

Social Indicators and Public Policy in the Age of Devolution

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Executive Summary

Powerful themes in U.S. social policy are converging in ways that increase the importance of social indicators as public policy tools. The themes driving this transformation are best exemplified by what are termed the *devolution* and *reinvention* movements. Devolution constitutes a shift in program authority from more inclusive levels of government to levels closer to the problems purportedly being addressed (e.g., from the national government to states to local communities). Similarly, the government reinvention movement shifts public sector management from a focus on process and inputs (what organizations and programs do) to a focus on outcomes (what organizations and programs accomplish). The focus on results requires a rather sophisticated use of what we broadly think of as social indicators.

DEVOLUTION AND REINVENTION IN THE 1990s

Contemporary devolution, embodied in the Personal Responsibility and Work Opportunity Reconciliation Act passed in August 1996, is characterized by the following themes: (1) termination of the individual entitlement status of selected income maintenance and service programs; (2) grouping related programs into broad program areas, defined either by common target populations or common service technologies; (3) converting federal contributions for programs from matching formulas into closed-ended block grants so that costs are no longer proportionately shared among local and federal governments; and (4) reducing or substantially transforming the federal role in regulation and rule making, in assuring accountability, and in providing technical assistance to the states. Both the current political climate and federal fiscal constraints for the coming decade make it likely that devolution will continue to evolve.

States and localities are responding by adopting a number of policy tools related to the government reinvention movement. Government reinvention holds that managers, agencies, and even

whole levels of government need maximum flexibility in determining how they respond to the particular needs and changing environments of their populations. Greater responsibility at the state and local level for planning and design requires abundant, high-quality social indicator data at those levels. Common and measurable social goals become the focus for coordinating planning within and across agencies, and between government and private interests within the community or state. Further, accountability between higher and lower levels of government shift management attention from measures of process to measures of outcomes.

Numerous concrete expressions of the reinventing government paradigm have been developing concurrently with devolution. For example, the principle of *outcomes-based accountability* is being applied to a wide variety of circumstances and at all levels of government. Other states have adopted *benchmark programs* to help focus and coordinate efforts across agencies. Benchmarks are broad, measurable social goals, such as lowering the teen birth rate or improving school readiness, that many agencies can have some effect on. At the local level *comprehensive community initiatives* can be found. Still other states are developing more *market-oriented, competitive models* to improve service delivery, where the right to deliver services is competitively bid and performance is judged according to whether the service provider meets contracted performance targets.

THE USES OF SOCIAL INDICATORS FOR SOCIAL POLICY

The social indicator, long a basic tool of social policy, has been employed for many purposes. The emerging forms of social policy development will make distinct demands on the characteristics of the social indicators employed and on the expertise of those who use them. It is important for policy makers to understand the unique features of these uses, and how each relates to the others. Further, it is essential that policy makers develop a common understanding and a common language regarding social indicators, both of which are currently lacking.

We have identified five basic policy-relevant uses of social indicators:

- *description*, for the sake of knowledge about society;
- *monitoring*, to track outcomes which may require policy intervention;
- *setting goals*, a priori to establish quantifiable thresholds to be met within specified time frames;
- *outcomes-based accountability*, to hold managers, agencies, governments, and even whole communities responsible for improving social well-being and for meeting established goals (a.k.a. performance-based management); and
- *evaluation*, to determine which programs and policies are effective (or destructive), and why.

These can be thought of as a hierarchical typology of uses which incur progressively exacting demands.

The result is a sort of Russian-doll format: description forms the outermost shell, evaluation the core, with the three intermediate levels sharing some characteristics of those outside.

When there is active interest in some dimension of social well-being, one which might require a governmental response, the task of description becomes one of monitoring. When social indicators become associated with active policies intended specifically to improve social well-being, monitoring becomes goals setting. When there are consequences associated with failure or success in meeting specified social goals, goals setting becomes outcomes-based accountability. Finally, when those held accountable are asked to demonstrate scientifically the relation between their activities and the social outcomes they are intended to affect, accountability becomes evaluation. Below we describe these uses in turn, and provide concrete examples.

Each of these uses is valuable in itself, and each is becoming more important as devolution proceeds. The technical and political challenges of developing a system of social indicators differs somewhat with each use, generally becoming more formidable as one moves closer to the core of the typology. In general, the need for accuracy, timeliness, and sensitivity to change increases. Social indicators used for accountability and evaluation, unlike those used for monitoring or goals, must in many cases have the capacity to reflect the effects of discrete programs and policies over time. Such

measures are much more difficult to construct, and are more likely to be supported by administrative program data rather than general population surveys or vital statistics. Measures used for accountability, where there can be negative consequences associated with failure to perform, will set more conservative targets more easily reached than those used for goals setting.

As states and localities move to develop their data systems to support social indicators, they must be clear about how they intend to use them. Indicators that are perfectly acceptable for more general purposes may be unsuitable for more politically sensitive and scientifically demanding applications. As states and localities become more experienced using social indicators for governance, the uses to which they are put may evolve toward more demanding applications. The system of social indicators used to support these uses must also evolve to meet the greater rigors of these new applications.

CHALLENGES

We next consider two classes of problems: technical problems associated with the production and use of indicators; and strategic problems associated with the deliberate misuse or mismeasurement of social indicators. The problems we describe here are serious and, if they are not attended to, we believe sufficient to undermine the devolutionary process with all its potential benefits.

Technical Challenges

Quantity. To be successful, those implementing the new programs will require comprehensive systems of child well-being data at the national, state, and local levels. However, data systems at all levels of government fall short of the ideal, and become less adequate as one moves from the national to the state and local levels. Even at the national level, where social indicator data are relatively plentiful, a forthcoming federal report identifies many indicators of child well-being that are either poorly measured or not available at all, including such critical measures as child abuse, school readiness, child mental

health, parent-child interaction, youth criminal activity, and neighborhood quality (Brown and Stagner 1997).

States like Oregon and Vermont, which have been very active in using social indicator data for governance, have put substantial effort into developing new sources of data, and even developing new measures when there were not adequate measures for critical outcomes such as school readiness. Every state and locality that intends to make serious use of social indicators will need to make data development, with its associated costs, a part of its ongoing strategy.

Quality. Indicators may be of poor quality either because they are poor measures (e.g., insensitive, not reflecting the construct they are intended to represent, or otherwise of poor quality psychometrically), or because they are poorly measured due to missing data, misreporting, or nonrepresentative samples. Often poor measurement results when those collecting the information do not see the importance of the data. This is a common problem for indicators based on administrative data: frontline workers are asked to gather data for which they have no direct use, and for which there are no consequences if the quality is low.

Comparability. Comparability of measures across jurisdictions is important for at least three reasons. First, as devolution allows a thousand approaches to social service provision to bloom, it is vital that jurisdictions be able to learn from each other. Second, comparability is needed to perform macroanalytic evaluations of various programmatic and policy approaches that are implemented across many jurisdictions. Third, in most instances, systems of outcomes-based accountability between higher and lower levels of governments require measures that are comparable across the jurisdictions being held accountable so that valid comparisons of relative performance can be made.

Training. Social indicators are tools, and like most tools they require some knowledge and skill to use properly. As devolution progresses, many people will be asked to make responsible use of tools for which they have little training. Lack of training could lead to frustration on the part of users, and to

inefficient use or misuse, all of which can have negative consequences for the social policy efforts that depend on them.

Political Challenges

Political challenges to the successful employment of social indicators as policy guides are substantial, and increase as one moves from less to more politically sensitive uses in our typology (e.g., from monitoring to goals setting, accountability, and evaluation). The pressures to use goals and performance-based accountability strategies for partisan or self-interested purposes rather than as tools of good government are great.

We characterize these political challenges as muddling, gaming, misrepresentation, and manipulation.

- *Muddling (lack of follow-through)*. Key political actors may well speak enthusiastically of the need for accountability, the establishment of social goals, the importance of monitoring social well-being, and so forth. While these will play well politically, there may be a failure to follow through in any sustained manner to establish such programs.
- *Gaming (biased choice of outcomes)*. These are strategies for gaining control over the processes that use social indicators. Those who define social goals and measures of accountability set the terms by which political success is judged. There are strong interests in defining the terms of success in ways which will be more friendly to particular political agendas.
- *Misrepresentation (biased interpretation of results)*. It is common for political agents to use a trend in a social indicator to make claims about the effectiveness or failure of particular policies. Occasionally these claims go well beyond what can reasonably be inferred from the data. The chances for active misrepresentation are strongest in relationships of accountability where the consequences of failure to perform are substantial. They can be particularly strong when those held accountable are also the ones responsible for collecting the data, a common arrangement under devolution.
- *Manipulation (biased choice, collection, and use of data)*. There are many subtle and not so subtle ways to manipulate the collection and presentation of social indicators to one's advantage. These can range from the selective presentation (or nonpresentation) of data for certain years or for certain population subgroups, to the deliberate manipulation of the data collection process.

RECOMMENDATIONS

The challenges that we have outlined are substantial. There is much work to be done in the development of good measures and good data to support these efforts, and for increasing the capacities of all actors (legislators, government managers, citizens) to understand and to use them effectively. Below we make specific recommendations to the federal government, state and local governments, private foundations, and the academic community, all of which have important roles to play in seeing that the promise of social indicators for governance in the coming era is realized.

Federal Government

Under devolution, the need for state- and local-level social indicators will outstrip what is currently available. Although some of these data needs will be unique to each locality, a large proportion of the required measures will be the same across many or all jurisdictions. Further, as we have argued above, there are important benefits to having comparable measures across jurisdictions, for purposes of accountability and the identification of best practices. It makes sense, therefore, that devolution will be best served through some central coordination of data collection and measurement development activities by the federal government. Such an approach can take advantage of economies of scale, and is necessary to produce data which are comparable across jurisdictions.

Under devolution, federal agencies will need to work closely with states and localities to develop and expand federal data collection in ways that will meet evolving state and local data needs. Federal agencies have developed a number of models for producing such data, which include some input from state and local users. Of these, the approach taken by the Centers for Disease Control (CDC) to monitor health indicators within states may serve as a model for data generation efforts under devolution. The Behavior Risk Factor Surveillance System is an annual health survey of adults, with representative samples fielded in every state and the District of Columbia. Each survey consists of the common core

questions developed jointly by the CDC and state health departments. In addition, states may include optional topical modules. The survey is designed to ensure some comparability across states, while providing each state with maximum flexibility to adapt the survey to its own needs.

Federal agencies can open up national surveys to states willing to pay the marginal costs associated with increasing the sample fielded in their state. The CDC is considering opening up its National Immunization Survey (NIS) to states wishing to pay for health-related state surveys of their own design. The NIS is a telephone survey of families with 2-year-old children. In order to identify these families, the CDC screens a very large number of households each year. This screening process could be used as a low-cost means of identifying representative state samples that can be used for other surveys, allowing states to produce surveys much more cheaply than if they started from scratch. (Though based on the screener for the NIS, the effort itself is known as SLAITS, which stands for State and Local Area Integrated Telephone Surveys.) The Census Bureau is considering a similar arrangement when it begins fielding the American Communities Survey. This is a possible replacement for much of the decennial Census, which will be contacting approximately 400,000 households per month when it becomes fully operational in late 1998.

Federal agencies can also support states and localities by providing technical assistance as these entities develop their own administrative and survey data. This is often done in federally coordinated administrative data sources such as the Vital Statistics system and education-related data contained in the federal Common Core of Data. Finally, federal agencies should focus additional and sustained resources to improve the quality of existing social indicators and to develop new measures in important areas where good indicators do not currently exist. In addition, federal agencies should work to adapt existing measures so that states and localities can gather them cheaply, perhaps through existing administrative data systems.

State Governments

As each state moves down its own path, it must understand and make provision for the new data requirements it is generating, and for the training required to develop the requisite skills to use social indicators effectively. Both data development and skills training will cost money at a time when budgets are expected to be tight. The pressures to underinvest in these activities will be strong when funds are needed to support basic services. The ultimate cost of underinvestment in these areas, however, will be ineffectiveness and possible failure.

Although each state will follow its own path, it need not—and in fact, should not—go alone. States can only benefit by forging links with other states, with the federal government, and with research institutions. Under devolution, the diffusion of knowledge and the promotion of cooperative relationships across states will come less from the top down, and more from horizontal links among the states themselves. States have much to gain by creating these links themselves.

