudinal Survey of Youth, NLSY), and the research is centered on attitudes about the employment of wives.

The analyses of youths' orientation to family indicate that an important continuity in U.S. trends in attitudes and values concerning family life over recent decades is a strong emphasis and commitment to marriage, children, and family life. Young men and women, black and white, in their final year of high school in the U.S. rank marriage as highly important in their lives. The majority of U.S. college freshmen also report raising a family as a life goal. The great majority of American youth are both planning and expecting to marry, and to have that marriage last until death intervenes. Only a small fraction of young Americans believe that a good marriage and family life is not important, prefer not to have a mate, believe that they will not marry, or believe that it is unlikely that they would stay married to their spouse for a lifetime.

There are also strong commitments to children. The great majority of young American women and men view both fatherhood and motherhood as fulfilling and believe that it is likely that they will want to have children if they get married. Only a modest fraction believe that motherhood and fatherhood are not fulfilling, that children are overly disruptive to parental freedom, and that they are likely to decide against having children if they marry. Furthermore, there is very little evidence that the commitment of Americans to children, marriage, and family life has eroded substantially in the past two decades. American youth's desired number of children, however, declined in the early part of this period and has been holding steady since that point, with remarkably similar levels for young men and women, black and white.

The meaning of marriage and children, however, has changed dramatically in recent years, however. Attitudes about the ideal time to marry have shifted to an increased ideal age for marriage. Acceptance of unmarried sexual expression is more widespread. A substantial majority of young Americans now accept unmarried cohabitation, and a significant majority go a step beyond acceptance and actively endorse living together before marriage as a good idea to see if they really get along. The increasing acceptance of cohabitation, however, has not been accompanied by increased orientation toward promiscuity. Indeed, the trend is toward less, rather than more, acceptance of the idea that one partner is too restrictive. A continuing gender difference in the U.S., though, is that young men, blacks in particular, are more accepting than are young women of the idea of multiple partners.

Unmarried childbearing has lost a considerable amount of its stigma in the U.S. in recent years. Only a minority of young people now believe that unmarried childbearing is morally wrong or destructive. At the same time, a substantial majority believe that marriage is the appropriate institution for childbearing, and only a very small fraction believe that unmarried childbearing is a worthwhile alternative lifestyle.

The analysis of American youths' attitudes toward work shows them placing a high ranking on the importance of financially rewarding jobs. Money and good chances for advancement have ranked as highly important qualities of jobs throughout the last two decades. This is true of black as well as white American youth: despite a sizable and persistent white-black wage advantage, black youth tend to rank money and advancement as important, if not more so, than do their white counterparts. American youths' ratings of money as an extremely important personal life goal rose during the 1980s and have remained higher than in the mid-1970s (see DHHS, 1998). On the other hand, although the economic aspects of jobs are of considerable importance to U.S. youth, they also tend to think of work as something more than just making a living, particularly if they are white or female.

Findings in all three studies of American youth's attitudes toward gender roles show that traditional gender-based division of labor in the family has become less acceptable among American youth, though it continues to be viewed more favorably by men than women. U.S. youth are now less inclined to relegate men to the work world and women to the home, and generally favorable to married women working in the labor market when no children are present in the home. Having young children present in the home, however, is a factor that continues to reduce acceptance of married women's labor market participation, and the tendency is for U.S. youth to find women's labor market participation less than acceptable in those circumstances (Hill and Yeung, 1999).

The Fan and Marini (2000) nationally-representative analysis of development and change in gender-role attitudes during the early stages of the life course, which centers around responses to a series of questions about the employment of wives, yields findings supportive of earlier theoretical arguments and evidence that attitudes of this type derive from social learning. They state that the process of learning begins early in life but continues throughout adolescence and early adulthood, and may continue at later life stages if interactions between the individual and the environment exposes the individual to new inputs.

They find evidence of the socialization of gender-role attitudes beginning in the family of origin. Over the decade of the 1980s the gender-role attitudes of both sexes were influenced in similar ways by characteristics of family background, most notably parents' education and mother's employment behavior. Development of egalitarian attitudes was associated with higher levels of parents' education and with having a mother employed in the labor market. Development of gender-role attitudes was also influenced by one's gender. The attitudes of young men changed more in the egalitarian direction during the 1980s than did the attitudes of young women, making young men's and young women's attitudes more similar.

Individual differences in experiences influenced the development of gender-role attitudes. The continuation of education tended to shift attitudes in the egalitarian direction, whereas the birth of children tended to shift attitudes in a less egalitarian direction. There were also gender differences in the influence of experiences. For young

women, but not young men, entry into the labor force shifted attitudes in the egalitarian direction, whereas exit from the labor force shifted attitudes in the opposite direction. Results studying transformations in youths' gender-role beliefs associated with movements in and out of male-dominated, female-dominated, and neutral fields of occupational aspiration (Linver et. al, 2000) show similar patterns of gender-specific differences, with shifts out of male-dominated fields enhancing traditionality of career/family beliefs among young women but not young men. Young women's, but not young men's, attitudes also shifted with entry into marriage, with marriage entailing a shift in a less egalitarian direction. Tying the results together, there is evidence that education and aspects of women's employment of both parents and the youth are important sources of societal change in gender-role attitudes.

There is also evidence that traditionality of career/family beliefs plays a role in young women's but not young men's career aspirations (Linver, et al., 2000). Among young American women, more traditional career/family beliefs are predictive of dropping a male-dominated occupational aspiration whereas less traditional gender-role beliefs predict changing into a male-dominated occupational aspiration. Traditionality of career/family beliefs lacks predictive power for changes in young American men's career aspirations.

These studies of American youths' attitudes suggest that, in many respects, U.S. youth have been mirroring the adult world around them in terms of their goals for work and family. They have a tendency to shift their goals to suit the realities of their situations, and in the U.S. young women, but not young men, continue to restrict their career aspirations for the sake of family demands.

Establishing a household separate from parents. The experiences of children leaving the nest (moving out of the parental home) and of establishing and maintaining a household (being and remaining a householder) have undergone change in recent years in countries such as the U.S. While these forms of independent living can interrelate to a number of other domains of life, e.g., schooling, marriage, work, and childbearing, (Hill, 1977), there is evidence that some linkages, e.g., to marriage, have weakened (Goldscheider and DaVanzo, 1989; Goldscheider and Goldscheider, 1989). There are also indications in countries like the U.S. that recent years have witnessed some shift toward delayed nest-leaving and household establishment along with a greater likelihood of young adults returning to a dependent living arrangement for at least a short period of time. The literature on both nest-leaving and, especially, household formation is small (see Hill, Yeung & Duncan, 1996, and Buck and Scott, 1993, for reviews of U.S. literature and Ermisch, J. & Di Salvo, P., 1995, for research in the U.K.). These are important domains of life meriting more research attention.

Needs for New Information

We draw upon a publications assembled by a sizable number of scholars for guidance about needs for new information.

Indicators of Well-being

Even the 1998 DHHS volume on trends in U.S. child well-being, which runs almost 550 pages in length and draws upon a large number of data sources to cover a wide assortment of indicators, has been noted as insufficient. The volume itself states that it falls short in terms of measures of social development and health-related behaviors for very young and pre-teenage children and in terms of representing important social processes affecting child well-being that go on inside the family and within the neighborhood. Add to this a recent Child Trends report emphasizing the need for development of measures of positive youth development.

To further complicate matters, during developmental transitions such as the adolescence, circumstances that carry risk for negative outcomes—conditions such as peer influences and family adversity--can also offer opportunities for growth and increased mental and physical health. According to Schulenberg, Maggs and Hurrelmann (1997) “it is clear that each transition involves some change in how we experience ourselves and our world, as well as in how others experience us. And change involves risk. . . . health risks can occur as adolescents make their way through developmental transitions and may even be part of the negotiation process. . . . Change also involves opportunity. Developmental transitions can be salutary. . . . When opportunities for increased responsibility and freedom match the young person’s desire and readiness for such—that is, a developmental ‘match’ (cf. Eccles et al., 1993; Eccles, Lord, Roeser, Barber, & Jozefowicz, chapter 11, this volume) or ‘good fit’ (cf. Lerner, 1982; Lerner, Ostrum & Freel, chapter 19, this volume)—it is likely that health and well-being will be enhanced.” With lapses in well-being potentially an inherent part of the transition processes that children and youth undergo and short-term health risks potentially becoming long-term health opportunities, determining indicators of well-being for the early stages of life is especially challenging. We have much yet to learn about what constitutes a positive versus negative indicator of children’s and youth’s well-being in the long-run.

Some guidelines in terms of important criteria for social indicators of child well-being are spelled out by a recent Child Trends research brief¹⁴. These are relevant both for the development of entirely new indicators and for adapting existing ones to a cross-national context. These include:

- Indicators should be comprehensive, assessing well-being across a broad array of outcome, behavior, and processes.
- An effective system of indicators should cover children of all ages, with age-appropriate measures from birth through adolescence and even into the transition to adulthood.
- Indicators of children’s well-being should assess depth, breadth, and duration.
- Indicators should share a common interpretation: that is, they should mean the same thing across various population subgroups.