Even under devolution, links with the federal government remain an important potential resource for developing social indicator data. States should take full advantage of the existing federal programs to develop state and local data. In addition, states should, as a group, work with federal agencies to define the federal role where data development for social indicators is concerned. Federal agencies represent a great resource for states, and close cooperation and dialogue can define a role that can help states to meet their emerging data needs in a more efficient manner.

Local Governments

Because many states are considering how to devolve responsibilities to local communities, local governments will need to work closely with state agencies to develop the social-indicator data they need and the skills to use them effectively. In addition, localities that are being particularly aggressive in developing comprehensive approaches to service delivery will need to look beyond the state to forge links with other localities pursuing a similar course.

Foundations

Private foundations have played a critical role in raising the profile of social indicators as public policy tools. Through its national and state Kids Count projects, the Annie E. Casey Foundation has fostered the use of social indicators to *monitor* child well-being by groups inside and outside of government at all levels. Kids Count data have become a part of direct government planning in several states, and figure prominently in the policy discourse of many states and localities.

Other foundations have been working to develop the information and the techniques required for policy-related applications of social indicators, and to actively encourage their adoption. The Improved Outcomes for Children Project is a joint effort led by the Center for the Study of Social Policy and the Harvard Project on Effective Services; its funders include the Lilly Endowment, the Pew Charitable Trusts, the Danforth Foundation, and the Carnegie Corporation. This effort has focused on the implementation of goals identification and outcomes-based accountability strategies by states and local communities to improve outcomes for children.

We strongly recommend that foundations continue to fund efforts of this sort, since their importance will only grow as devolution advances. In addition, we suggest several complementary areas where foundations can play a facilitating role. First, as the need for cooperation and information exchange across states and localities increases dramatically under devolution, the mechanisms to accomplish these functions must also evolve. Foundations can provide initial funds to establish these important links across jurisdictions.

Second, we recommend that foundations help the academic community and the policy community to forge stronger links. Developing and refining social indicators where good measures are currently lacking requires basic research. Another important task is the development of cost-efficient means by which states and localities can measure and track these indicators. Academics and policy makers must develop theories and models to direct the use of social indicators for various purposes.

Although we expect that the federal government will help fund such linkages, we believe that foundations must also make investments. Social indicators are by their nature cross-cutting, while federal funding tends to be area-specific due in part to the compartmentalization of its agencies. Foundations have much greater flexibility to support efforts which are by their nature integrative, comprehensive, or cross-cutting.

Academia

Public administrators will be relying on social indicators under devolution. The social and political consequences associated with their use will also continue to increase. It becomes vital, therefore, that governments and communities have at their disposal the most sensitive and accurate measures possible. Academics have a crucial role to play in refining existing indicators and developing new measures. This includes developing new measures and supporting basic research.

Academia, foundations, and government entities must find ways to sustain and increase academic involvement in this area, and to focus that work on issues of greatest importance to those who use social indicators for policy-related purposes. Possible strategies include the establishment of research networks or institutes to focus specifically on social indicators, the development of a cross-disciplinary journal on the subject, and the establishment of specific links between interested academics and policy makers with individual states and localities.

I. INTRODUCTION

Powerful themes in U.S. social policy are converging in ways that increase the importance of social indicators as public policy tools. Although social indicators have typically been employed as descriptive measures of how society is faring, they increasingly function as critical tools for policy development, program design and administration, resource allocation, intergovernmental relations, and for ensuring the proper conduct of program accountability and evaluation functions.

The themes driving this transformation are best exemplified by what are termed the *devolution* and *reinvention* movements. Devolution constitutes a shift in program authority from more inclusive levels of government to levels closer to the problems purportedly being addressed (e.g., from the national government to states to local communities). Devolution, proponents argue, will increase the flexibility of states and localities to design, coordinate, and administer a host of social service programs affecting children, youth, and their families.

Similarly, the government reinvention movement shifts public sector management from focusing on process and inputs (what organizations and programs do) to a focus on outcomes (what organizations and programs accomplish). This new focus is intended to give government managers greater freedom and the capacity to *reinvent* the ways in which they provide services, with the goal of making them more efficient, effective, and better targeted to the needs of their intended populations.

Taken together, the themes of *devolution* and *reinvention* are revolutionizing the way public services are designed and delivered. This revolution is increasing the potential for further changes in public sector management, including:

- outcomes-based accountability,
- systems-wide coordination and integration of social services at the state and local levels,
- performance-based competitive provision of services,
- the democratization of social service design through increased citizen involvement at the community level, and

- greater reliance on the private sector and competitive or market forces to provide services.

Along with these derivative transformations, devolution and reinvention have increased the importance of social indicators in policy making and public sector management. Service-coordination initiatives, for example, typically rely on a set of measurable social goals to focus activities across agencies and to monitor system-wide effectiveness. The competitive provision of services employs performance goals as the basis for awarding contracts. Democratization uses social indicators of child and family well-being as a tool for citizens to monitor government performance, and privatization means that private organizations will have greater need of social indicators in order to plan and target their social support efforts. More than any of the others, outcomes-based accountability strategies rely on tracking social outcomes.

This focus on outcomes or results suggests, and requires in fact, an advanced use of what we broadly consider social indicators. But the need for social indicators is outstripping available data and the resources for data collection; the rules for the appropriate development and application of these indicators are unclear; the opportunities for their misuse are considerable. Governments and researchers face many challenges if they are to take full advantage of the potential of social indicators to improve social planning, governance, accountability, and evaluation activities in this new era.

In this paper we consider the nature of these emerging uses and coincident data needs, and identify best practices for their use in light of existing scientific knowledge. We begin with a look at how the emerging forces of devolution and reinvention are reshaping the ways in which social indicators are used, and their increasing importance as tools for planning, governance, and political accountability. Section III describes the primary uses to which social indicators are put: description, monitoring, goals setting, accountability, and evaluation. Section IV examines the characteristics of good social indicators, and of good systems of social indicators. Section V discusses the promise and potential problems related

to the use of social indicators in the coming era. The paper concludes with recommendations for the federal, state, and local governments, academia, and private foundations.

II. THE CHANGING ROLE OF SOCIAL INDICATORS

Devolution and Reinvention

The recent reform debate in Congress primarily focused on what is termed the “devolution revolution,” of which there are two basic variants. The first might be called *structural* devolution—the formal transfer of control of selected social welfare functions to the states. The second form of devolution might be called *incremental* devolution—an increase in state and local flexibility while preserving elements of formal national control. The recent welfare bill—the Personal Responsibility and Work Opportunity Reconciliation Act of 1996—exemplifies structural devolution while the explosion of federally approved welfare waiver experiments over the past decade represents a form of incremental devolution.

The themes that have defined the devolution revolution in the 1990s are not new to this era, but have a historical context that must be appreciated if one is to fully understand the current activities and their likely consequences in the years to come. Below we offer a brief overview of that history.

Origins and Evolution of “Devolution.” The proper relationship between federal and local levels of government has been a matter of ongoing concern ever since federal grants to states and localities to support education were initiated in the 1700s. The modern federal grant system can be traced to 1887, when federal support was first provided for state and local agricultural extension services. Although additional programs, including those having to do with maternal and child health, vocational education and rehabilitation, and physical infrastructure (e.g., roadways), were launched near the end of the Progressive Era (1914–21), the Depression-motivated Social Security Act of 1935 signaled the most

dramatic alteration of the federal-state distribution of responsibility (Institute for Research on Poverty 1995: 15–24).

Negative reaction to the centralization of power and accountability did not take long to develop. In 1949, the Hoover Commission called for reform of the trend, calling on the federal government to do more through categorical grant programs. President Dwight Eisenhower followed with similar calls for reform in 1955 (Dresang and Gosling 1989). The 1960s, however, saw an explosion of grant programs: between 1960 and 1968, the number of categorical programs and projects increased from 132 to 379 (Institute for Research on Poverty 1995: 1–14). The Great Society era was a particularly fertile period for new programs designed to rehabilitate the poor, to lower barriers to opportunity, to empower impoverished communities and, in some cases, to deliberately bypass state governments.

The Office of Economic Opportunity (OEO) was located in the White House in an attempt to coordinate poverty-reduction efforts across executive agencies. The Model Cities program (1967) was one attempt to allocate federal dollars directly to the affected communities and to foster collaboration at the local level. And the process of bundling narrowly targeted programs into larger bundles began with the creation of health block grants.

But expansion begat countervailing reactions. By the 1970s, the tensions surrounding centralization and decentralization were fully engaged. For many, the limits and constraints of centralization were apparent. The federal government seemed too far removed from the people served, and too fragmented in its structure (an incomprehensible Congressional committee structure and competing executive agencies) to adequately design or manage programs to be delivered locally.

It also appeared that centrally designed, narrowly targeted programs inevitably created problems that were difficult, if not impossible, to overcome. They seemed rigid and inflexible in the face of variation in local circumstances. They appeared uncoordinated and incoherent when the problems they purportedly addressed were multidimensional. Targeting also appeared to create adverse incentives as

individuals and communities altered behavior in ways designed to advantage themselves of federal dollars. The search for finding the correct balance continued.

During the 1970s, the Department of Health, Education, and Welfare (now the Department of Health and Human Services) carried out a number of experiments in service integration designed to coordinate the delivery of services and to allocate resources at the local level in ways responsive to local needs. State fiscal claims on Washington for the provision of social services soared, from several hundred million dollars at the end of the 1960s to an expected \$4.5 billion in 1973 (Wildavsky 1987). In response, the Title XX block grant program combined and capped spending on a number of categorical service programs. The Community Services Block Grant (CSBG) and the Comprehensive Employment and Training Act (CETA) were also efforts to consolidate programs and to devolve decision making to lower levels of government.

The biggest change was the introduction of General Revenue Sharing in 1972. Federally collected revenues would be returned to the states with virtually no constraints. The official rationale was to “return power to states and local governments.” President Richard Nixon in 1973 proposed to cut and consolidate some one hundred existing programs. President Gerald Ford established the Domestic Council Review Group on Regulatory Reform, a body whose initial work laid the foundation for important reductions of federal regulatory control under President Jimmy Carter.¹

The balancing act was never easy. The 1970s also witnessed continued expansion and enhancement of federal authority in many areas. Welfare for the blind, disabled, and aged poor was essentially federalized in the Supplemental Security Income (SSI) program. Food Stamps, a sort of in-kind negative income tax or nutrition income floor, were mandated throughout the country.² By the early

¹This was particularly true in the deregulation of transportation systems like the airline and trucking industries.

²Prior to that point, local governments could choose to participate in the Food Stamp program or run a food commodities program where surplus foodstuffs were made available to disadvantaged households.

1970s, a patched-together social safety net had developed where responsibility was shared across various levels of government. The federal government assumed primary responsibility for cash income support programs for those considered most deserving of help (the aged, disabled, children) and for most in-kind programs such as Food Stamps, Medicaid, and Housing Assistance. Local governments were left with the responsibility for single adults and couples with no obvious disability, through general assistance programs.

Though responsibility for AFDC continued to be shared across government levels, the program drifted toward becoming more of a federal entitlement during this period, subject to increasing oversight and regulatory control by national authorities. Many on both sides of the ideological spectrum argued that an “incomes solution” to poverty was more consistent with a minimalist approach to government. Giving people money was seen as less costly and intrusive, relative to the service-intensive and moralistic approaches that dominated welfare and human service management to this point.³ By the mid-1970s, AFDC had been transformed from a people-changing system to a check-issuing system, which lent itself to centralized administration.⁴

The tenure of welfare as an unfettered entitlement supported by federal guarantees was relatively short-lived. At the beginning of his presidency, Ronald Reagan called for a new federalism and devolution of authority for welfare to the states. A key proposal would have given the main welfare programs to the states in exchange for fully federalizing the financing of Medicaid. Later in the 1980s, states were encouraged to exploit the waiver authority vested in the secretary of DHHS to experiment with changes to the welfare system. The Low-Income Opportunity Board, later the Economic

³President Carter also proposed a national welfare reform, the Program for Better Jobs and Income. The era of “solutions from the center” was clearly over, however, and the legislation had virtually no chance for passage.

⁴It was at this time that Wisconsin developed its automated welfare case management system, known as the Computer Reporting Network (CRN). Caseworkers in local agencies would merely enter client data into a terminal and virtually all decisions regarding eligibility and benefits would be made by the machine and checks issued from the state capitol. Virtually all remaining local discretion was eliminated from the program.