¹⁴ Child Trends research briefs are available on its website <http://www.childtrends.org>

- Indicators should be forward-looking, anticipating future events and developments.
- Indicators of child and family well-being should be geographically detailed.
- Indicators should reflect key social goals.
- Indicators should assess positive as well as negative aspects of well-being.

The Child Trends report emphasizes development of measures of positive youth development as “the next frontier in the study of child and family well-being” and makes suggestions about how to approach research on this topic. It stresses that lack of consensus among experts in the field regarding what constitutes positive development is a major impediment because parents, communities, youth leaders, and teachers lack a sense of what goals to seek. The report recommends the following:

“This next generation of indicators work includes conceptualizing positive development, developing sound measures, testing them in longitudinal studies, and then making them available for use as indicators. This will require qualitative work, such as focus groups, to identify the characteristics desired by parents, policy makers, citizens, and children themselves. It will require psychometric work to develop items and scales that overcome problems of social desirability and which can be administered in large-scale studies. It will require longitudinal data collection because surprisingly few positive measures are currently included in major databases. And, it will require careful analyses of these data to assess whether a given construct and a given measure predict positive outcomes in adulthood.”

*Recommendations of the U.S.
Family and Child Well-Being Research Network*

The U.S. Family and Child Well-Being Research Network in Thornton et al. (forthcoming) outlines “a series of recommendations that it believes will be particularly useful for the advancement of knowledge concerning children and families.” Many of these are related to demographic, economic, and social perspectives on the quality of life and behaviors of children and youth. They give high priority to further research of the following dimensions of family and child well-being:

- Expanded research on the meaning of marital and nonmarital union formation, focusing on factors that strengthen and weaken the ties and commitments that bring people together into long term caring relationships, including stages in the process such as dating and cohabitational unions that dissolve before a long term relationship materializes.
- Expanded research on fathering and father relationships across all types of family relationships, with a particular focus on ways in which fatherhood is dependent upon and influences marital and romantic relationships.
- Increased study of family relationships beyond the residential unit, recognizing that family relationships are very complex and extend substantially beyond simple

definitions and units, hence are not confined to members in the same nuclear family or household.

- Reorienting research on childbearing and childrearing, historically studied in different research traditions and literature, to a more integrated, joint focus that permits examination of the close and complex ties between these two domains of life.
- Additional research concerning family processes, with a special focus on altruism and its related concepts of empathy and caring.

The Well-Being Research Network also gives high priority to further research of the following determinants of family and child well-being:

- Expanded investigation of the linkages of physiological and social influences, including both behavior genetics designs and the collection of biological specimens in social science studies
- Expanded studies of the effects of culture, values, and preferences on family and child well-being, including cultural analysis of the way that central values, symbols, and motivation fit together into a system.
- Further investigation of diversity and immigration.
- Expanded investigation of siblings and their influences on each other.
- Expanded investigation of the ways in which children influence parents.
- Expanded attention to neighborhood and community effects on family and child well-being.

We will elaborate on the items in this listing that seem most feasible to investigate in the context of cross-nationally coordinated studies of a modest size. Some of the items on the list are not very feasible in such a setting. These include such things as collection of biological specimens, which involves sensitivity and ethical issues likely to take them beyond what is feasible.

Forming commitments in major life domains. Linkages between union formation, childbearing, and childrearing have all undergone dramatic changes in recent decades, and we are far from understanding the formation of these linkages. The Well-being Research Network ranks as high priority for further research gaining better understanding of factors strengthening and weakening ties and commitments that bring people together into long term caring relationships. Included in the relevant behaviors to study are dating and cohabitation. Factors influencing the dissolution of couples as well as the transformation of informal arrangements to marriage are of particular interest. Though not noted by the Well-being Research Network, education and work plans and behaviors

also figure into this picture as potentially interconnected with family formation and dissolution. Transitions in all of these areas begin as early as adolescence, and the life course in these directions is likely to be shaped by beliefs held and actions taken at that stage of life and on through young adulthood. It is important to give attention to potential differences between males and females and diversity across cultures in terms of orientation toward these different domains of life.

Father involvement. Both the Well-being Research Network and Child Trends point to fatherhood as a topic meriting further research. The chances of children and fathers living apart have increased substantially in recent decades, and our knowledge of how father involvement affects children's well-being, especially in these situations, is limited. Fatherhood has tended to receive considerably less research attention than motherhood. There is research documenting positive associations between father's involvement in children's activities and children's social and cognitive development as well as academic achievement. However, research on the relationship between child outcomes and involvement of fathers who do not live with their children is scarce.

Most U.S. research on nonresident fathers has focused on the provisions of financial support and frequency of father-child contact. But fathers can be involved with their children in a variety of capacities, and the quality of father-child interactions is a particularly neglected topic in research on children's well-being. Researchers are now calling for an expansion of research to address aspects of father involvement that assess both quality and quantity and that examine direct and indirect forms of father involvement in children's lives. The more indirect forms of involvement include accessibility--fathers making themselves available to their children even when they are not in physical contact; this can include regular phone calls or visits, writing letters, getting a beeper to be available for phone calls from children, or participating in school activities. And quality of father involvement has the potential for being as important, or even more so, than quantity of father involvement. As stated by Child Trends, "If a father is not able to have frequent physical contact with his child yet provides warm, stimulating, and positive contact when possible, children can still benefit from father involvement. Conversely, if a father has frequent opportunities to interact with his child but does not engage the child in positive ways, the child may not fare as well."

Family processes. A comprehensive response to their call for additional research on family processes would entail the study of a sizable variety of aspects of family interaction and functioning, such as balancing individuality and belongingness in the family system, family flexibility, supervision and monitoring, conflict and violence, and caring, kindness, and love. The Network places particular emphasis on the later, stating that better understanding of the causes and consequences of the development of altruism and empathy is of especially high priority since they guide commitment, social support, and interpersonal relationships.

Sibling relationships. Although single-child families are not uncommon, a sizable portion of children continue to grow up in families with siblings, and as the Well-being Research Network points out, though the influence of peers has been extensively studied

relatively little is known about the influences of siblings on each other. What evidence there is (see research summarized by Child Trends) tends to show that interactions with siblings are an important aspect of child development. According to that synopsis, sibling interactions influence the course of a child's social and moral development, including the development of good citizenship and good character. Positive sibling relationships early in life have been found to be associated with higher quality social skills with peers. It is reasonable to assume as well that strong sibling relationships constitute a source of satisfaction and support not only when children are growing up but later in the life course as well.

Ways children influence parents. The Well-being Research Network notes that while it is appropriate to focus research attention mostly on the effects of parents on children, children can also influence their parents. Further study of the influence of children on parents is deemed important both for the substantive interest and because of potentially biasing forces for estimates of the influence of parents on children if the potential for influences in the opposite direction is not taken into account: misinterpretation of empirical findings regarding parents' influence on children are possible if assumptions are made that children's influence on parents is unimportant.

Schools, neighborhoods, policy. A large number of community institutions, organizations, and environments impinge on the lives of children and their families. Each of these has the potential to influence parents and children, and relatively little is known about the actual influence. The institutions that the Well-being Research Network emphasizes as being of greatest importance to the study of family and child well-being are: education, childcare, neighborhoods, and government.

Children spend extensive time in childcare and education institutions, and that aspect alone is enough for them to merit those institutions special attention. Moreover, from the U.S. Network's standpoint, there is also concern about low academic performance of American children relative to other industrialized countries and the possibility that certain aspects of these institutions contribute to the lower relative standing.

Neighborhoods also affect the quality of life of children and families, and the Network states that more needs to be understood about which factors have the most influence and what mechanisms transmit those influences. Features of children's and youth's local environment that the Network notes as important to recognize as potential influences on children's and youth's well-being "range from the resources in the communities to the values and beliefs found in the neighborhoods and schools, from the organization of programs to the nature of laws and regulations, from the availability of programs and institutions to the cohesiveness and integration of communities." Important contextual features could also include aspects of the physical environment that pose potential dangers or offer special opportunities.

Governmental policies and programs are numerous, large and, almost by definition, subject to modification by policy makers. In the U.S. policies affecting

children, especially poor children, have been changing rapidly in recent years, with public assistance to poor families among the most drastically transformed. As the Network notes, such changes reinforce the need for timely and informative policy research.

Other Recommendations

Shift emphasis to positive development. Child Trends, among other voices, have emphasized the need to focus more specifically on positive development in children and youth, rather than problems. Although noting the difficulty of trying to reach consensus about what constitutes positive development in children and youth, a recent Child Trends report presents a preliminary set of constructs—broad concepts or attributes—that might comprise positive youth development. In developing the list, they drew from research finding associations between certain child and youth characteristics and later positive outcomes, opinions expressed in U.S. national surveys and polls, and a perceived cultural consensus about characteristics and activities that are intrinsically valuable. Their list includes:

- close parent-child relationships
- strong sibling relationships
- peer relationships that hone social skills and prosocial behavior
- development of character, which encompasses notions of responsibility, truthfulness, good values, and steadfast adherence to one's principles
- learning to treat others with respect
- involvement in some type of religious or spiritual activity
- development of tolerance (respectful attitudes and nondiscriminatory behaviors) toward those who differ from you
- involvement in extracurricular activities
- athletic participation
- participation in cultural and literary activities
- development of behaviors and consciousness respectful of the environment
- community service
- development of social capacity in terms of ability to interact positively within intimate and family relationships as well as the society at large

The report notes that the dearth of information on positive outcomes desired for and achieved by children is in part due to the lack of consensus among experts in the field regarding positive outcomes desired for children. The lack of consensus on positive outcomes, in turn, undermines parents', communities', and teachers' ability to contribute to positive outcomes because goals are unclear.

Dynamics of child well-being. Most indicators of the well-being of children and youth reflect their status at a point in time. However, change and stability are important aspects of well-being. These are aspects rarely reflected in well-being measures, despite findings showing that the long-term dimension of some types of well-being indicators, such as child poverty, are especially important to children's development (e.g., McLoyd's (1998) finding in the US that chronic poverty exerts much more adverse

effects on children than transient poverty). Panel data are required for collecting information on the dynamics of most dimensions of well-being and its long-term nature (see Ashworth, Hill & Walker, 1994, and Danziger & Gottschalk, forthcoming, for examples of unique perspectives that a long-running panel study can provide). Often even as few as two waves of panel data are sufficient to yield useful assessments of the dynamics and long-term nature of well-being, though more waves expand the perspective on these aspects of well-being. Bradbury, Jenkins & Micklewright's (forthcoming) focus on varying-length panel data for seven industrialized countries provides an excellent example of how research possibilities expand with the number of waves of panel data for a topic such as the dynamics of child poverty (forthcoming).

Children's and youths' time use. The growing number of children's time diary initiatives that are afoot across the world reflect the widespread consensus that a lack of information on children's and youths' time use is a glaring omission.

Household establishment. This is a major life domain that has not received as much research attention as related activities such as union formation. Norms regarding household establishment vary across countries, though, and cross-country differences in patterns regarding other major life domains behavior may be a reflection of differences in household establishment behavior.

Policy-relevant issues. Successful social policies for children are crucial for the future of a society, and the policies of many countries have undergone substantial change in recent decades. Partly in response to the major social and economic changes that occurred in the past several decades, many countries have made changes in policies affecting how families function. In most industrialized countries, social policies benefiting children and their families expanded in the 1960s and early 1970s when these countries enjoyed high rates of economic growth. In 1980s and 1990s the political and economic climate shifted. Widespread perception of resource constraints and of rising public social expenditures, along with a change in perception about public attitudes toward the poor, led many countries to impose cuts and restrictions on public social support (Kamerman and Kahn, 1997). Important components of the social protection systems that affect crucial domains of children's lives include those in childcare, schooling, housing, food, transition to work, health care, a variety of population policy measures, income security, physical security and child abuse, policies affecting work schedules and the interrelationship of work and family life in general and treatment-oriented and support services for children and their families.

Countries differ in beliefs about the causes of the problems children face and the role of government in trying to solve those problems. Policies in Scandinavian countries have traditionally provided the most comprehensive universal package of benefits, whereas policies in the U.S. and many European countries have been more prone to rely on means-tested approaches targeting the very poor. In the U.S., Canada, and Britain, for instance, a combination of tax exemption, or tax credit for low-income families and enforcement of child support or maintenance obligations has been used as a strategy for protecting the economic situation of lone-mother families while keeping public

expenditures to a minimum. In general, there has been an increasing emphasis on family, rather than government, responsibilities for child well-being, and support has weakened for providing universal benefits.

The status of children in today's society suggests that the current policies in many countries may not be serving them well (Garfinkel et al. 1996). McFate, Lawson and Wilson (1995) noted that the social safety net is under strain in both European and North American countries, as social and economic changes have created problems that traditional welfare system are not equipped to handle. There is no agreement about what sets of programs are most efficient and cost effective. Additional work on international comparisons of family policies and their effects are needed to help understand why some countries are more successful than others in terms of addressing the problems facing children and their families. A useful way of approaching a comprehensive assessment of public policy's role in children's lives is outlined in Hill & Sandfort's (1995) examination of childhood poverty's effects on productivity later in life. Distinctions are made between policies (a) to prevent or reduce children's problems, (b) to compensate for children's inadequate developmental environment, and (c) remedial assistance to improve children's adulthood skills and qualities

Given the trends in family changes, family policy should consider placing a high priority on gender equity, providing support to working families, and improving opportunities for low-skill labor market entrants. With high maternal employment rates, many countries still have inadequate childcare service. An universal child care system such as that in France or Scandinavian countries is designed to meet the needs of working parents as well as the developmental needs of children. In other countries, however, government sponsored early-childhood education and day care are only available for selected low-income population. After-school care is far more limited. Childcare services for disabled children in many countries are often limited and more expensive than many working parents can afford. Arguments can be made for needs for programs to facilitate young adults' transition to the labor market and to reduce gender and racial inequality in income, education and employment programs.

A recent U.S. National Research Council research briefing (Phillips & Bridgman, 1995) emphasizes several research issues deemed especially important for understanding the consequences of U.S. public support policies relevant to children's development. These include enduring questions about changes in family income and reliance on nonparental child care as well as a focus on the short and long-term effects of national and state welfare initiatives on children, which have introduced dramatic change in public support programs. Other important issues for future research and discussion include identifying the magnitude and duration of interventions needed to make a difference in children's lives, as well as discovering the factors that facilitate or inhibit fathers' participation in programs designed to provide support for their families.

Relevant Theory and Data Regarding Child Development and Well-Being

We present, for consideration and to facilitate discussion, a conceptual framework that draws on theories in psychology, economics, and sociology about how resources from the family influence children's development discussed in an earlier section, all in the surrounding context of school, neighborhood, peers, and policies. We then provide a taste of the type of data needed to test the model.

Inter-disciplinary Framework for Studying Child Well-being

The inter-disciplinary theoretical framework we use for illustration imbeds the developmental psychology model of family processes that has traditionally guided studies of family functioning and child development (Cowan & Cowan, 1995) in a combination of the larger time use model of Juster and Stafford (1985), the social capital theory of Coleman (1988), the expectancy-value model (Eccles et al, 1983; Eccles, 1992), economic theories of intra-family resource allocation (Lundberg & Pollak, 1997), and Haveman and Wolfe's attainment model (1994) that stresses the effects of resources on children's achievement. Each of these adds something unique but within limitations.

Economic theories do not specify the role parental attitudes and values play in their investment behavior. The family process studies in psychology tend to have little concern with the socioeconomic structure in which children are placed, and they are often based on small samples. Analyses by Haveman and Wolfe (1994) do not include any measures of parental time input, internal family process or attitudinal measures, and do not shed light on why some parents invest more in children than others do.

Integrating these theories from different disciplines results in a richer theoretical model. Parental investment in children can be conceived as taking the form of money, time, human capital, or socio-psychological resources. Parents are viewed as making choices about allocating resources given constraints imposed by family characteristics (e.g., family income, family structure, parents' education and employment status, race/ethnicity, and parents' psychological well-being) and other factors outside of the immediate family such as resources from kin, the neighborhood, peers, and schools. These family circumstances affect parents' time allocation, expenditures on children and family processes. It is through the management of time, money and family processes that parents affect children's developmental outcome. Family processes characterize the interaction among family members such as parenting practices, the interaction between children and parents, and the quality of the relationship between parents. Parents' decisions of how to invest in children may be affected not only by the socioeconomic characteristics of the family but also by parental attitudes and the relations between parents.

Figure 1 illustrates this type of framework in a model that focuses on family's role in child well-being and can serve as a concrete basis for discussion of the types of data needed for this area of research. It incorporates social-economic and developmental psychology perspectives and draws together ideas from a wide literature. While this is

not a definitive model, it does help illustrate the complexity of inter-disciplinary modeling of child development issues and the breadth of data required for estimating such models.

(Figure 1 here)

Four aspects are emphasized in this framework. First, context (depicted in the figure by the concentric circles to the left in the diagram) plays a role in the processes impinging on a child's well-being. The child is embedded in a family and both are in a setting involving institutions (school/daycare), other significant people (peers/neighbors), local facilities and environment (buildings, nature, and community services in the neighborhood), and the political infrastructure (national and regional policy). The setting plays a major role in the opportunities and constraints faced by both the child and his or her family. Both the objectively viewed opportunities and constraints and perceptions of those opportunities and constraints, on the part of the child and his or her family, can influence the processes involved with the child's well-being.

Second, two crucial elements are included to capture the mechanism through which parents attach importance to children's development, and allocate resources accordingly. They are (1) parental values and expectations, and (2) the relationship between spouses. Among the values and expectations, there are two broad categories. The first category refers to the more general attitude about gender roles, how good parents feel about themselves, and parents' sense of locus of control. The more parents feel they have control over their lives and have high self-esteem, the more likely they will plan and invest in children. The second type of parental attitude that may affect investment behavior is specific to childrearing: attitudes about parenthood, childrearing values, expectations concerning children's achievements and perceptions about the children's ability. The more parents feel it is important to have children, to be involved, and the more they enjoy parenting and have high expectation for children, the more likely they are to allocate resources to children instead of to themselves. Parents' view about their partners' role may also be important. For example, mothers' perception of fathers' roles and fathers' ability to care for children may affect decisions about fathers' level of involvement with their children. The more mothers feel it is important for fathers to be involved, and the more confident mothers feel about fathers' ability, the more likely fathers will be involved. Demographic and economic factors certainly affect what resources parents can afford to provide to their children. They also influence how successfully parents can translate their general beliefs and values into effective practices. These are critical components in the expectancy-value model of achievement (Eccles et al, 1983; Eccles, 1992).