Empowerment Task Force, was created to facilitate the waiver and experimentation process. Finally, the Family Support Act (FSA) of 1988 changed the welfare system through a combination of new federal requirements tempered with the provision of state flexibility in key areas.

The 1990s have seen an explosion of interest in redefining the relationship among levels of government. Still, the record of reform efforts dating back to the 1949 Hoover Commission has been mixed. Various attempts to consolidate and bundle together programs appear to have been offset by the creation of new, targeted programs or set-asides within expenditure areas. And where federal dollars were provided to states with few, if any strings attached, such transfers appear to have been vulnerable to reductions in federal support over time. For example, inflation-adjusted Title XX expenditures (the Social Services Block Grant) fell by 58 percent between 1977 and 1994 (*Green Book* 1996: 680). The desire to move programs closer to the people has proven to be complicated indeed.

Devolution in the 1990s. Contemporary devolution, embodied in the welfare reform legislation passed in August 1996, is characterized by the following themes: (1) termination of the individual entitlement status of selected income maintenance and service programs; (2) grouping related programs into broad program areas, defined either by common target populations or common service technologies; (3) converting federal contributions for programs from matching formulas into closed-ended block grants so that, on the margin at least, costs are no longer proportionately shared among local and federal governments; and (4) reducing or substantially transforming the federal role in regulation and rule making, in assuring accountability, and in providing technical assistance. Both the current political climate and federal fiscal constraints for the coming decade make it likely that devolution will continue to evolve without the level of countervailing centralization that has often followed or even accompanied devolutionary efforts in the past.

All major candidates in the 1996 presidential campaign argued that “the era of big government is over.” Nowhere was that sentiment better expressed than in the bitter debate over welfare reform. At the

heart of the debate was whether the federal government would end a sixty-year commitment to guarantee income support to poor families with children.⁵ Congress gave serious consideration to devolving three major social support programs—AFDC, Food Stamps, and Medicaid—along the lines described above. Only AFDC was fully devolved, though funding for the Food Stamp program was substantially reduced. The block-granting of Medicaid was taken off the table, though it appears likely that it will experience some measure of devolution in the funding reduction in the coming year.

Block-granting has also taken place or is being seriously considered in several other areas. Senator Nancy Kassebaum introduced a bill to consolidate hundreds of youth-related federal programs into a handful of block grants, providing states with greater flexibility in the design and administration of youth programs while reducing the total level of federal funding. Substantial block-granting has taken place in employment and training/job development with the Department of Labor's one-stop-shopping approach.

Even if there is no further formal block-granting of other programs affecting children and their families, there are other more incremental mechanisms through which devolution has occurred and is likely to continue to do so. For example, during the 1980s and early 1990s, the federal government granted waivers to states which allowed them to deviate from federal guidelines in specified ways. In this decade, both the number and the complexity of these waivers increased substantially, to the point where one could plausibly argue that the devolution of AFDC had been largely accomplished by the time the law was signed.

During the 1980s, only a handful of states had successfully obtained waivers despite encouragement from both the Reagan and Bush administrations. Between January 1988 and January 1990, the number of states with waivers doubled from five to ten. Three years later, the waiver state total

⁵In some important ways, this overstates the case a bit. The federal government did become a partner in administering welfare for children in 1935 with creation of Title IV of the Social Security Act. But it did not become aggressive in monitoring state performance until the 1960s.

had crept up to slightly less than twenty. With the advent of the Clinton administration, however, welfare experimentation increased such that by mid-1996, about 90 percent of all states had received at least one waiver to experiment with their AFDC program.

The *complexity* of the state-based welfare demonstrations also increased during this period. In the 1980s, a state would request permission to modify a few provisions of the Social Security Act in order to implement one or two new ideas. As time went on, the demonstrations became bolder and more multidimensional. Wisconsin Works (W-2), a newly enacted welfare replacement initiative, changes virtually every aspect of the AFDC program.⁶

Whither Devolution? Although it is impossible to predict the future of devolution, a number of factors strongly suggest that it will continue to advance. First, fiscal pressures from attempts to balance the federal budget over the next several years will only increase over time. Devolution is, at least for the time being, an attractive way to make the coming budget cuts more palatable to states, using the argument that the increased flexibility provided by devolution will allow states to make more effective and efficient use of the dollars they do receive.⁷

Second, if the 1996 legislation is any indication, the nature of the task embodied in social support programs is changing from that of financial support to changing behaviors. In addition to the law's aggressive work requirements, there are also explicit incentives for states to lower nonmarital birth rates, and requirements that teen mothers continue to live at home. The time limits alone will force states to focus on changing the behaviors of dependent individuals toward self-sufficiency in a timely manner or

⁶It ends the individual entitlement to any cash assistance and replaces most cash benefits with time-limited work-based supports. It decouples child support from AFDC in the sense that total support payments will go to the children rather than to the government to offset program costs. It decouples those portions of Medicaid payments and child care subsidies that were formerly conditioned on AFDC receipt from the welfare program. It changes the whole mission and purpose of agencies, as well as wholly redefines the tasks of operational personnel. Finally, W-2 terminates the government monopoly on the management of welfare programs by, in some circumstances, selecting the local management teams on the basis of competitive bids open to for-profit and nonprofit firms.

⁷Although, over time, tight federal dollars may increase pressure to hold states accountable for results.

face the prospect of supporting (or abandoning) those individuals once their time limits run out. Whereas simple financial support, the cutting of checks, is a task easily and most efficiently handled by a central government, tasks associated with changing individual (and community) behaviors would seem to require a more decentralized approach that can be tailored to local conditions.

Third, state governments will continue to be strong advocates for devolution as long as they perceive that they are benefiting from the arrangement. The increased flexibility and control over program design and budgets offered by devolution is a strong motivating factor to states. Whether and how quickly such factors will eventually be outweighed by an increasing fiscal burden is unclear.

On the other hand, there are reasons to expect that devolution may, over time, produce its own backlash, resulting in pressure to recentralize certain governmental responsibilities. The lack of a national framework could result in new problems for state and local governments. For example, a counterproductive form of interstate competition may emerge in which states (or counties) avoid developing exemplary or generous programs for fear of becoming a magnet for needy populations from other jurisdictions. Over time these pressures could push even the more compassionate and inventive localities toward reduced program efforts. The overall result could be significantly less effective programs accompanied by increased human suffering, resulting in political pressures to recentralize many social support functions.

In addition, it is unclear what will happen when the first major economic recession of the devolutionary era arrives. As in the past, states will experience greater demands for services. States have limited capacities to respond to such increased need themselves since most cannot run budget deficits. The pressure for increased federal involvement will likely be strong, but is unlikely to come without some strings attached.

Finally, devolution is a major social experiment, one based on attractive but largely unproven assumptions about the superior capacity of state and local governments to design and administer

programs in the service of their own populations. With increased flexibility comes increased political and administrative responsibility. The increased political pressures that attend enhanced responsibility for policies and policy results certainly represent important new challenges for state and local governments. The ultimate success or failure of devolution will depend, in part, on the extent to which states and localities can take advantage of this opportunity to reinvent the design and administration of programs.

Reinventing Government. Government “reinvention” emphasizes the outcomes which programs and policies are expected to achieve. Planning, coordination, and performance assessment are all built around these outcome measures. Managers, or governments, are given a great deal of flexibility in how they carry out their duties, but are held responsible for results. This flexibility is valued because it gives those who are most directly involved the capacity to respond in ways which are tailored to particular needs and changing environments. It also forces those who are actually designing and coordinating services to build their policies explicitly around the outcomes for which they are being held accountable.

Numerous concrete expressions of the reinventing government paradigm have been developing concurrently with devolution. The principle of *outcomes-based accountability* is being applied to a wide variety of circumstances and at all levels of government (see Harvard Family Research Project 1996; Roberts 1996; Council of Chief State School Officers 1995). At the national level, Vice President Al Gore has launched a new initiative to reinvent the ways in which the federal government delivers services to the public (Roberts 1996). His plan calls for the establishment of performance-based organizations (PBOs). Managers are to be given substantial flexibility through reductions in the laws and regulations that now constrain them in various ways. In return, their performance will be judged according to their ability to meet annual performance targets. The result, advocates hope, will be more effective services delivered at a lower cost.

Accountability between the federal government and the states has been built into the new welfare reform law. States are offered financial incentives to lower the percentage of children born out of

wedlock without raising the abortion rate. The four or five states that demonstrate the greatest progress will be awarded a total of up to \$100 million (Prosser 1996).

Many states have been developing and instituting reinvention strategies to improve service delivery. Some have adopted *benchmark programs* to help focus and coordinate efforts across agencies. Benchmarks are broad, measurable social goals that many agencies can have some effect on, such as lowering the teen birth rate or improving school readiness. Examples include Oregon Benchmarks, Minnesota Milestones, and Ohio's Children First Initiative. Individual agencies are asked to plan and budget with these benchmarks in mind, and are held accountable for demonstrating in measurable ways how their activities have contributed to meeting those benchmarks. Accountability for results also defines the state-local relationship in many of these states.

Other states are developing a more *market-oriented, competitive model* to improve service delivery, where the right to deliver services is competitively bid, and performance is judged according to whether the service provider meets contracted performance targets. Government agencies may bid against each other and private contractors for the right to deliver any number of social services. In Wisconsin, as part of the state's W-2 welfare reform effort, local government agencies and private organizations are invited to bid for contracts to deliver welfare services. Texas is considering further privatization of its welfare system. This model is also highly dependent on definable and measurable social outcome measures.

At the local level are *comprehensive community initiatives*. These initiatives are based on the assumption that the lives of disadvantaged citizens can be improved only if their multiple and interrelated challenges are addressed in a comprehensive and coordinated manner over a sustained period of time. Great importance is given to the engagement of local stakeholders, and to effective and coordinated planning among all stakeholder groups, including government agencies, private nonprofit and for-profit organizations, interest groups, and the citizenry at large. An explicit model relating service delivery

strategies to intermediate and ultimate social goals identified by the stakeholders, and the means to measure and track progress in all these areas, is considered to be crucial to the success of these initiatives, and to their successful evaluation (Connell and Kubisch 1996). Recent examples include communities involved in the Annie E. Casey Foundation's New Futures Initiative, the Cleveland Community Building Initiative, and some of the local Commissions on Children and Families operating within Oregon.

Devolution provides state and local governments the flexibility to pursue all of these strategies for improving the effectiveness and efficiency of their social services. What's more, all of these strategies depend on the effective and sophisticated use of social indicators. At present, however, either the data or the sophistication to use the data well are, in many cases, lacking. To help develop that understanding, in the next two sections of this paper we discuss in some detail the different policy-related uses to which social indicators are put, and the characteristics of good social indicators. We concentrate primarily on indicators of the well-being of children and their families.

III. THE USES OF SOCIAL INDICATORS FOR SOCIAL POLICY

The social indicator, long a basic tool of social policy, will be employed in ways that go well beyond some of the forms briefly described in the previous section. The emerging forms of social policy making will make distinct demands on the characteristics of the social indicators employed and on the expertise of those who employ them, with differing consequences for the policy process. It is important for policy makers to understand the unique features of these uses, and how each relates to the others. Further, it is essential that policy makers develop a common understanding and a common language regarding social indicators, both of which are currently lacking. The goal of this section is to lay the foundation for this common understanding and common language.

We have identified five basic policy-relevant uses of social indicators:

- *description*, for the sake of knowledge about society;
- *monitoring*, to track outcomes which may require policy intervention;
- *setting goals*, to focus and coordinate activities across agencies, between higher and lower levels of government, and between public and private groups at all levels of government;
- *outcomes-based accountability*, to hold managers, agencies, governments, and even whole communities responsible for improving social well-being; and
- *evaluation*, to determine which programs and policies are effective (or destructive) and, where possible, to shed light on the reasons for success or failure.

These are organized into a typology according to the progressively exacting demands of each use. The result is a sort of Russian-doll format: description forms the outermost shell, evaluation the core, and the three intermediate levels share some characteristics of those outside in addition to their own particular characteristics.

When there is active interest in some dimension of social well-being, one which might require a governmental response, the task of description becomes one of monitoring. When social indicators become associated with active policies intended specifically to improve social well-being, monitoring becomes goals setting. When there are consequences associated with failure or success in meeting specified social goals, goals setting becomes outcomes-based accountability. Finally, when those held accountable are asked to demonstrate scientifically the relation between their activities and the social outcomes they are intended to affect, accountability becomes evaluation. Below we describe these uses in turn, and provide concrete examples.