The roles fathers and mothers play are negotiated by the couple. How egalitarian the intra-family relation is affects the negotiation process for the levels and forms of investment from the mother and the father. Extreme examples are the view that both parents have equal responsibilities for care and a right to a market job versus the view that parenting is a full-time job for the mother. Parents in families with a more egalitarian relationship tend to have a more equal level of involvement with children's

lives. Such families are also more likely to have a working mother. Economic theories argue that this relationship depends largely on the wages of the wife. The wife's wages tend to increase her relative power in the relationship, thus inducing a more equal division of domestic labor and childcare responsibilities between the partners. Volling and Belsky (1991) suggest that in single-earner families, fathers' involvement is more likely to be a "choice" determined by fathers' personality; whereas in two-earner families fathers may not have the option but are required to partake in childcare responsibilities regardless of the time and stress they experience at work.

Third, the framework allows the child's characteristics to affect the parents' resource allocation behavior. Children's gender, age, aptitude, and birth-related health problems will affect how parents perceive their children's abilities and their expectations for the children, and hence how they allocate resources to them. An extreme example of this may be parents of children with Downs syndrome spending more resources on that child than on other siblings (Stafford, 1996). Some research has shown that fathers prefer to interact with sons (Barnett and Baruch, 1987; Bronstein, 1988) while others found no such evidence (Feldman & Geshring, 1988; Belsky et al. 1984). From a developmental perspective, because children's needs vary in different developmental stages, it is important to examine the parental investment by age and gender of the child. The characteristics of the children could also induce changes in parental values and parents' relationship to one another. For example, Fan and Marini (2000) find shifts in gender-role beliefs following childbearing, and Hill (1988) finds that the spouses' amount of shared leisure time varies with the number and ages of children.

Fourth, a feed-back effect of child well-being on parental investment behavior is incorporated in this framework. Changes in family structure, income, and maternal employment status affect parental investment behavior. In the long run, many of these family circumstances may be modified in order to enhance children's wellbeing. An example might be a mother cutting back on work hours to allow herself more time to help a child who had been falling behind in school. Panel data are needed to test the relevance of this hypothesized feed-back mechanism.

Data Needed for Empirical Investigation of the Framework

To obtain some idea of the breadth of data needed for empirical investigation of this framework, we list relevant content from the Panel Study of Income Dynamics Child Development Supplement that Yeung has outlined in a recent proposal to examine many of the pictured linkages. The data facilitate some measures of neighborhood and peers but they focus mainly on measures for the child, the family, and the school. The description of these data is as follows:

(1) The PSID includes a nationally representative sample of American households and individuals, with an oversample of low-income black families. Since 1968, the PSID has collected annual data on the socioeconomic characteristics of 5,000 U.S. families. The Child Development Supplement in 1997 contains information on approximately 3,600 children aged 0-12 in 1997 with an oversample of disadvantaged children and about 550 immigrant children.

(2) The PSID has high quality annual longitudinal data on the socioeconomic characteristics of the family. Histories of family income, employment patterns, residential changes, family structure, and marriage (as well as cohabitation) and fertility events dating back to a child's birth can be constructed to facilitate longitudinal analysis of causes and consequences of events that occur in childhood and children's developmental outcomes. Annual information about major family consumption and assistance from relatives is also available.

(3) The Child Development Supplement (PSID-CDS) in 1997 collected a comprehensive accounting of the way children spend their time at home, as well as at school or in other child care programs. Time diaries were collected for up to two children in the household for both a weekday and a weekend day. Activities children engaged in were recorded sequentially in a 24-hour day. In addition to the types of activities, the study gathered information about who was directly engaged in the activity with the child, and who else was there but not directly involved. This is the first national representative data set in U.S. that can provide detailed information about the quantity and quality of children's time since the time use study conducted by Juster and Stafford (1985) in the early 1980s. Methodological work by Juster and Stafford (1985) shows that time diaries are superior to other methods, such as direct survey questions about time spent in various activities, in obtaining unbiased measures of time inputs.

(4) Considerable supplementary information was obtained from both the primary care giver and secondary care giver (if present) on family process measures in the PSID-CDS. These measures include parenting behavior (warmth, discipline strategies), interaction between parent and child, quality of relationship between parents (parental conflict, decision-making patterns), division of labor for household tasks, and attitudes about sex roles and parenthood. The study also included indicators of the learning environment in the home measured by the HOME scale.

(5) The PSID-CDS included a variety of questions related to children's psychological, socio-emotional and intellectual wellbeing asked of the child, mother, a second caregiver (if present), an absent parent and the teacher. The emotional wellbeing of the child was measured with the Behavior Problems Index as well as a Positive Behavior Scale. Children's self-esteem was measured by a set of scales developed by Eccles et al. (1993) and a subscale of global self-concept and task perception created by Herbert Marsh (SDQ-I). The cognitive skills of children were assessed with subtests of the Woodcock Johnson Revised Achievement Test and the Digit Span test in WISC-III for children over age 3.

(6) The Child Development Supplement collected information about children's time use at school, school resources and teacher's assessment of children's ability.

(7) The PSID provides information about the neighborhood where the families resided over the years through linkage of respondents' address to the U.S. census data.

(8) A second wave of the Child Development Supplement planned in 2001. As the second wave of data becomes available, many important questions regarding the causal relationship between socioeconomic characteristics of the family, time use, family process and child development can be addressed.

This is clearly content well beyond the reaches of modest-sized national surveys with a focus on prime-age and older adults as well as children and youth. Moreover, the content of the PSID-CDS is geared specifically to children ages 0-12. Still, this does indicate some important aspects of data collection for issues of child well-being -- a national sample in the context of a panel study; measurement of children's time use as well as a variety of indicators of child well-being; assessment of a number of aspects of family processes, school experiences, and neighborhood characteristics; gathering information from and about both co-resident and absent fathers -- many of the things mentioned in earlier sections of this paper. The User Guide for the PSID-CDS provides a detailed description of the supplement (Hofferth et al., 1997). Even with this broad sweep of panel survey data, however, some linkages would be better identified by supplementing panel survey data with information gathered with more qualitative approaches such as the 'conversations' approach and with outside sources of information on neighborhoods and local policies.

Proposed New Data Collection and Analysis

Overview

The Generations and Gender Programme aims at continuity with the Fertility and Family Survey (FFS) in its quest for an international comparative study of behavior, relationships, and well-being of different generations and gender. Young children, adolescents, and, to some extent, young adults could be, and to a large extent in the FFS were, viewed as less central to research focused on fertility behavior than other generations, most notably prime-age adults. But the lives of children are affected by the fertility and related behaviors of prime-age adults, and children, in turn, affect adults' fertility and related behaviors as well as transform the lives of adults in other important ways. Children, adolescents, and young adults are all central to 'family.' The interactions between these younger generations and the older ones are vital elements reflecting and shaping the nature of the society. In addition, it is in these early stages of life when the roots of gender identification and family formation develop and begin to grow.

The Generations and Gender Programme proposes making use of a specially-developed Generations and Gender Survey (GGS), census data and other data sources, including contextual information, and their inter-linkage. Before turning to our recommendations for the content and methodology for the GGS, we review here the potential of census data and approaches other than standard survey methods for gathering data relating to children and youth.

Censuses

As material distributed by the PAU indicates, traditional censuses (population and housing) and register based censuses provide a broad base of collected data to draw on, though the variation in available measures and definitions of key concepts across the different countries is sizable. Ideally, the data can be used to construct local-area measures for the characteristics of communities and neighborhoods, as well as serving as a source for some measures of family and child well-being. Variation in what data are publicly available may limit its usefulness, however, for devising neighborhood measures, especially if geographical identifying information is limited because of concerns about guarantees of confidentiality. Ideally, though, census data could be used both to measure the socio-economic and demographic nature of communities and neighborhoods as well as establish the cultural context of a nation as a whole in terms of basic socio-economic and demographics features.

The census data are well-suited to establishing overall patterns for households with regard to a number of major characteristics:

- number and ages of household members
- education, marital status, employment status & occupation of at least one key adult in the household
- space for persons, type of structure, utilities & amenities for the dwelling

The census data appear to be less suited to measures for family units when subfamilies are present in households, and they tend to lack information about family members residing in institutions (e.g., college students away at school) or in other households (absent parents). In addition, they appear to provide limited information on the relationships between the full set of household members, usually providing relationship to a single key member such as the household head; hence, making identification of step relationships or presence of children's grandparents difficult. While the data provide information about marital status of at least one key adult in the household, this does not assure that such information is available for the parents of children present in the household (if, for example, marital status is known only for the household head but children are part of a subfamily within the household). Cohabitation on the part of a parent or parents also appears to be undetectable for many countries. These aspects limit the census data's usefulness for examining living arrangements of children and youth.

The census data also add challenges for comparisons of the economic status of children and youth in different countries. Information on amount of income does not appear to be available in most data sets, when that information would be desirable at the household level, family level, and subfamily level. Differing time frames for measuring the flow of income are undoubtedly present as well, creating additional challenges.