Description

The most basic function that a social indicator of child and family well-being can perform is to describe the condition of children and families. Social indicators are used for descriptive purposes to enhance our knowledge of society. Unlike the other functions described here, however, there is no

necessary or implied relation to a social action agenda. In this sense, description bears roughly the same relationship to social policy as does basic scientific research.

Social scientists are primarily interested in monitoring social indicators in order to better understand social change. Based on whole systems of social indicator data, social scientists develop macro-social models of the determinants of particular social outcomes of interest (infant mortality, for example). Or, more commonly, the coincidence of two observed social trends (e.g., increasing female headship and increasing child poverty) leads to the generation of plausible (sometimes contending) hypotheses which are then pursued using any of a number of more rigorous research methodologies.

During the 1970s there was a major push in the United States to develop a comprehensive system of child and family indicator measures and the means to track them. Spearheading this effort was the Social Science Research Council's Center for Coordination of Social Indicators. The Center, though cognizant of the more policy-related uses of social indicator data, felt that the primary value of a system of regularly tracked social indicators was its potential for increasing understanding of the dynamics of social change. There was, in fact, a desire to insulate such a system from direct political influences that might distort results.

More recently, the U.S. Interagency Forum on Child and Family Statistics has been working to improve the quality, coverage, and availability of child well-being indicators collected by the federal statistical system. Forum members are working to identify data gaps, and to fill those gaps by developing new measures and incorporating them into existing surveys.⁸ The forum has collectively supported and contributed to the efforts of one of its members, the Assistant Secretary for Planning and Evaluation (DHHS/ASPE) to produce and disseminate a comprehensive annual report on over eighty indicators of child well-being at the national level titled *Trends in the Well-Being of America's Children and Youth*.

⁸One member in particular, the Assistant Secretary for Planning and Evaluation (DHHS), has been providing funds for these purposes, though all members have been actively involved in doing this work.

Another forum member, the National Center for Education Statistics, has for some years produced *Youth Indicators: Trends in the Well-Being of American Youth*, a report that focuses on the lives of students beyond the classroom setting.

While the forum systematically considers the policy relevance of the data it collects, most of its work on social indicators to date has been driven by scientific criteria and scientifically defined needs. This contrasts to data development efforts at the state and local level, which, in many cases, have been driven primarily by policy-related concerns. This is an understandable and even a sensible arrangement, since much of the scientific knowledge gained at the national level will be generally applicable.

Monitoring

While descriptive indicators of children's well-being are intended to inform our understanding, indicators used for monitoring purposes are intended to inform social action as well. In addition to its scientific importance, the outcome or status represented by the indicator must be seen as important by social actors and amenable to change through intentional intervention.

Social indicators used for monitoring purposes provide a means for identifying emerging, waning, and continuing needs of children and their families. The primary consumers of social indicator data for this purpose are governments, political and advocacy groups, and citizens. Policy makers at the national, state, and local levels are increasingly using such information to prioritize and guide government action.

For social actors with a broad social agenda for protecting and promoting the well-being of children, the list of monitoring indicators can be similar in size and scope to one defined for descriptive purposes. Several private organizations now produce reports containing a broad set of national child well-being measures including the Annie E. Casey Foundation's *Kids Count Report*, the Children's Defense Fund's *State of America's Children Yearbook*, and William Bennett's *Index of Leading Cultural Indicators*. State-level organizations which are part of the Annie E. Casey Foundation's Kids Count

project produce annual reports about children in each of the fifty states and the District of Columbia. Other private organizations produce regular reports on particular subjects, such as the American Health Foundation's *Child Health Report Card*, and the National Center for Children in Poverty's *Five Million Children: A Statistical Profile of Our Poorest Young Citizens*.

The New Federalism project, a privately funded, joint effort of the Urban Institute and Child Trends, Inc., is monitoring trends in child and family well-being, and trends in social policy formation in all fifty states, with particular attention being given to twelve states. The monitoring of social indicators of child well-being that may be affected by devolution, including the gathering of new measures through a privately funded survey, plays a prominent role in this project. Though attempts will be made to explicitly tie changes in social policy to observed changes in levels of child well-being, the primary goal of the project is simply to monitor seminal trends during an era of great social change. Project reports that use these social indicators will begin to appear later this year.

Government agencies also monitor well-being for a variety of purposes. Some monitoring efforts are very specific and highly targeted. For example, the federal government recently began producing annual child poverty estimates for school districts to help determine the distribution of funds under Title 1. The Centers for Disease Control and Prevention's (CDC) communicable disease surveillance system tracks a variety of communicable diseases and works with state and local health departments to respond to outbreaks.

Other federal monitoring efforts are broader and intended to inform policy in a more general way. In addition to their tracking system, the CDC works with many states and cities to field specialized health surveys to monitor health-related behaviors of the general population, including

- The Youth Risk Behavior Survey, currently fielded in public high schools in some thirty-nine states and sixteen cities, and four U.S. possessions, which tracks trends in a variety of health behaviors like drug use, sexual practices, diet, exercise, and the use of safety equipment.
- The National Immunization Survey, which provides annual estimates of immunization rates among 2-year-olds for each of the fifty states.

- The Pregnancy Risk Assessment Monitoring System, currently fielded in nineteen states, provides information on prenatal care, pre- and post-natal maternal behaviors, infant health, and receipt of well-baby care.
- And the Behavior Risk Factor Surveillance System, currently fielded in all fifty states, which concentrates primarily on adult health behaviors, though some information relevant to child health is also collected.

Since 1969 the U.S. Department of Education has conducted national surveys of educational achievement on many subjects including reading, writing, mathematics, and science. These surveys, known collectively as the National Assessment of Educational Progress, are administered every two years to a representative sample of 4th, 8th, and 12th grade students. (The subject areas tested—math, reading, science—vary from year to year.) Since 1990, assessments have also been produced for individual states wishing to participate. As of 1994, forty-four states, the District of Columbia, and Guam participated in the survey.

Many local areas have organized and developed their own geographic information system (GIS) databases that record measures of well-being down to the neighborhood level. These databases usually include both direct measures of child well-being and contextual measures, the neighborhood characteristics known or believed to affect the well-being of children. An extensive GIS database has been constructed for Cleveland to support the Cleveland Community Building Initiative. In addition to decennial Census and vital statistics data, this database includes information from many local sources—administrative data from social service agencies, crime data from the police department, and information gathered from original surveys of residents and businesses are some of the sources (Center on Urban and Social Change 1996).

Cleveland and six other cities with fairly advanced neighborhood indicator systems (Atlanta, Boston, Chicago, Denver, Oakland, and Providence) are working with researchers from the Urban Institute to improve methodologies for building such systems (Urban Institute 1995). These data systems are used extensively for local services planning.

Goals

Another basic function of social indicators is the effective monitoring of progress toward the social goals adopted by governments, agencies within governments, and/or whole communities. Goals serve as focal points around which to organize social action in an effective and coordinated manner. Unlike simple monitoring, goals are associated with an active plan to improve social well-being along one or more specified dimensions. Even broad, general goals (e.g., all children will be healthy) are typically related to concrete, measurable objectives to be reached over a specified period of time, like these from Minnesota Milestones: by the year 2000 90 percent of all 2-year-olds will be fully immunized, only 3.5 percent of newborns will be born low birth weight, and only 35 percent of 12th grade students will report using alcohol or illegal drugs within the previous month.

Goals often serve as *management tools* for focusing activities within particular agencies, for coordinating activities across governmental agencies and between those agencies and community nongovernmental organizations (NGOs). Goal setting can also be used to *create consensus* among stakeholders whose cooperation will be needed for effective social action. Indeed, this is often a necessary step for effective management. In such cases goals must be identified from the ground up rather than being imposed from the top down, reflecting the interests of the stakeholders. Increased program flexibility under devolution will create new opportunities for designing programs that better reflect the goals of local stakeholders, and for redesigning social support systems that more efficiently and effectively serve local needs.

The jump from social indicator as monitoring tool to social goal is a large one. Goals are intended to affect the distribution of budgetary resources, the design and implementation of program strategies, and the formation of basic policy, often across many agencies and organizations. To be effective, they require the active cooperation of many stakeholders. As a result, the lists of social indicators which are used as goals tend to be considerably shorter than those compiled for monitoring or

descriptive purposes. In addition, because the consequences associated with their use are more profound, it is particularly important that such measures be valid, sensitive, and accurate barometers of the conditions of interest. (We discuss the characteristics of good social indicators in the next section.)

The federal government has launched and sustained several major goals projects, including Healthy People 2000 and Education Goals 2000. Healthy People 2000 is a ten-year plan to improve the health of the U.S. population. The plan consists of 298 health objectives with specific target levels for each objective. One objective is to reduce the proportion of 20–24-year-olds who smoke from 30 percent in 1987 to 15 percent by the year 2000 (National Center for Health Statistics 1995).

The U.S. Public Health Service, the 50 state health departments, and over 270 national organizations participated in a three-year process to develop these objectives. States and communities are encouraged to adopt their own Year 2000 objectives modeled on the national effort, and to develop systems for monitoring progress toward meeting state and national health goals. Participating states set state health objectives and developed plans for meeting them. Each state sets its own target levels, with differences across states in part reflecting their different starting points for particular outcomes (e.g., some states have higher rates of smoking than others).

Over three hundred professional, private, and voluntary NGOs are also involved in this initiative at the national level through the Healthy People 2000 Consortium, many with their own programs to advance project goals. Healthy People 2000 has led to the development or enhancement of numerous data collection efforts designed to track progress toward these goals at the national, state, and local levels.

In 1989 President George Bush and the fifty state governors adopted six National Educational Goals. These goals, plus two others, were adopted into law in 1994 as part of the Goals 2000: Educate America Act. The goals include the following.

- All children in America will start school ready to learn.
- The national high school graduation rate will increase to at least 90 percent.

- All students leaving 4th, 8th, and 12th grade will demonstrate competency in areas including reading, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography.

Although state participation in the program is strictly voluntary, federal grants are available to all states submitting approved plans for improving educational outcomes related to these goals, and for developing, field-testing, and evaluating state assessments to measure progress toward the goals. States may develop their own standards as long as they are comparable to or higher in rigor and quality than the national standards. As in Healthy People 2000, states set their own target levels for each specific goal.

Many states have developed their own goals-oriented programs independent of, though often encompassing, these national efforts. Two of the most comprehensive and well-known state plans are Oregon's Benchmarks program and Minnesota's Milestones, both of which set goals encompassing well-being for the entire state population. Some states have comprehensive programs targeted specifically toward children. The National Center for Children in Poverty's Mapping and Tracking project has identified such programs in eight states. The more active of these programs include Vermont's Success by Six, and Ohio's Family and Children First.

The Oregon Benchmarks program, the oldest and most developed of these initiatives, contains over 92 specific benchmarks for personal well-being, quality of life, and economic development. Over 20 of these benchmarks are related to child well-being. These benchmarks are used to set budget priorities and to act as focal points for program development within and across agencies. Agency budgets must be justified in terms of their relationship to core benchmarks relevant to each agency's mission.

The Oregon Progress Board, consisting of the governor and eight of his or her appointees, is charged with identifying measurable, quantifiable, and achievable goals, and to track progress toward those goals (reports are to be made to the state legislature every two years). The list of benchmarks continues to evolve, thanks to input from the state legislature and from the public through a public comment process.

When data are not available to measure particular goals, the board seeks means to develop such data. Several state-representative surveys have been developed and fielded specifically to monitor personal well-being, including the Oregon Population Survey, the Oregon Literacy Survey, and the Oregon Statewide Assessment (an annual educational assessment of children in grades 3, 5, 8, and 11).

Local municipal governments and community organizations are encouraged to participate in the Benchmarks process. For example, the Oregon Commission on Children and Families was founded in 1993 with the mission of empowering local communities to improve the lives of their own children through comprehensive community planning efforts guided by a concrete set of benchmarks adopted by each community. There are currently thirty-six local commissions representing each county in the state. State and local commissions have jointly identified and adopted ten core benchmarks. In addition, most local commissions have identified their own child benchmarks to guide planning efforts. The state commission works with local commissions, providing county-level benchmark data when they are available. Individual local agencies (e.g., health, education) also work directly with state agencies developing local goals as well as the means to track and achieve them, often, though not always, in coordination with the local Commission on Children and Families.