The census data also tend to be geared to measuring the characteristics of adults, though the range of measures is limited and detailed measures may not be available for all adults in the household. The census data are not as well-suited to measuring the

characteristics of children and youth. In addition, even key features of families especially important to research on children's quality of life (e.g., amount of family income) are lacking. Of the 11 child well-being indicators listed in Micklewright and Stewart (2000) as a feasible set for cross-country comparisons, the following appear to be the most likely to be available in census data:

- prevalence of worklessness among households with children
- unemployment among all 20-24 year olds
- percent of 16 year olds in education

Life satisfaction and teenage fertility measures do not appear to be available.

Instead of limiting cross-country comparisons for issues relating to children's and youth's quality of life to the small set of measures universally available, it would be desirable to extend beyond that to broader sets for various groupings of the countries with the needed data. It would also be possible to use the census data on adults to establish country-specific patterns of behavior of adults for some aspects of work and family life. These could be matched with information to be collected in the planned cross-country surveys on the attitudes of youth about their personal goals in these domains of life to determine the degree of correspondence across the generations between youths' goals and adults' behavior and how that might vary across countries.

Sources other than census data and the planned surveys will need to be found for important contextual measures of resources available in children's and youths' environment that affect their quality of life (e.g., level of expenditure on education both country-wide and in local areas). These measures of environment as well as the census-based measures of the socio-economic and demographic nature of communities and neighborhoods could then be used along with the planned survey data in multi-level analysis of factors impinging on children's and youth's quality of life, behaviors and expectations.

New Approaches to Consider

The standard approach to asking about such things as life goals is to ask a sizable set of closed-choice questions about the extent to which the respondent agrees or disagrees with specified circumstances in the realm of work and family. All sets of circumstances must be specified in advance of the data gathering; thus researchers must accurately anticipate the full set of relevant choices. While this approach has many merits, it could be prone to biases (e.g., answers shaped by what are considered socially acceptable responses) and omissions (e.g., adult researchers being unaware of important aspects of children's and youths' life goals).

Alternative approaches include ethnographic methods such as the 'conversations' approach noted in the methodological discussion early in this paper. It is qualitative approaches along these lines that are advocated by policy experts interpreting the findings about child poverty dynamics in a recent international volume (Aber & Ellwood,

forthcoming) and a family economist discussing international perspectives on birth cohort studies of children at recent Joint Statistical Meetings (Hill, forthcoming). Some examples of coordination between surveys and qualitative approaches can be found in Hill & Duncan (2000). It is important to consider some combination of these methods either as small-scale studies associated with the survey or in a form that is feasible within the limits of the survey context. Several recent studies have adopted this method (e.g. surveys by Eccles et al. and Cherlin et al.¹⁵). A possibility that comes to mind is adapting the ‘conversations’ approach to the survey context by following a data collection process consisting of interviewers engaging children/adults in pre-scripted conversation templates designed to address the issues of interest then listening and recording what the children/adults say in their own words, followed later by ethnographers or literary specialists studying the conversations in their entirety and interpreting the meaning. This is but one possibility, and we note it here to stimulate thought on ways to incorporate qualitative assessments along with quantitative ones. Other possibilities include careful directed observation of the objects, symbols, and sounds that surround children and youth, with cultural interpretation given by experts in human studies and the arts.

Recommendations for the Generations and Gender Survey

Age boundaries. We feel it is important to the goals of the Generations and Gender Programme to bring children, adolescents, and young adults into the picture more fully than did its predecessor, FFS. Studies show that most children aged 11 and older are able to negotiate survey instruments designed for adults with relatively little adaptation of the survey instrument. In addition, there is experience to draw on in adapting questionnaires for children as young as ages 6 to 8 (see, for example, the Population and Family Study Centre in Brussels’ survey on ‘The Living Conditions of Children’) or even age 3 for some types of questions (see, for example, the 1997 Child Development Supplement of the Panel Study of Income Dynamics). Given that some UNECE countries are likely to face severe limitations in their data collection potential, it is reasonable to consider age 15 as a lower age limit for uniformity across all participating UNECE countries. However, we urge the UNECE countries to reach to lower age limits whenever possible. The voices of younger individuals offer additions of important insights. We recommend that children and youth as young as age 11 be asked questions in a format similar to comparable questions for adults and that children as young as ages 6 to 8, or possibly even age 3, be considered as respondents for questions adapted to their perceptual range. In general, children and youth should be considered as reporters in measures where their perspective is important (e.g., attitudes, views, and expectations). In addition, we recommend that information on living conditions and status be collected about individuals of all ages, including children as young as newborns.

Topics of highest priority. In what follows we outline what we see as the most promising content for a Generations and Gender Survey, taking into account its aim of being a moderate-sized, unitary survey in the UNECE countries but supplemented by

¹⁵ Cherlin, A., Winston, P., Angel, R., Burton, L., Chase-Lansdale, P.L., Moffitt, R., Wilson, W. J., Coley, R. L. & Quane, J. Welfare, Children and Families. A Three City Study.

census data and the possible addition of modules expanding the coverage of substantive issues. While the paper thus far has discussed the importance of monitoring child well-being, studying the orientation and behaviors of children and youth in major life domains, and modeling in detail all of the interrelated aspects of child development in terms of parents and children, school, peers and potential partners, communities, and policies we recognize the need to prioritize topics and establish guidelines for the Generations and Gender Programme's focus. We have tried to take account of what we have reviewed as well as the discussion at the July 2000 meeting in developing these recommendations.

Of high priority regarding relations between generations and between genders and for processes of family and gender development is improved understanding of the meaning of fatherhood and motherhood. Perceived tradeoffs between parenting and other life activities (e.g., labor market participation) and rankings of parenting relative to the alternative activities are important elements.

Children, along with their parents, are active agents in defining parenthood, and particularly in non-traditional family structures it is the parents and children who are actively constructing the meaning of motherhood and fatherhood. In this process, the two generations may well have different ideas about the meaning, and the match, or lack thereof, between them may be influencing the well-being of both generations. A view of the meaning of motherhood and fatherhood is incomplete if based solely on the parents' perspective. We recommend addressing questions to children, adolescents and young adults as well as their parents. These questions could include ones assessing expectations for mothers and for fathers and how parenting fits with other adult roles, gender role orientation, life goals in diverse realms, and relations with parents. The fit between expectations for and the reality of parenting is also an important topic to consider.

Family and household contexts are important for children but family and household can be defined in many ways, with standard definitions differing substantially both across countries and across time. This, along with the wide variety of family and household arrangements children and youth face, needs to be kept in mind both in designing data collection and in analyzing the data. Inter-household as well as intra-family interactions need to be considered because the living arrangements of parents and children can place some in the same household and others in separate households.

Indicators of well-being are of substantial importance for international comparisons of the relative standing of different generations in different social settings and as tools for policy makers. While on-going studies such as the European Community Household Panel (now in its fifth wave collecting comparable data in at least 12 European Union countries) facilitate international comparisons of well-being in many dimensions, their focus is broad and not specifically geared to generation and gender issues. We recommend that the designers of GSS consider the indicators of child well-being reviewed in this paper and include in GSS measures that facilitate constructing a picture not only of child well-being but how child well-being compares with the well-being of other generations and across genders. Special attention should be given to the diversity across the UNECE countries in terms of recent trends and levels of economic

development and social change. Differences between Eastern Europe and Western Europe, but also within these two regions, argue for considering some identical and some differing dimensions of well-being across the various UNECE countries.¹⁶

While gathering measures of indicators of child well-being is of considerable importance by itself, we feel it is also important to collect information about the ways children and youth are woven into the fabric of social, economic, and political systems. Understanding mediating processes in child well-being is of vital importance if policies are to be shaped with a realistic set of underlying assumptions. This means learning more about such things as poverty, family structure, mother's employment, mothers' and fathers' involvement with children, and children's and youths' aspirations and how they relate to well-being. While collecting data to facilitate comprehensive modeling of parental investment and child development is beyond the scope of the GSS, we encourage attention to on-going studies in UNECE countries that are collecting such data. Possibilities of adding parts especially relevant to gender orientation development and relations between generations as special modules in GSS should be given consideration, as should analysis which links to findings from the on-going specialized studies.

We feel it is important to consider measurement of children's and youth's time use because it reveals a great deal about the forces that shape their behavior, expectations, and development. While extensive time use diaries are beyond the scope of the GGS, consideration should be given to insights to be gained from the time use studies fielded in recent years in UNECE countries. In addition, consideration should be given to the GGS collecting a modest amount of information about children's and youth's time use. Just knowing some of the types of activities they do and do not engage in can be tremendously informative (Hofferth and Sandberg, forthcoming). This is especially relevant for activities directly involving parents or access to them when needed as well as exposure to mass media (TV in particular), consumerism, and technology.

With concern about growing age segregation and successful social integration of children into society, it is also important to assess the exposure of children to other generations and the types of activities older generations engage in. All of these can be important forces shaping gender orientation and relations between generations.

In gathering information about life goals for children and youth, consider collecting information regarding the thoughts of both young people and adults. Opinions of adults as well as the young people themselves can shape the directions the young people move in. And adults include not only parents but also adults without children. The entire adult citizenry of a country can have opinions about the goals young people should be pursuing and their opinions can shape the resources available to young people for following those goals.