Outcomes-Based Accountability

Social indicators used for accountability are essentially goals with consequences attached to them. There is a contractual element (explicit or implicit, voluntary or involuntary) where one party holds the other responsible for achieving specified socially desirable goals. For example, the federal government may hold states accountable for achieving preselected goals in a program area; states similarly may hold counties accountable; counties may hold service providers accountable, and so forth. Consequences may include sanctions for failure, rewards for success, or both. Intergovernmental relationships based on accountability of outcomes assume that there is, in principle, a causal relationship

linking the actions of those responsible to the outcomes deemed important. That causal link is often assumed, however, with no rigorous attempts to link actions to outcomes analytically.

Relationships of accountability can be based on measures of process (e.g., how well one executed the intended action or program), on measures of outcomes (on the dimensions of social well-being that the programs or policies are ultimately intended to affect), or on systems of measurement which include both. Relationships of accountability based on outcomes have the advantage of providing the actors with programmatic flexibility while still holding them accountable for results.⁹ The devolution revolution, as we have described it, has been motivated in part by the belief that providing such flexibility to actors at the state and local levels is one key to improving the effectiveness of social programs and policy. It is said to allow those responsible the freedom to design courses of action tailored to the needs of particular groups they serve, and the flexibility to change course in response to changing circumstances. It can also encourage innovation by allowing for a variety of approaches by different actors. As a result of the new flexibility ushered in by devolution, many relationships between levels of government that had been defined in part or in whole by *process accountability* (e.g., on how well one implemented a prescribed or previously agreed-upon program design) must now be defined by *outcomes accountability* if accountability is to be maintained.

This flexibility of process is bought at a price, however, in terms of the knowledge that is generated. Outcomes-based accountability that does not also include an explicit evaluation component cannot produce certain knowledge of best practices, of what works, though it may be used to identify *best practitioners*, persons or organizations who build up successful track records over time. It can also be used to flag approaches that may be particularly promising or particularly damaging, which can be targeted for formal evaluation (described below).

⁹For more a more in-depth discussion of outcomes-based accountability, see Schorr et al. 1995.

The additional burdens placed on accountability measures relative to goals substantially shapes both the types of measures chosen for such purposes, and the target levels. A social goal may be broad, requiring the work of many actors to achieve over a long period of time. An accountability measure, on the other hand, must be defined such that the actions of an individual actor can be reasonably expected to produce changes in the measure, usually in a relatively short period of time. Further, it requires that the impact of other actors can be factored out in some way, either statistically or through careful definition. As a result, good outcome-based accountability measures can be far more difficult to identify and operationalize than goals.

Accountability measures tend for several reasons to set more conservative targets than do goals. Goals often (and many would argue rightly) express a society's more lofty and ambitious desires for the future: for example, that every child will come to school ready to learn by the year 2000. Accountability measures, by contrast, must pay greater attention to what is realistically achievable. It is one thing to condition state education financial assistance on improving high school graduation rates, quite another to condition aid on 100 percent graduation rates. In addition, those held accountable have a strong interest in minimizing expectations, and since they often help shape definitions and set target levels for such measures, they are frequently able to negotiate targets that fall short of what might be achieved.

Federal-State Relationships. One result of devolution has been that accountability measures are shifting away from those assessing process or effort to those reflecting outcomes or results. (At the same time, there has been a move in the direction of less accountability of any sort.) For example, under the old AFDC system, states were held accountable for how accurately they applied the rules in making eligibility determinations. Poor execution could result in reductions in federal funds to the state. Under the Temporary Assistance for Needy Families Block Grant (TANF), which replaces AFDC, states are to be held accountable, through a combination of budgetary sanctions and positive incentives, for results

ranging from reaching target employment levels among assistance recipients to lowering the nonmarital birth rate.

State-Local Relationships. Devolution is also being pursued in many state capitals, and is likely to move forward even more rapidly in light of the new welfare reform laws. Examples include block-granting funds to local governments, and the establishment of local commissions to coordinate child and family services across agencies and between local agencies and private community organizations (see Gold and Watson 1996). Efforts to enhance local accountability and performance typically require the reporting of selected indicators of child and family well-being to the state, as well as their use for purposes of goals identification, planning, and program design by the localities. As of yet there are few cases where explicit sanctions are attached to poor performance as measured by the social indicators, though clearly these relationships are being structured with the assumption that localities will be held responsible for achieving results at some level.

By way of example, the state of Oregon has set up local commissions on children and families in every county. These commissions receive funding and technical assistance from the State Commission on Children and Families. Each commission identifies a minimum of eleven child well-being benchmarks (outcomes) that they will target. The commissions are charged with “conducting needs assessments, planning and coordinating local and state services, distributing and coordinating funding streams, encouraging citizen involvement, and promoting services integration and systems reform” (Bruner, Both, and Marzke 1996). At present, failure to meet benchmark standards will result in additional technical assistance from the state commission. Eventually, however, county commissions may face financial consequences for long-term failure to achieve goals.

In 1995, the state of Minnesota passed legislation to encourage the development of collaboratives made up of local government, schools, and community organizations. These groups are to produce agreements to consolidate some or all state funds currently earmarked for a wide variety of separate

social support programs under the purview of the newly created Minnesota Department of Children, Families, and Learning. The collaboratives have flexibility in spending the funds, as long as the funds are used to achieve the goals of what had been distinct programs and funding streams, with outcome indicators reported to reflect progress toward those goals. Examples of similar initiatives are North Carolina's Partnership for Children, Ohio's Families and Children First Initiative, and California's Youth Pilot Program. (See Bruner, Both, and Marzke 1996 for a recent review of these initiatives.)

The Massachusetts Department of Education has proposed regulations that would allow the state to take over individual schools or entire school districts judged to be underperforming. Schools could be classified as underperforming based on one or more of the following conditions: student academic performance below minimum standards, high dropout rates, low attendance rates, loss of accreditation, operational deficiencies, or noncompliance with state or federal laws.

Other state-local initiatives using outcomes accountability are designed to improve local service provision through enhanced market-style competition among such groups. For example, under Wisconsin's W-2 welfare program, local government agencies will compete with each other and with private service providers to administer the welfare program in their county. The contractor will be given broad discretion in administering the program, and will be judged by broad outcome or performance criteria set at the state level. It is unclear whether these will include measures related to the well-being of children, though this has been under discussion.

Finally, outcomes accountability related to agency performance within a single stratum of government has also been gaining popularity at both the federal and state levels. In March of 1996 Vice President Gore announced a new policy to establish performance-based organizations (PBOs) within the federal government. Such organizations would "dramatically change" the ways in which services are delivered to the public, providing federal managers greater operational flexibility in exchange for performance evaluations based on success in meeting annual performance targets (National Performance

Review 1996, cited in Roberts 1996: 1). Up to eleven federal organizations have been identified as potential candidates for the initiative. (For a listing of these agencies, and for an informed analysis of the possibilities and limitations of this approach, see Roberts 1996.) Of the potential pilot agencies, only the Federal Housing Administration provides services that are directly related to the well-being of children and their families, but the initiative envisions substantial expansion to other agencies over time.

Several states have taken steps to implement a performance-based budgeting process in which agencies are held accountable for results, and where ineffectiveness or failure to perform results in lost revenues and/or program termination. For example, Texas has developed a statewide strategic plan called Texas Tomorrow. Under this plan, state agencies will be held accountable for advancing specified state goals, and will be funded according to demonstrated agency performance in obtaining outcomes specified in their agency strategic plans. Statewide goals for children and families were developed in consultation with the relevant state agencies, advocacy groups, and public testimony (see Council of Chief State School Officers 1996). In response to recent budget shortfalls in Oregon, state agencies, which were asked to cut their budgets by 20 percent, have been given the opportunity to win back some of those cuts for programs that are directly linked to state benchmarks. All agencies are now required to identify specific agency performance measures tied to benchmarks as part of their annual budget plan. (For more detail, see Bruner, Both, and Marzke 1996 and Oregon Progress Board 1994.)

Citizen-Politician Relationships. In a democracy, the notion of accountability is inherent in the relationship between citizens and elected officials at all levels of government, with the ballot box as the ultimate accountability mechanism. The accountability measures that define that relationship are often though not always vague and can change over time with the shifting concerns of the electorate.

Private organizations are working to increase citizen access to child well-being data for their own communities and states, and for the nation. For the last six years the Annie E. Casey Foundation has produced an annual report on the condition of children, with data for each of the fifty states. In addition,

the foundation has funded alliances of interest and research groups in every state to produce and disseminate annual reports on the children of that state, including data for individual counties. These reports are intended to serve multiple purposes, including providing citizens with the information they need to hold state and local officials accountable for improving the well-being of children. Massachusetts Kids Count is organizing community groups across the state to use local data provided by Kids Count for this purpose (Children's Advocacy Board 1994).

Evaluation

Causal evaluations of programs and policies are our only means of building a knowledge base of which approaches work and why. This knowledge is essential if governments and communities are to take advantage of their own past experience and the experience of others to identify and adopt best practices. In addition, systems of accountability are greatly strengthened by providing a scientific basis for linking efforts to outcomes.

Traditionally, social indicators have played a limited role in the formal evaluation of programs and policies. They have functioned primarily as early warning systems, identifying potentially promising (or potentially dysfunctional) programs deserving of rigorous evaluation. This is an important role, and one whose significance will increase under devolution as the number and type of policy experiments at the state and local level expands.

Social indicators have rarely served as evaluation tools in the approaches that have been developed over the last thirty years: experimental method, pre-post and comparative models, multivariate analyses of national data. These methods have usually relied on microanalytic techniques using individual-level data, rather than macroanalytic approaches using aggregate data. Social indicators are, by contrast, typically used in the form of aggregate measures reflecting the condition of population subgroups.

During the past six or seven years, however, policy evaluators have formulated a macroanalytic approach that depends explicitly on social indicators for both intervening and outcome measures. These *theory-driven* or *theories of change models* have been developed to apply to policy experiments where, by design, no counterfactual can be generated (Connell and Kubisch 1996; Chen 1990). Such is often the situation for programs intended to affect an entire community, and/or where multiple system changes are occurring simultaneously. To date, such evaluations have been applied to a number of comprehensive community initiatives. The approach is still being developed, however, and is not without its critics.

The forces of devolution and reinvention are fostering conditions in which it will be easier to initiate comprehensive, pan-systemic policies at the state and local level. To the extent that this happens, the importance of theory-driven approaches (and therefore social indicators) to evaluation will only increase. Below we briefly review traditional approaches to evaluation, followed by description of the theory-driven approach.

Traditional Methodological Approaches to Evaluation. The goal of evaluation is to identify whether a program or policy works, how it produced its effects, and for whom. Many approaches have been used separately and in combination to explore these questions. (For a more detailed treatment of these issues, see Hollister and Hill 1995.) To measure program impact, all traditional evaluation strategies depend on the identification of a counterfactual, on what would have happened in the absence of such a program (or if some other program had been in effect). The counterfactual must be identical to the treatment group in all respects *except* for the program, meaning that all differences must be accounted for or “controlled” in some fashion. There are a number of methodological alternatives for creating such counterfactuals.

Experimental method. The experimental method is widely considered to be the most effective means of creating a valid counterfactual (Miller, Card, Paikoff, and Peterson 1992; Campbell and Stanley 1963). The method is based on the random assignment of individuals to treatment and control groups. If

based on large enough samples, the random assignment procedure assures that the two groups will be identical in all respects relevant to the evaluation. Further, the two groups must have identical social contexts that remain identical in all respects with the exception of participation in the program being evaluated.

But this otherwise highly desirable method does have several limitations. First, it is not always possible to create conditions where the environments of the experimental and control groups are identical except for the program. This is particularly true for policies intended to affect entire communities, where in a sense *everyone* is a member of the treatment group.

Second, although a properly designed and executed experimental evaluation can tell researchers definitively whether a program had the desired impact and at what level, *how* the program produced this impact is more difficult to determine. Particularly for programs that are more comprehensive and multidimensional, we are left without guidance if complementary methods, such as interviews with staff and those receiving services, must be used to “get inside the black box.”

Pre-post method. A commonly employed alternative is the pre-post design. For evaluations at the micro level, one would compare measures of individual well-being prior to program participation with measures for the same individuals after program participation. For macroanalyses at the community level, one would compare aggregate measures of well-being for the target population before and after program implementation.

The viability of this method depends on the analyst’s ability to control for other factors that may also have changed during the program implementation period and which may affect the outcomes of interest. To take a simple example, evaluations of welfare-to-work programs employing a pre-post design must account for changes in the local low-wage labor market that could affect employability independent of the program. Such factors can be controlled for statistically by various means. (Interrupted time series methods are often used for such purposes [Hollister and Hill 1995].) A successful pre-post evaluation

requires both a strong theoretical model to identify these factors and data which adequately measure them, requirements that are often difficult or impossible to meet.

Other comparative methods. Most other traditional methods depend on statistical matching techniques to identify suitable comparison groups. This is often accomplished by choosing communities that are similar to the treatment community in initial characteristics and in terms of the larger contextual influences likely to be experienced by the communities during the evaluation period. Communities are commonly matched along demographic characteristics, and on similarity of social support systems (with the exception of the program to be evaluated). In short, the goal, is to recreate the experimental-control group situation using statistical matching rather than random assignment.

To be effective, this approach also requires strong theoretical models and good data. Even when such criteria are met, however, the approach is vulnerable to major, unexpected events in the comparison community, such as a plant closing, which cannot be incorporated into the evaluation model (see Hollister and Hill 1995).

Other approaches identify comparison groups within the treatment community, comparing those who participate in the program under evaluation to those who were eligible but chose for one reason or another not to participate. The weakness of this approach is that there is typically some difference across the two groups that motivated members of one group to participate and the others not. Selection models have been developed and employed to control for such initial differences (e.g., Heckman 1979), though they often do an inadequate job of controlling for unobserved differences between the two groups.

Multivariate analyses of national data sets. Instead of focusing on a single program in a particular community, this approach tries to take advantage of variation across many sites to identify programs and policies (or aspects of those programs and policies) that affect the well-being of particular groups. Multivariate analyses are common for large, nationally representative microlevel data sets that also include state and/or community-level economic, demographic, and policy or program characteristics.

Such approaches have been used, for example, to evaluate the impact of state policies related to teen birth (Moore et al. 1993), child support (Pirog-Good 1994; Garfinkel and Robins 1993), and welfare benefit levels (Moore, Morrison, and Gleib 1994).

The same approach can also be used for macrolevel analyses using aggregate data (including social indicator data for outcomes) to relate aspects of particular programs to the well-being of various population groups. This approach is common in the econometrics literature, but we know of no examples in the policy evaluation literature.

Like the other nonexperimental approaches discussed here, analyses of natural variations across sites are dependent on strong theoretical models. They are also highly dependent on the existence of comparable, high-quality measures of all relevant community or state characteristics. This is often a stumbling block, particularly for macrolevel analyses. Their strength, relative to the other nonexperimental approaches, is that they incorporate the experience of many communities, which makes the analyses less vulnerable to unexpected events in any particular community. In addition, and in contrast to simple experimental studies, they can begin to tease out which elements of complex programs seem to be driving program results.

Theory-Driven Approaches to Evaluation: Beyond the Counterfactual. The number of states and communities that are reorganizing entire systems of service delivery to improve the well-being of children and their families has increased substantially since 1992. These include comprehensive goals-driven initiatives such as Oregon Benchmarks, as well as community-level initiatives such as the Annie E. Casey Foundation's New Futures, and the Pew Charitable Trusts' Children's Initiative.

Such initiatives typically target a broad set of long-term goals. Often, the goals are restricted to particular age ranges (e.g., children under the age of six) or socioeconomic strata (e.g., low-income children and their families). In pursuit of these goals, such initiatives change the content of the many programs affecting the target population, and the ways in which these programs work together. Often,

coordination extends beyond the boundaries of government to include many private organizations within the community, making the initiative truly comprehensive.

These initiatives are difficult to evaluate for several reasons. First, they are designed such that all members of the target population are to be affected, precluding experimental evaluation designs. Second, there are multiple, interrelated program changes which are intended to produce changes along many dimensions of social well-being. The nature of the changes is likely to differ substantially from site to site, complicating the identification of a counterfactual.

In response, theorists have been developing an alternative method of evaluation that does not require a counterfactual, and which is more appropriate to the multiple inputs-multiple outputs nature of these initiatives (Connell and Kubisch 1996; Weiss 1995; Chen 1990). This *theory-driven* or *theories of change* approach depends on the development of an explicit model relating the complex programmatic changes to intermediate and long-term changes in the well-being of the target population. Each element of programmatic change is linked causally to the outcomes it is expected to affect. The theories of change underlying the model are judged according to the cumulative evidence of actual outcomes for the many hypothesized linkages in the model (see Connell and Kubisch 1996: 16).

Although this approach may seem foreign to those well-versed in counterfactual methods, Connell points out that theory-driven models are well established in the physical sciences.¹⁰ In addition, it has some methodological similarities to social science-based approaches to microsimulation modeling (see Citro and Hanushek 1991). A weakness of the approach, however, is the lack of a strong theory of community dynamics, which would seem to be a prerequisite for the successful application of such models in evaluations. Nevertheless, it is hoped that such approaches, if implemented, will build the theoretical knowledge over time.

¹⁰Connell, personal communication with B. Brown.

Aggregate social indicators of well-being are integral tools of this approach to evaluation. They represent the intermediate and long-term goals of each initiative, and are the ultimate measuring sticks for the initiative's success or failure. The outcomes are identified through a process which includes all relevant stakeholders in the community, in consultation with the evaluator, who draws on his or her knowledge of scientific theory. A similar process is undertaken to identify the expected linkages between program change and the social outcomes. Thus the model is grounded in science and in the community's expectations. The proper relationship between these two forces is a matter of ongoing debate within the literature.

The Cleveland Community Building Initiative is an example of a comprehensive community initiative that is attempting to use this theory-driven approach to evaluation.¹¹ The Initiative began in 1994 and involves four Cleveland neighborhoods. Village councils made up of residents, business interests, and representatives of local social service agencies identify neighborhood goals and the local resources and strategies that can be employed to meet these goals. The Center for Urban Poverty and Change at Case Western Reserve University is working with the councils to identify their underlying theories of change, assisting them to make underlying assumptions explicit and testable. In addition, they have produced a substantial neighborhood database that assists neighborhoods in identifying assets, and which will be used to evaluate their programs over time. Local administrative data, census, vital statistics, and data from other standard sources are augmented with neighborhood surveys used to monitor specific issues. A baseline report is due out in the summer of 1997. It will be several years, however, before evaluation results will be available from the project.

¹¹There are a number of comprehensive community initiatives whose evaluations are being undertaken. For a review, see Walsh 1997.

The Different Uses of Social Indicators: An Example

To clarify the distinctions among the various uses of social indicators described above, we look at a familiar data item, the child poverty rate.

- *Descriptive use.* Data on the child poverty rate (trends over time, differences across population subgroups) can give us meaningful information about children's lives. Used in conjunction with other indicators, such data can even enhance our understanding of how society functions. If these data are used in a purely descriptive manner, however, it is not intended that they will have any direct impact on policies for helping children.
- *Monitoring use.* The child poverty rate can be followed with the idea that society is interested in and capable of lowering that rate if it reaches a certain level (though that level may not be commonly agreed upon). The use of indicators to inform policy at such a general level is best described as monitoring.
- *Goal-setting use.* As a matter of policy, we can take the monitoring function a step further by setting a normative goal to be achieved. Goal setting can be explicit or subtle. It is not inconceivable that a political body would establish the objective of cutting child poverty in half by a certain date, or set a goal of not permitting child poverty to worsen as welfare reform is being introduced. How the goal is expressed is less critical than the fact that a standard of acceptable performance has been articulated in advance.
- *Accountability use.* The stakes are raised when success in meeting a goal is rewarded and/or failure punished. States that reform welfare and reduce child poverty might receive more federal dollars; those states where child poverty increases by some amount might be subject to fiscal penalties and/or bad publicity. Clearly, we would now have monitoring, goal setting, and the introduction of real *consequences* for how a state performs.
- *Evaluative use.* We can hold a state, county, agency, or program accountable for performance even if we do not know for sure they are responsible for success or failure—for child poverty going up, down, or staying the same. However, when we go beyond responsibility to understanding whether a particular policy approach actually lowered the poverty rate that we have been tracking, we have moved to a level where we wish to establish causal links between policy initiatives and outcomes.

Moving from level to level—from describing to monitoring, to setting goals—increases the importance of actual numbers or rates (i.e., child poverty rate) to the policy-making and public-management processes. Not surprisingly, the need for quality numbers, or indicators, is critical. If child poverty is used merely in a descriptive sense, flaws in the way it is conceptualized and measured may be of interest but not of great social importance. But when we use an indicator to hold entities responsible or decide

whether programs are useful or not, we had better know what we are measuring and be confident that it is what we think it is.¹² High-quality indicators are needed.

IV. CHARACTERISTICS OF GOOD SOCIAL INDICATORS: SCIENTIFIC AND PRACTICAL CONSIDERATIONS

In the previous section we explored the different policy-related uses of social indicators. Regardless of the uses to which they are put, all indicators must have certain characteristics if they are to be scientifically valid and useful in the real world. The consequences of using poorly constructed or otherwise inadequate measures can be disastrous for any policies which depend on them for information and guidance. The development and scientific vetting of desired measures and their accurate measurement will represent major challenges to those seeking to advance the use of social indicators for policy-related purposes in the coming decade.

Next we focus on indicators of child and family well-being.¹³ We begin with a discussion of existing scientific theories of child well-being, which are at the core of all systems for assessing child well-being. Next we discuss the role of empirical research in providing the evidence for identifying strong social indicators. We then discuss technical considerations related to the development of concrete measures (validity and reliability), and finish with a limited set of practical considerations that make for useful social indicators.

Theories of Child Well-Being

A system of child indicators ideally ought to be grounded in a comprehensive model of child well-being. All of the existing comprehensive models use some version of the whole-child perspective, a

¹²How to attain the most accurate measure of poverty (or child poverty) is the subject of an ongoing debate. See Citro and Michael 1995.

¹³The work in this section draws substantially from Moore 1995.

perspective that originated in research on child development (see Sattler 1988; Zill and Coiro 1992). This approach contends that the well-being of children can be assessed only by using a comprehensive profile covering many domains of well-being. Particular models may differ in details, but all cover the basic areas of physical health, cognitive or academic achievement, social/moral development, and emotional well-being.

Models that adopt a developmental or life-course approach emphasize measurements that reflect children's particular developmental stages: the challenges of early childhood are considerably different than those of middle childhood and youth, and distinct measures are required for each stage.

This approach stresses the importance of developmental levels at various stages not only because of their effect on the child's well-being at a specific age, but also because of their impact on future well-being (Featherman 1982). For example, studies have shown that early schoolroom behaviors can have long-term consequences for school performance and achievement (Alexander, Entwisle, and Dauber 1993; Brooks-Gunn, Guo, and Furstenberg 1993).

Developmental models of child well-being also emphasize the role of the child's social environment in determining an array of outcomes. Perhaps the most influential is the ecological model developed by Urie Bronfenbrenner (1979). This model emphasizes that children grow and develop within specific social environments or contexts. It is a concentric model with the child at the center, and the family as the closest and most critical social environment. They in turn are encompassed by the neighborhood, community, and the wider society. Each context affects the child, though the direct effects become weaker as one moves farther from the center.

Family poverty, family structure, parenting styles, and neighborhood poverty are examples of contextual measures of children's environments. They are *indirect* measures of well-being, however, drawing importance from their relationship to many *direct* child outcomes such as physical and emotional health, cognitive achievement, and so on.

More recently researchers have attempted to develop comprehensive models of child well-being using expanded capital and resource frameworks to model the child's environment and the mechanisms through which the child and his or her environments interact. These include Coleman's social capital theory (1988), Robert Haveman and Barbara Wolfe's choice-investment theory (1994), and a resource framework developed by Jeanne Brooks-Gunn and colleagues (1995) which draws on all of these approaches.

This resource framework also emphasizes the social context within which children live. These contexts are more finely elaborated, including immediate family, kin, neighborhood, community, and macro social systems such as government, the economy, and the larger culture. The relationship between these contexts and the child is modeled in terms of broadly defined "available resources," including money, time, interpersonal connections, and social institutions. When these resources are actively employed to enhance the present and/or future well-being of children and youth, they are considered "investments."