¹⁶ For well-being indicators especially relevant to Eastern Europe see the UNICEF ICDC MONEE (Monitoring Eastern Europe) project at website: <http://www.unicef-icdc.org>

In addressing the role that context plays in behavior and orientation, consider gathering information about perceptions of opportunities and constraints to supplement more objective assessments of these aspects. Perceptions of these conditions could be as important, if not more so, than actual conditions.

Flexibility and qualitative approaches. Researchers are at a special disadvantage in knowing what to assume and what not to assume in their research design when it comes to children, even children at the upper reaches of childhood. Adults are trying to study non-adults, and though they have been children themselves it can be very difficult for adults to view the world through the eyes of children. The full range of possibilities is even more difficult to anticipate than when collecting information solely from adults. Our recommendation in urging interviewing of children and youth is for substantial flexibility in possible responses to questions, as well as substantial flexibility in the questions themselves. This both circumvents problems of fully anticipating the relevant range of possible responses to questions and makes possible the capturing of special insights children sometimes have that somehow slip away in the maturation process and that adults can miss entirely if not paying sufficient attention and allowing them their own voice.

An international comparative study presents special challenges in terms of designs for obtaining comparable measures across countries. To facilitate the international comparisons we urge study designers to consider combining qualitative with quantitative approaches. Special consideration should be given to gathering data in a way that facilitates interpretation across vastly different contexts. How we say things and what types of objects, images, symbols, and sounds we surround ourselves with reveal a great deal about our orientation and circumstances. These are important indicators that sometimes carry more content than simple responses to standardized multiple-choice questions. Information about these aspects of respondents' lives is often lost in standard census and survey approaches. We urge the collection of such information and involvement of specialists in human studies and the arts both for design and interpretation of these aspects of the data. Rely more on respondents' own words -- not just standardized questions and multiple-choice responses -- and the types of objects and symbols they surround themselves with in the home and neighborhood. Engage specialists in these aspects of life (e.g., literary specialists in a country's own language or cultural specialists) and have them bring their expertise to bear on the design and interpretation of the data.

This may strike statisticians as being a highly subjective form of data collection and analysis; however, there is also a large element of subjectivity in the choice of standardized questions and multiple-choice responses to include in a census or survey. What we are urging is a combination of both approaches. Standard survey approaches could then yield a mapping of tendencies and the range of possible patterns in relationships between quantitatively measured circumstances and behaviors. Qualitative approaches drawn from human studies and the arts could help fill in explanations for those patterns. These approaches could be used to relate the statistics to life stories told in diverse ways in the language and surroundings of the actors to get a fuller perspective

on why things happen the way they do, at least sometimes, and what it means to the individuals involved. A melding of the two approaches offers the potential for an alloy much stronger than either component alone. The combination also allows everyone, including policy makers, to relate statistical findings to real life.

Consider a panel design. We encourage considering a panel design. As few as two waves of panel data open great vistas in terms of seeing longer run conditions and the dynamics of underlying relationships and processes. And interviews as short as two years apart can reveal a great deal about children's lives: two years is a long stretch for children and youth from both a developmental standpoint and from the perspectives of the children and youth themselves. This is especially true for children in the early years of life and adolescence, when transitions are rapid. Panel data would facilitate a much-improved view of long run assessments of how well children are doing, the causes and consequences of child well-being, and insight into what constitutes positive development. Tracking of child, family, and societal well-being in a panel study setting helps reveal the ultimate outcome of behaviors and circumstances. This is especially important for children's and youth's behaviors and circumstances, given the nature of some of the developmental transitions they undergo and the possibility that behaviors may be problematic immediately but could ultimately improve well-being. Seeing if this is the case requires tracking of both the behaviors and well-being for the same sets of individuals over time.

Concluding Remarks

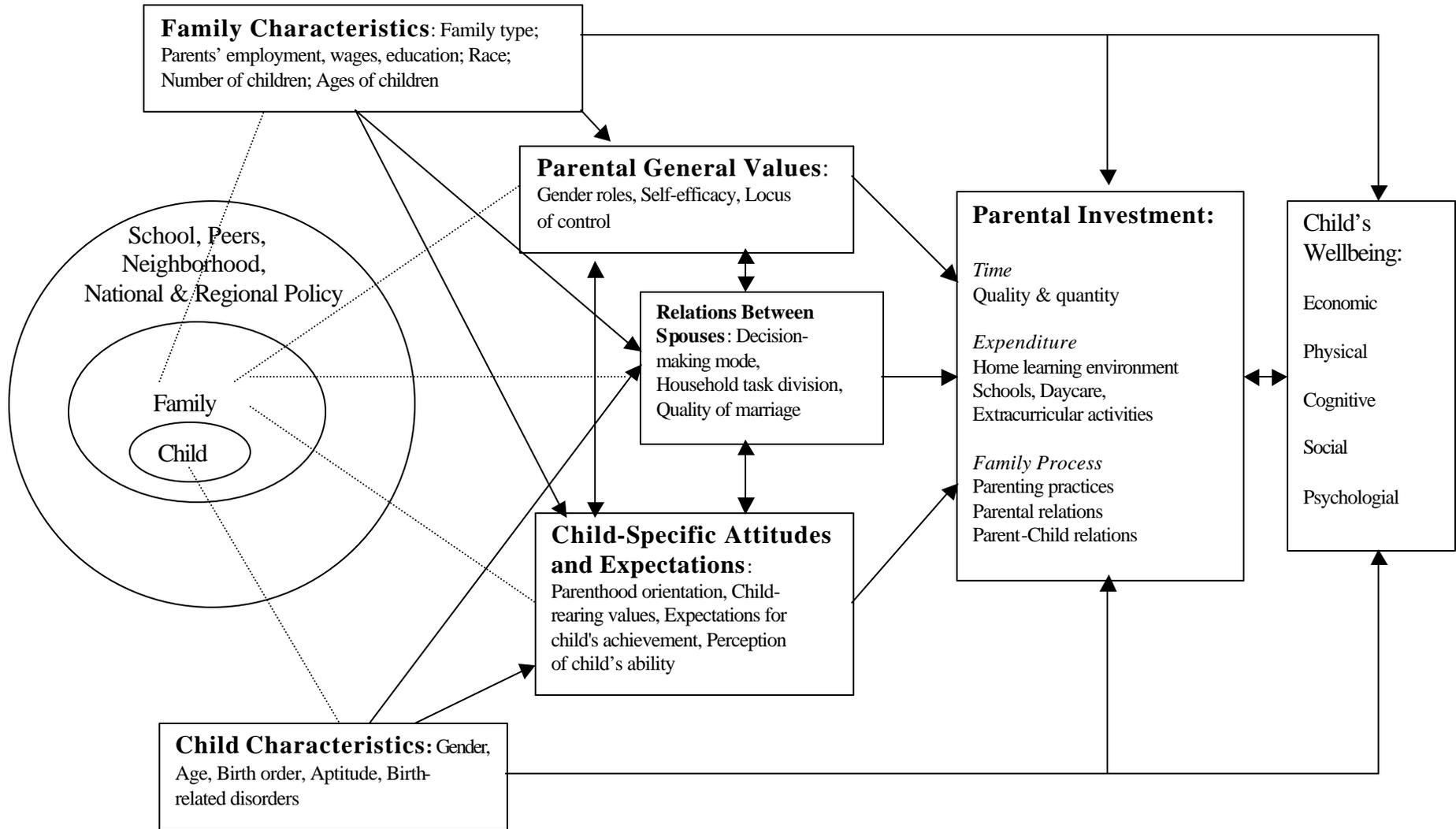
Young children, adolescents, and young adults are important to the Generations and Gender Programme's goals of improving the well-being of and solidarity between generations as well as enhancing gender relations and equity. The roots of gender identification and family formation appear and take shape during these early stages of life, and these young people can both influence and be influenced by the adults they encounter. They are important actors in relations between generations and genders. In addition, in discussions about population aging in industrialized countries, a topic of considerable and growing concern in recent years, the role of shrinking fertility merits careful attention. Without better understanding of shifts in the meaning of fatherhood and motherhood our understanding of the impetus behind such shifts is incomplete and our ability to project fertility, hence population age distributions, into the future is limited. Children and youth have important perspectives to voice concerning the meaning of fatherhood and motherhood.

The last several decades have brought tremendous social and economic change that offers new opportunities and promises but also poses sizable challenges for today's children and youth. These young people are living in a more diverse world than preceding cohorts, in some ways more closely connected to peers in other parts of the world but in other ways less closely connected to other generations in their own part of the world. Monitoring their well-being and observing how it interacts with and compares with that of other generations are important for understanding the web of life, what it

means to the different generations and genders, and ways policies could best take account of life-course and gender differences.

The Generations and Gender Programme aims at international comparative study across UNECE countries of behavior, relationships, and well-being of different generations and genders through the use of up-coming censuses and other available data sources along with a specially developed Generations and Gender Survey. We encourage this approach and direct those designing the Generations and Gender Survey to the many surveys and associated creative approaches we have reviewed concerning important issues surrounding the well-being of children and youth, their development of gender orientation, their gender relations, and their fit with other generations.