Empirical Research

Empirical research plays a key role in defining the contents of this conceptual framework. Research helps us identify which dimensions of child well-being are important by demonstrating their relationship to other valued dimensions of child well-being (e.g., good physical health promotes cognitive development), to well-being in adulthood (e.g., academic achievement in high school is strongly related to earnings in adulthood) and to the well-being of other members of society (e.g., low rates of juvenile violent crime leads to greater safety for all members of society).

In addition, empirical research is necessary to establish the connections between different types of contextual resources and child well-being. For example, a vast body of research on family poverty demonstrates its negative relationship to many child outcomes including school readiness, health,

emotional well-being, delinquency, and making a successful transition into adulthood. (For a review, see Duncan and Brooks-Gunn forthcoming 1997.)

Individual research disciplines have tended to concentrate on particular dimensions of the larger resource model: child development research emphasizes defining the whole child, with particular attention to the parent/child relationship and family functioning; economics emphasizes family and community economic resources, and focuses on child characteristics most likely to affect functioning in adulthood; sociology emphasizes social capital, family structure, and community culture. Those who work from the resource framework or similar models must borrow freely from the richness of various research traditions. This research has also sparked cross-disciplinary efforts to develop new, more accurate models. Recent examples of such efforts include work by [add first names] Duncan, Brooks-Gunn, and Aber (1994), Cherlin et al. (1991), and Desai, Chase-Landsdale, and Michael (1989).

One of the most promising multidisciplinary efforts is the Child and Family Research Network assembled by the National Institute on Child Health and Human Development, U.S. Department of Health and Human Services. The network's seven nationally recognized child and family researchers and their research colleagues each represent a different disciplinary approach to the study of children. Their charge is to develop cross-disciplinary approaches that will advance the field of children's research conceptually (by developing richer models) and empirically (by applying those models in original research). Members of the network produced the resource framework described above (Brooks-Gunn et al. 1995) and are presently designing a new survey on children that incorporates the insights of their group and of other researchers.

Operationalizing Indicators

Scientific theories conceptually identify important dimensions of child well-being—mental health, mathematical ability, emotional maturity, authoritative parenting. In empirical research these concepts are operationalized using concrete definitions (e.g., identifying all those who score below a

certain level on a twelve-item mental health scale as depressed). In developing social indicators, the step from valid concept to concrete measures is a crucial one. Such measures should meet certain technical scientific criteria of validity and reliability before they are used.

Validity. For an operationalized measure to be considered valid, one must demonstrate empirically that it reflects the more abstract concept it is intended to represent. The measure should be shown to relate statistically (e.g. through bivariate correlations) with other dimensions of well-being and to aspects of the social environment in ways that could be expected given current theory and previous research (Carmines and Zeller 1979).

In many cases this has already been done in the existing empirical literature and measures can be simply adopted. In other cases, financial or practical considerations may necessitate adapting measures so that data can be gathered economically. Measures originally developed for in-person administration in a clinical setting may need to be adapted if used as a program eligibility screener, or for a survey administered over the telephone. Thomas Achenbach, for example, recently created four-item child mental health scales based on a much longer behavioral problems checklist he had developed for clinical work. These four-item scales are now used in the National Health Interview Survey, a major national health survey.

Reliability. Reliability means that measures should be comparable, measuring the same thing over time and for different population subgroups of interest. This is particularly important when measures are used as social indicators, since they are used principally to track trends over time, and to make comparisons across population subgroups. The federal government, for example, has for years defined all families containing an unmarried father and his children as a “single-father household” regardless of who else lived in the household, including the unmarried mother of the children. When cohabitation was rare, this was a reasonable measure. However, the cohabitation of unmarried parents has become more common over the last fifteen to twenty years, and this group has become a substantial

proportion of families identified as “single-father household.” The result is that the concrete meaning of the measure has changed, creating difficulties for interpreting simple time trends of the measure (see Brown 1996).

Taking another example, many of the measures of family functioning, quality of the home environment, and so on, were originally developed using white middle-class families. While some measures have been shown to be robust and comparable for other socioeconomic groups, others have been shown to work less well in low-income and minority families, and fail to pick up important dimensions of social life of particular cultures or income groups (Sugland et al. 1995).

Practical Considerations

Beyond the scientific characteristics of good indicators, there are many desirable characteristics that relate to the ways in which social indicators are commonly used (Moore 1995).

Clarity. The people who work with social indicators—whether in the public or private sector—have widely varying levels of statistical sophistication. Social indicators of children’s well-being should always be easily and immediately understood by those who will be using them. An indicator that is technically superior but difficult to understand is not preferable to one that may be slightly less accurate but whose meaning is transparent. (There are, of course, always exceptions, as when the measure will be used by specialists who, because of their backgrounds and training, will easily understand a measure.)

Regular Measurement. Nearly all applications of social indicators involve tracking trends over time. The frequency with which indicators should be measured depends on the use to which they are being put, and on the nature of the measures themselves (some of which do not change quickly). Unlike important changes in the economy, which can happen month-to-month, most social indicators do not fluctuate so quickly. (An important exception would be the communicable disease monitoring system

maintained by the CDC.) Most federal surveys tracking child well-being are repeated every one to three years.

Timely Measurement. Historical data can be useful for scientific purposes, but virtually all practical uses of social-indicator data require timely estimates. Certainly all uses related to government policy, program performance, and public information require up-to-date estimates. The public, for instance, is interested in how children are now, rather than how they were four or five years ago.

Covering Population Subgroups of Interest. Trends that are not broken down by key population subgroups are less informative, and can even be misleading. Knowing how groups differ in some dimension of well-being is useful in itself, can aid in better understanding the overall trend, and can be especially useful in for efficiently targeting policy interventions to those who are in greatest need. For example, it is useful for all these reasons to know that the recent downward trend in teen birth rates has been dramatic among black teens (about 17 percent in the previous four years), modest for white teens (about 5 percent, and nonexistent for Hispanic teens (Brown and Stagner 1997). The important subgroups may differ somewhat from indicator to indicator, but will commonly include such fundamental social characteristics as sex, age, race and ethnicity, family structure, and poverty status.

Covering Geographic Areas of Interest. Separate estimates for geographically defined subgroups (e.g., estimates for each of the fifty states in addition to national estimates) can also be useful for the same reasons. If, however, the data are to be truly useful as management instruments, governments at every level—federal, state, county, city—need estimates for their constituencies. As we have argued, the importance of state and local data is only growing as the direct result of devolution.

V. PROMISES AND PROBLEMS OF SOCIAL INDICATORS IN THE ERA OF DEVOLUTION

Social indicators, particularly indicators at the state and local levels, hold great promise as powerful tools of public administration under devolution. The success or failure of devolution as a grand

social experiment will depend in no small part on the availability, development, and intelligent use of social indicators for the following purposes.¹⁴

Although the promise of social indicators may be great, governments at all levels face considerable challenges and problems. We next consider two classes of problems: technical problems associated with the production and use of indicators, and strategic problems associated with the deliberate misuse or mismeasurement of social indicators. The problems we describe here are serious and, if they are not attended to, we believe sufficient to undermine the entire devolutionary process with all its potential benefits.

Technical Challenges

The techniques of governance which we have associated with government reinvention (monitoring, goals-driven government planning, outcomes-based accountability, and evaluation) place substantial burdens on the system of social indicators that must support them, and on the training of those who will use them. Presently, both the quality and quantity of available data and training for their proper use lag far behind what will be required if they are to be effective tools.

Quantity. To be successful, those implementing the new programs will require comprehensive systems of child well-being data at the national, state, and local levels. However, data systems at all levels of government fall short, and become less adequate as one moves from the national to the state and local levels. Even at the national level, where social indicator data are relatively plentiful, a forthcoming

¹⁴As has been discussed elsewhere, devolution may falter on several counts having little to do with the use of social indicators. The expected efficiencies may be overwhelmed by a lack of expertise at the local level, by a breakdown in cooperation between states and localities, or by simple inefficiencies of scale. Or, the withdrawal of national standards that apply to all states (or of state standards that apply to all localities) may force even the more conscientious governments into a race to the bottom, minimizing government services rather than making them more effective. Finally, local governments may on balance be less able or less willing to safeguard and promote certain aspects of child well-being. For example, the expansion of federal power associated with the Civil Rights movement of the 1950s and 1960s was in large part a response to the failure of state and local governments to safeguard and promote the well-being of black citizens, particularly the educational well-being of black children.

federal report identifies many indicators of child well-being that are either poorly measured or not available at all, including such critical measures as child abuse, school readiness, child mental health, parent-child interaction, youth criminal activity, and neighborhood quality (Brown and Stagner 1997).

The federal statistical system is a major source of social indicator data for states and localities. A recent report identified fifteen federal data sources from which indicators of child well-being can be produced for at least some states and localities (Brown and Botsko 1996). These include vital statistics, school and law enforcement administrative data, surveys, and the decennial Census. A review of these sources for state data reveals that there are substantial gaps both in the types of measures available and in the number of states for which data are available (Brown 1994). The annual Kids Count report is limited to ten indicators available for all states on an annual basis and is heavily dependent on two sources of data: Vital Statistics and the Current Population Survey (Annie E. Casey Foundation 1996).

Most states are heavily dependent on these federal data systems for social indicator data on their own populations. A few states field their own surveys, and more have additional health and education-related administrative data that can be used to construct child indicators.¹⁵ But even among those states which have established the most aggressive benchmarking program—Oregon, Minnesota, Florida—there are substantial data gaps. A large proportion of the social benchmarks these states have adopted as goals are not available or are poorly measured. For example, of the original fifteen Minnesota benchmarks related directly to child well-being, no data were available for six, and one additional measure (child poverty) depended on the decennial Census and hence was available only once every ten years.

Quality. Indicators may be of poor quality either because they are poor measures (e.g., insensitive, not reflecting the constructs that they are intended to represent, or otherwise of poor quality psychometrically), or because they are poorly measured due to missing data, misreporting, or

¹⁵Oregon, for example, has fielded its own state population survey, and Wisconsin its own annual state health survey. Every three years, Minnesota fields a youth risk behavior survey covering approximately 90 percent of all public high schools.

nonrepresentative samples. Often poor measurement results when those collecting the information do not see the importance of the data. This is a common problem for indicators based on administrative data: frontline workers are asked to gather data for which they have no direct use, and for which there are no consequences for generating poor-quality data. This can also be a problem with survey data. For example, of the thirty-nine states that fielded the Youth Risk Behavior Survey in 1995, over 40 percent failed to draw a representative sample, making the resulting data virtually useless for tracking trends in the well-being of adolescents.

When the need for an indicator is great, pressure can be strong to use whatever is available, regardless of the quality of the indicator. Further, budgetary pressures can foster the continued use of low-quality measures because of the increased costs associated with proper measurement. However, the negative consequences of using poor-quality measures can be great. They can fail to pick up changes in well-being or, worse, indicate change when no change has occurred. The use of poor measures for planning can lead to the inefficient allocation of resources; for goals tracking, the failure to identify actual progress; for accountability, the unjust penalizing or erroneous reward of persons, agencies, or whole levels of government; for evaluation, the misidentification of effective and ineffective policies and programs. The more serious the consequences associated with using indicators, the more important it is that they be measured accurately.

Comparability. Comparability of measures across jurisdictions is important for at least three reasons. First, it is vital that jurisdictions be able to learn from each other. To do this, they must be able to understand and accept as valid the measures used by other jurisdictions to track well-being, set goals, enforce accountability, and evaluate performance. Second, comparability is needed to perform macroanalytic evaluations of various programmatic and policy approaches that are implemented across many jurisdictions. As we argued above, such macro evaluations may become an important evaluation tool in the age of devolution, but one which requires measures which are comparably measured across

states and localities. Third, in most instances, systems of outcomes-based accountability between higher and lower levels of governments require measures that are comparable across the jurisdictions being held accountable. This is particularly the case when the distribution of funds across the jurisdictions is determined by these measures. The 1996 welfare reform law, as noted earlier, provides up to \$100 million per year to be awarded to the five states that show the greatest progress in lowering their out-of-wedlock birth rate without raising the abortion rate (Brady and Snow 1996). An unforeseen difficulty is that the quality of abortion data is highly variable across states, and is not even collected in five states.