Figure 1: An Inter-Disciplinary Framework Focusing on Family's Role in Child Well-Being



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Appendix A

Summary Indicators Used in *America's Children: Key National Indicators of Well-Being*, by Federal Interagency Forum on Child and Family Statistics, 1999

Indicator Name	Description of Indicator	Previous Year of Data Value (Year)	New Data Value (Year)	Change Between Years
Economic Security				
Child poverty and family income	Percentage of related children under age 18 in poverty	20 (1996)	19 (1997)	NS
Secure parental employment	Percentage of children under age 18 living with parents with at least one parent employed full-time all year	75 (1996)	76 (1997)	NS
Housing problems	Percentage of households with children under age 18 that report any of three housing problems	36 (1995)	—	—
Food security	Percentage of children under age 18 in households experiencing food insecurity with moderate or severe hunger	6 (1996)	4 (1997)	t
	Percentage of children ages 2 to 5 with a good diet	27 (1995)	24 (1996)	NS
Access to health care	Percentage of children under age 18 covered by health insurance	85 (1996)	85 (1997)	NS
	Percentage of children under age 18 with no usual source of health care	6 (1995)	6 (1996)	NS
Health				
General health status	Percentage of children under age 18 in very good or excellent health	81 (1995)	81 (1996)	NS
Activity limitation	Percentage of children ages 5 to 17 with any limitation in activity resulting from chronic conditions	7 (1995)	8 (1996)	NS
Low birthweight	Percentage of infants weighing less than 5.5 pounds at birth	7.4 (1996)	7.5 (1997)	s
Infant mortality	Deaths before the first birthday per 1,000 live births	7.3 (1996)	7.1 (1997)	t
Childhood immunizations	Percentage of children ages 19 to 35 months who received combined series immunization coverage	77 (1996)	76 (1997)	NS
Child mortality	Deaths per 100,000 children ages 1 to 4	38 (1996)	36 (1997)	t
	Deaths per 100,000 children ages 5 to 14	22 (1996)	21 (1997)	t
Adolescent mortality	Deaths per 100,000 adolescents ages 15 to 19	84 (1995)	79 (1996)	t
Adolescent births	Births per 1,000 females ages 15 to 17	34 (1996)	32 (1997)	t
Behavior and Social Environment				
Regular cigarette smoking	Percentage of 8th-grade students who reported smoking daily in the previous 30 days	9 (1997)	9 (1998)	NS

	Percentage of 10th-grade students who reported smoking daily in the previous 30 days	18 (1997)	16 (1998)	t
	Percentage of 12th-grade students who reported smoking daily in the previous 30 days	25 (1997)	22 (1998)	t
Alcohol use	Percentage of 8th-grade students who reported having five or more alcoholic beverages in a row in the last 2 weeks	15 (1997)	14 (1998)	NS
	Percentage of 10th-grade students who reported having five or more alcoholic beverages in a row in the last 2 weeks	25 (1997)	24 (1998)	NS
	Percentage of 12th-grade students who reported having five or more alcoholic beverages in a row in the last 2 weeks	31 (1997)	32 (1998)	NS
Illicit drug use	Percentage of 8th-grade students who have used illicit drugs in the previous 30 days	13 (1997)	12 (1998)	NS
	Percentage of 10th-grade students who have used illicit drugs in the previous 30 days	23 (1997)	22 (1998)	NS
	Percentage of 12th-grade students who have used illicit drugs in the previous 30 days	26 (1997)	26 (1998)	NS
Youth victims and perpetrators of serious violent crimes	Rate of serious violent crime victimizations per 1,000 youth ages 12 to 17	30 (1996)	27 (1997)	NS
	Serious violent crime offending rate per 1,000 youth ages 12 to 17	36 (1996)	31 (1997)	t
Education				
Family reading to young children	Percentage of children ages 3 to 5 who are read to every day by a family member	57 (1996)	—	—
Early childhood education	Percentage of children ages 3 to 4 who are enrolled in preschool	45 (1996)	48 (1997)	s
Mathematics and reading achievement (0-500 scale)	Average mathematics scale score of 9-year-olds	231 (1996)	—	—
	Average mathematics scale score of 13-year-olds	274 (1996)	—	—
	Average mathematics scale score of 17-year-olds	307 (1996)	—	—
	Average reading scale score of 9-year-olds	212 (1996)	—	—
	Average reading scale score of 13-year-olds	259 (1996)	—	—
	Average reading scale score of 17-year-olds	287 (1996)	—	—
High school completion	Percentage of young adults ages 18 to 24 who have completed high school	86 (1996)	86 (1997)	NS

Youth neither enrolled in school nor working	Percentage of youth ages 16 to 19 who are neither in school nor working	9 (1997)	8 (1998)	t
Higher education	Percentage of high school graduates ages 25 to 29 who have completed a bachelor's degree or higher	32 (1997)	31 (1998)	NS
Special Feature				
Difficulty performing everyday activities	Percentage of children ages 5 to 17 who have difficulty performing at least one of four everyday activities	—	12.3 (1994)	—

Legend: NS = No significant change s= Significant increase t= Significant decrease
 — = not applicable

Source: Excerpted from <http://ojjdp.ncjrs.org/about/99juvjust/990716b.html>, June 6, 2000

Appendix B

Summary of indicators in KIDS COUNTS Data Book and Criteria for Selecting them

Indicators:

Child Death Rate
Family Risk Index
Infant Mortality Rate
Juvenile Property Crime Arrest Rate
Juvenile Violent Crime Arrest Rate
Median Income of Families With Children
National Composite Rank
Percent Change Over Time Analysis
Percent Low Birth-Weight Babies
Percent of 2-Year-Olds Who Were Immunized
Percent of 4th Grade Students Who Scored Below Basic Reading Level
Percent of 8th Grade Students Who Scored Below Basic Reading Level
Percent of Births Covered by Medicaid
Percent of Children Covered by Medicaid or Other Public-Sector Health Insurance
Percent of Children in Poverty
Percent of Children in Extreme Poverty
Percent of Children Living With Parents Who Do Not Have Full-Time, Year-Round Employment
Percent of Children Without Health Insurance
Percent of Families With Children Headed by a Single Parent
Percent of Female-Headed Families Receiving Child Support or Alimony
Percent of Teen Births Occurring to Mothers Who Smoked
Percent of Teens Not Attending School and Not Working
Percent of Teens Who Are High School Dropouts
Race/Ethnicity of Children
Rate of Teen Deaths by Accident, Homicide, and Suicide
Teen Birth Rate

Criteria for Selecting KIDS COUNT Indicators:

1. Data must be from a reliable source. All of the indicator data used in this book come from U.S. government agencies. Most of the data have been published or released to the public in some other form before we use them.
2. The statistical indicator must be available and consistent over time.
3. The statistical indicator must be available and consistent across all states.
4. The statistical indicator should reflect a salient outcome or measure of well-being.
5. The statistical indicator must be easily understandable to the public.
6. The statistical indicator must have a relatively unambiguous interpretation.
7. There should be a high probability that the measure will continue to be produced in the near future.

Source: Excerpted from <http://www.aecf.org/kidscount/kc1999/defs.htm> June 6, 2000

Appendix C: Summary Indicators of Well-being for U.S. Children and Youth, in Trends in the Well-Being of America's Children & Youth

Part I: Indicators of Children's Well-Being

by Child Trends, Inc.

Section 1: Population, Family, and Neighborhood (PF)

Child Population Characteristics (PF 1)

- PF 1.1 Number of children under age 18 in the United States
- PF 1.2 Children as a percentage of the total population
- PF 1.3 Percentage of families with children and distribution of families by number of children
- PF 1.4 Racial and ethnic composition of the child population of the United States
- PF 1.5 Immigrant children
- PF 1.6 Children as a percentage of the dependent population
- PF 1.7 Fertility rate and number of births

Family Structure (PF 2)

- PF 2.1 Percentage distribution of children in the United States by number of parents in household
- PF 2.2 Percentage of all births to unmarried women
- PF 2.3 Children living in foster care

Neighborhoods (PF 3)

- PF 3.1 Residential stability: Percentage of children under age 18 who have moved within the last year
- PF 3.2 Children in poor and very poor neighborhoods

Section 2: Economic Security (ES)

Poverty and Income (ES 1)

- ES 1.1 Median family income
- ES 1.2 The income distribution: The income-to-poverty ratio of families with children, by income quintile
- ES 1.3 Children in poverty
- ES 1.4 Long-term childhood poverty

Financial Support (ES 2)

- ES 2.1 Effect of government cash and near-cash transfer programs on poverty among persons living in families with children under age 18
- ES 2.2 Means-tested assistance: AFDC and Food Stamps
- ES 2.3 Long-term welfare dependence
- ES 2.4 Sources of income and payment of federal taxes for families with children
- ES 2.5 Child support nonpayment

Parental and Youth Employment (ES 3)

- ES 3.1 Parental labor force participation: Percentage of children with both parents or only resident parent in the labor force
- ES 3.2 Maternal employment: Percentage of mothers with children under age 18 who are employed, full-time and part-time
- ES 3.3 Parental labor force detachment: The percentage of children under age 18 with no resident parents in the labor force
- ES 3.4 Secure parental labor force attachment: Percentage of children with at least one fully employed (full-time, full-year) resident parent
- ES 3.5 Child care
- ES 3.6 Detached youth: Percentage of 16- through 19-year-olds not in school and not working

Consumption (ES 4)

- ES 4.1 Housing problems
- ES 4.2 Food security

Section 3: Health Conditions and Health Care (HC)

Mortality (HC 1)

- HC 1.1 Infant mortality
- HC 1.2 Child and youth deaths
- HC 1.3 Youth motor vehicle crash deaths
- HC 1.4 Youth homicides
- HC 1.5 Youth suicides
- HC 1.6 Firearm-related deaths

Health Conditions (HC 2)

- HC 2.1 Healthy births
- HC 2.2 Low birth weight
- HC 2.3 Very low birth weight
- HC 2.4 General health conditions: Percentage of children in very good or excellent health
- HC 2.5 Chronic health conditions
- HC 2.6 Overweight prevalence among children and adolescents
- HC 2.7 Abuse and neglect
- HC 2.8 Suicidal teens: Youth who have thought seriously about or attempted suicide
- HC 2.9 Activity limitations
- HC 2.10 Lead exposure
- HC 2.11 Violent victimization of teens
- HC 2.12 Dental caries
- HC 2.13 Children and adolescents with HIV/AIDS
- HC 2.14 Sexually transmitted diseases among adolescents

Health Care (HC 3)

- HC 3.1 Health insurance coverage
- HC 3.2 Early prenatal care: Receipt of prenatal care in the first trimester
- HC 3.3 Late or no prenatal care
- HC 3.4 Inadequate prenatal care
- HC 3.5 Immunization: Percentage of children ages 19 months to 35 months who are fully immunized

Section 4: Social Development, Behavioral Health, and Teen Fertility (SD)

Social Development (SD 1)

- SD 1.1 Life goals: The percentage of high school seniors who rated selected personal and social goals as extremely important
- SD 1.2 Peer approval
- SD 1.3 Religious attendance and religiosity
- SD 1.4 Voting behavior of young adults
- SD 1.5 Television viewing habits
- SD 1.6 Youth violent crime arrest rates
- SD 1.7 Low-risk teen cumulative risk index
- SD 1.8 Closeness with parents
- SD 1.9 Parents' activities with children

Behavioral Health: Physical Health and Safety (SD 2)

- SD 2.1 Physical fighting by youth
- SD 2.2 Weapons carrying among high school youth
- SD 2.3 Seat belt use
- SD 2.4 Regular physical exercise
- SD 2.5 Sufficient hours of sleep

[Behavioral Health: Smoking, Alcohol, and Substance Abuse \(SD 3\)](#)

- SD 3.1 Cigarette smoking among youth

- SD 3.2 Smokeless tobacco use among youth
- SD 3.3 Alcohol use among youth
- SD 3.4 Exposure to drunk driving
- SD 3.5 Drug use among youth: Marijuana, inhalants, hallucinogens, and cocaine
- SD 3.6 Peer attitudes towards alcohol, marijuana, cocaine and smoking
- SD 3.7 Abuse of alcohol or other controlled substances

Behavioral Health: Sexual Activity and Fertility (SD 4)

- SD 4.1 Sexually experienced teens
- SD 4.2 Sexually active teens
- SD 4.3 Contraceptive use by teens
- SD 4.4 Number of sexual partners
- SD 4.5 Teen pregnancy
- SD 4.6 Abortion among teens
- SD 4.7 Teen births
- SD 4.8 Teen non-marital births
- SD 4.9 Second- and higher-order births to teens

Section 5: Education and Achievement (EA)

Enrollment/Attendance (EA 1)

- EA 1.1 Early childhood program enrollment
- EA 1.2 Grade retention: Percentage of current 2nd graders who were retained in kindergarten and/or 1st grade
- EA 1.3 School absenteeism
- EA 1.4 High school dropouts: Event dropout rate for grades 10 through 12
- EA 1.5 High school completion rates for 18- through 24-year-olds
- EA 1.6 College attendance and attainment

Achievement/Proficiency (EA 2)

- EA 2.1 Reading proficiency for children ages 9, 13, and 17
- EA 2.2 Mathematics proficiency for children ages 9, 13, and 17
- EA 2.3 Science proficiency for children ages 9, 13, and 17
- EA 2.4 Arts proficiency for children in grade 8

Related Behaviors and Characteristics (EA 3)

- EA 3.1 Family-child engagement in literacy activities
- EA 3.2 Reading habits of children and youth
- EA 3.3 Parental involvement in child's school
- EA 3.4 Difficulty speaking English
- EA 3.5 Student computer use

Part II:

[CHANGES IN RISK-TAKING AMONG HIGH SCHOOL STUDENTS 1991-1997:
Evidence from the Youth Risk Behavior Surveys](#)

by Scott Boggess, Laura Duberstein Lindberg, and Laura Porter

Part III:

[MULTIPLE THREATS:
The Co-Occurrence of Teen Health Risk Behaviors](#)

by Laura Duberstein Lindberg, Scott Boggess, Sean Williams

Source: [Trends in the Well-Being of America's Children & Youth: 2000](#) volume. U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation

Appendix D

Summary of Indicators in *State of the Children 2000*

1. Basic indicators:

- Under-five mortality - UNICEF, United Nations Population Division and United Statistics Division
- Infant mortality rate – same as above
- GNP per capita- World Bank
- Life expectancy at birth- United Nations Population Division
- Adult literacy rate - United Nations Educational, Scientific and Cultural Organization (UNESCO)
- Gross primary school enrolment ratio United Nations Educational, Scientific and Cultural Organization (UNESCO)
- Income share (by the 20 per cent of households with the highest income and by the 40 per cent of households with the lowest income) - World Bank

2. Nutrition

- Low birth weight - Less than 2,500 grams. World Health Organization (WHO) and UNICEF.
- Underweight - Demographic and Health Surveys (DHS), Multiple Indicator Cluster Surveys (MICS), World Health Organization (WHO) and UNICEF.
- Wasting – same as above
- Stunting – same as above
- Salt iodization - Multiple Indicator Cluster Surveys (MICS) and UNICEF.
- Vitamin A - Percentage of children aged 6-59 months who have received a high dose of vitamin A capsules within the last six months – UNICEF field offices

3. Health

- Access to safe drinking water and adequate sanitation facilities - Demographic and Health Surveys (DHS), Multiple Indicator Cluster Surveys (MICS), World Health Organization (WHO) and UNICEF.
- Government Funding of Vaccines - UNICEF
- Immunization - EPI - Extended Programme of Immunization: The immunizations in this programme include those against TB, DPT, polio and measles, as well as babies against neonatal tetanus by vaccination of pregnant women. Other vaccines (e.g. against hepatitis B or yellow fever) may be included in the Programme in some countries. Demographic and Health Surveys (DHS), Multiple Indicator Cluster Surveys (MICS), World Health Organization (WHO), and UNICEF.
- ORT use - - Percentage of all cases of diarrhoea in children under five years of age treated with oral dehydration salts and/or recommended home fluids. Demographic and Health Surveys (DHS), Multiple Indicator Cluster Surveys (MICS), World Health Organization (WHO) and UNICEF.

4. Education

- Adult literacy - Percentage of persons aged 15 and over who can read and write. United Nations Educational, and Cultural Organization (UNESCO).
- Gross primary or secondary school enrolment ratio - UNESCO
- Radio and television - United Nations Educational, Scientific and Cultural Organization (UNESCO).
- Net primary school enrolment - Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS).
- Net primary school attendance - Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS).
- Primary school entrants reaching grade five - United Nations Educational, Scientific and Cultural Organization (UNESCO).

5. Demographic indicators

- Life expectancy at birth - United Nations Population Division.
- Child population - United Nations Population Division.
- Crude death and birth rates – United Nations Population Division.

- Total Fertility rate - United Nations Population Division.
- Urban population - United Nations Population Division.

6. Economic indicators

- GNP per capita - World Bank.
- % of population living on less than \$1 a day - World Bank.
- Expenditure on health, education and defense - International Monetary Fund (IMF).
- ODA - Official development assistance - Organisation for Economic Co-operation and Development (OECD).
- Debt service - The sum of interest payments and repayments of principal on external public and publicly guaranteed long-term debts. -World Bank.

7. Women

- Female Life expectancy at birth - United Nations Population Division.
- Adult literacy - United Nations Educational, and Cultural Organization (UNESCO).
- Primary and secondary school enrolment ratios - Demographic and Health Surveys (DHS) and United Nations Educational, Scientific and Cultural Organization (UNESCO).
- Immunization - Demographic and Health Surveys (DHS), Multiple Indicator Cluster Surveys (MICS), World Health Organization (WHO) and UNICEF.
- Contraceptive prevalence - Demographic and Health Surveys (DHS), United Nations Population Division and UNICEF.
- % Births attended physicians, nurses, midwives, or primary health care - World Health Organization (WHO) and UNICEF.
- Maternal mortality ratio - World Health Organization (WHO) and UNICEF.

8. The rate of progress

- Under-five mortality - United Nations Division, United Nations Statistics Division and UNICEF.
- GNP per capita - World Bank.
- Total fertility rate- United Nations Population Division .

Average annual rate of reduction required 1998-2000, to achieve an under-five mortality rate in the year 2000 of 70 per 1,000 live births or two thirds the 1990 rate, whichever is the less.

Source: <http://www.unicef.org/sowc00/statfra2.htm>