Training. Social indicators are tools, and like most tools they require some knowledge and skill to use properly. As devolution progresses, many people will be asked to make responsible use of tools for which they have little training. Lack of training could lead to frustration among the users, and to inefficient use or misuse of the data, with negative consequences for the social policy efforts which depend on them.

The state of Oregon acknowledged early on the importance of proper training as a prerequisite for the success of its Benchmarks program. The state's Commission on Children and Families helps to set up local commissions in each county to coordinate the design and delivery of services to children and their families. The state also provides thorough and ongoing training and technical assistance to the local commissions to help them plan and then to develop and use social indicators to track their progress toward both state and local goals (Oregon Commission on Children and Families 1994). This training and ongoing support is considered to be crucial to the success of the Benchmarks effort.

The Annie E. Casey Foundation has long recognized the importance of social indicators in the political process, and in building the capacities to use them effectively. It funds Kids Count organizations in each of the fifty states and the District of Columbia. Each state organization produces an annual report featuring trends in state and countywide indicators of child well-being. At its core, the project is an effort to inform and train citizens and policy makers in the use of social indicators in the formation of policies

affecting children. The national report states: “By providing policy makers and citizens with benchmarks of child well-being, Kids Count seeks to enrich local, state, and national discussions concerning ways to secure better futures for all children” (Annie E. Casey Foundation 1995).

Political Challenges

Political challenges to the successful employment of social indicators as policy guides are substantial, and increase as one moves from less to more politically sensitive uses in our typology (e.g., from monitoring to goals setting, accountability, and evaluation). The pressures to use goals and accountability for partisan or self-interested purposes rather than as tools of good government are great. In addition, devolution itself has increased the pressure to adopt such approaches to governance quickly, with the possible result that they will be employed haphazardly, supported by inadequate measures and inadequate training. Finally, even the successful employment of these strategies can produce problems, which must also be addressed. We will address each issue in turn.

The partisan and competitive nature of politics in the United States is undeniable, and creates strong political dynamics that can easily undermine efforts to rationalize the policy process through the dispassionate use of social indicators. The competitiveness inherent in the process often leads to exaggerated claims regarding proposed policies, claims that would be much more difficult to put forward and sustain where, for example, strong accountability frameworks were in place. The partisan or ideological component of policy making can also be threatened by strong systems of accountability and evaluation whose results may run counter to ideologically derived policy platforms. These political pressures can encourage the viewpoint that social indicators are weapons, rather than positive tools for public management. Consequent responses can include attempts to minimize their power and importance or, alternatively, to control them. We characterize these responses as muddling, gaming, misrepresentation, and manipulation.

- *Muddling.* Key political actors may well speak enthusiastically of the need for accountability, the establishment of social goals, the importance of monitoring social well-being, and so forth. While these will play well politically, there may be a failure to follow through in any sustained manner to establish such programs.
- *Gaming.* These are strategies for gaining control over the processes that use social indicators. Those who define social goals and measures of accountability set the terms by which political success is judged. There are strong interests in defining the terms of success in ways which will be more friendly to particular political agendas. For example, in monitoring the effects of welfare reform, it matters if the reduction of welfare dependency as a goal is considered a good in itself independent of changes in the poverty rate. In establishing relationships based on outcomes-based accountability, it is in the interest of those being held accountable to set the outcome standards as low as possible. This can result in the adoption of accountability measures that do not reflect the goals they are intended to advance.
- *Misrepresentation.* It is common for political agents to use a trend in a social indicator to make claims about the effectiveness or failure of particular policies. Often these claims go considerably beyond what can reasonably be inferred from the data. For example, the president's policies have been alternately praised and blamed with every change in the teen birth rate, when in fact it is not clear that recent policies have had any effect whatsoever on teen births. The chances for active misrepresentation are strongest in relationships of accountability where the consequences of failure to perform are substantial. They can be particularly strong when those held accountable are also the ones responsible for collecting the data, a common arrangement under devolution.
- *Manipulation.* There are many subtle and not so subtle ways to manipulate the collection and presentation of social indicators to one's advantage. These can range from the selective presentation (or nonpresentation) of data for certain years or for certain population subgroups, to the deliberate manipulation of the data collection process.

Finally, devolution creates its own pressures to reinvent the delivery of government services in ways that require intensive use of social indicators. Such pressure can easily result in the adoption of accountability frameworks, goals-driven program coordination, and evaluation strategies without the time, training, technical assistance, or data development necessary to make them successful. Devolution, if it proceeds too quickly, could become its own worst enemy.

VI. RECOMMENDATIONS

Devolution both encourages and demands that government at all levels reinvent the ways in which work is carried out. In particular, state and local governments are being called upon to improve the effectiveness of government in the following ways:

- by tailoring services to the needs of their own populations,
- through coordinating and integrating services across agencies and with the private sector, and
- through holding all actors accountable for the demonstrable effects of their efforts on social well-being (i.e., outcomes).

Social indicators play an important role in all of these efforts: monitoring to be sensitive to changing local needs; goal setting to coordinate services; outcomes-based accountability to maintain accountability while increasing programmatic flexibility; and evaluation to determine which approaches are working and which are not.

The challenges, which we have outlined in the previous section, are substantial, and the clock is ticking. There is much work to be done in the development of good measures and good data to support these efforts, and for increasing the capacities of all actors (legislators, government managers, citizens) to understand and to use them effectively. Below we make specific recommendations to the federal government, state and local governments, private foundations, and the research community, all of which have important roles to play in seeing that the promise of social indicators for governance in the coming era is realized.

Federal Government

Under devolution, the need for state- and local-level social indicators will outstrip what is currently available. Although some of these data needs will be unique to each locality, a large proportion of the required measures will be the same across many or all jurisdictions. Further, as we have argued above, there are important benefits to having comparable measures across jurisdictions, for purposes of

accountability and the identification of best practices. It makes sense, therefore, that devolution will be best served through some central coordination of data collection and measurement development activities by the federal government. Such an approach can take advantage of economies of scale, and is necessary to produce data which are comparable across jurisdictions.

Under devolution, federal agencies will need to work closely with states and localities to develop and expand federal data collection efforts in ways that will meet evolving state and local data needs. Federal agencies have developed a number of models for producing such data, which include more or less direct input from state and local users. (See Brown and Botsko 1996 for a recent review of these data sources.) Of these, the approach taken by the CDC to monitor health indicators within states may serve as a model for data generation efforts under devolution. The Behavior Risk Factor Surveillance System is an annual health survey of adults, with representative samples fielded in every state and the District of Columbia. Each survey consists of the common core questions developed jointly by the CDC and state health departments. In addition, states may include optional topical modules. All surveys are fielded by the state health departments, with strong technical assistance from CDC staff. Funding to support the collection of data is also provided by the CDC. The survey is designed to ensure some comparability across states, while providing each state with maximum flexibility to adapt the survey to its own needs.

Federal agencies can open up national surveys to states willing to pay to have a larger representative sample fielded in their state. The CDC is considering opening up its National Immunization Survey (NIS) to states wishing to pay for health-related state surveys of their own design. The NIS is a telephone survey of families with 2-year-old children. In order to identify these families, the CDC screens a very large number of households each year. This screening process could be used as a low-cost means of identifying representative state samples that can be used for other surveys, allowing states to produce surveys much more cheaply than if they started from scratch. (Though based on the screener for the NIS, the effort itself is known as SLAITS [State and Local Area Integrated Telephone

Surveys].) The Census Bureau is considering a similar arrangement when it begins fielding the American Communities Survey. This is a possible replacement for much of the decennial Census, which will be contacting approximately 700,000 households per month when it becomes fully operational in 2000.

Federal agencies can also support states and localities by providing technical assistance as these entities develop their own administrative and survey data. This is often done in federally coordinated administrative data sources such as the Vital Statistics system and education-related data contained in the federal Common Core of Data. Representatives from a number of federal agencies that produce data on children and their families have recently formed a special working group within the Federal Interagency Forum on Child and Family Statistics to explore opportunities to provide such services independent of specific federal data collection efforts.

Finally, federal agencies should focus additional and sustained resources to improve the quality of existing social indicators and to develop new measures in important areas where good indicators do not currently exist. In addition, federal agencies should work to adapt existing measures so that states and localities can gather them cheaply, perhaps through existing administrative data systems. At present both the Assistant Secretary for Planning and Evaluation and the National Institute for Child Health and Human Development, both of the U.S. Department of Health and Human Services, have been funding efforts to produce new social indicators of child well-being from existing data, and conceptualizing new measures that could easily be included in existing surveys. The National Education Goals Panel Goal 1 Technical Planning Group is also putting forth a sustained effort to produce a broad set of new measures of school readiness for young children (see Kagan 1995).

State Governments

Devolution is giving states new responsibilities for policy development and service delivery, and new opportunities to reinvent the ways in which they deliver those services. Social indicators play a prominent role in many of the activities required to pursue these new responsibilities and opportunities

including monitoring for planning, goals tracking to focus and coordinate services across agencies, outcomes accountability to increase flexibility in how services are delivered, and evaluation to learn what works. States differ substantially on the extent to which they are currently pursuing these techniques of governance. Though we expect their use to increase generally as devolution proceeds, each state will develop its own unique path.

The individual states will need to understand and make provision for the new data requirements they are generating, and for the training required to develop the requisite skills to use social indicators effectively. Both data development and skills training will cost money at a time when budgets are expected to be tight. The pressures to underinvest in these activities will be strong when funds are needed to support basic services. The ultimate cost of underinvestment in these areas, however, will be ineffectiveness and possible failure.

Although each state will follow its own path, it need not—and in fact, should not—go alone. States can only benefit by forging links with other states, with the federal government, and with research institutions. Under devolution, the diffusion of knowledge and the promotion of cooperative relationships across states will come less from the top down, and more from horizontal links among the states themselves. States have much to gain by creating these links themselves. For example, a new consortium of seven Midwestern states (Illinois, Indiana, Iowa, Michigan, Minnesota, Ohio, and Wisconsin) is meeting regularly to discuss welfare reform in order to learn from each other and, possibly, to coordinate activities across states. They have identified as a top priority discussions on how to define and measure success under welfare reform.

Even under devolution, links with the federal government remain an important potential resource for developing social indicator data. States should take full advantage of the existing federal programs to develop state and local data, some of which were discussed above. In addition, states should, as a group, work with federal agencies to define the federal role where data development for social indicators is

concerned. Federal agencies represent a great resource for states, and close cooperation and dialogue can define a role which can help states to meet their emerging data needs in a more efficient manner.

Finally, state governments should pursue working relationships with academic institutions, particularly state universities. Oregon and California have already made strong links with their universities for benchmark development and administrative data integration activities, respectively. Many states have already developed relationships with university business and economics departments to inform and facilitate state economic development.

Local Governments

Because many states are considering how to devolve responsibilities to local communities, local governments will need to work closely with state agencies to develop the social-indicator data they need, and the skills to use them effectively. In addition, localities that are being particularly aggressive in developing comprehensive approaches to service delivery will need to look beyond the state to forge links with other localities pursuing a similar course.

Foundations

Private foundations have played a critical role in raising the profile of social indicators as public policy tools. Through its national and state Kids Count projects, the Annie E. Casey Foundation has fostered the use of social indicators to monitor child well-being by groups inside and outside of government at all levels. Kids Count data have become a part of direct government planning in several states, and figure prominently in the policy discourse of many states and localities.

Other foundations have been working to develop the information and the techniques required for policy-related applications of social indicators, and to actively encourage their adoption. The Improved Outcomes for Children Project is a joint effort led by the Center for the Study of Social Policy and the Harvard Project on Effective Services; its funders include the Lilly Endowment, the Pew Charitable

Trusts, the Danforth Foundation, and the Carnegie Corporation. This effort has focused on the implementation of goals identification and outcomes-based accountability strategies by states and local communities to improve outcomes for children. Another effort, by the Aspen Institute Roundtable on Comprehensive Community Initiatives, focuses on a broad range of implementation and assessment issues related to such comprehensive local efforts. Funders for this effort include the Ford Foundation, the Robert Wood Johnson Foundation, the Pew Charitable Trusts, the Foundation for Child Development, the Annie E. Casey Foundation, the W. K. Kellogg Foundation, the John D. and Catherine T. MacArthur Foundation, and the Spencer Foundation. The roundtable has focused on developing a theory-driven approach to managing and evaluating these initiatives. Roundtable members are currently preparing a list of social- indicator measures to be used for such initiatives.

We strongly recommend that foundations continue to fund efforts of this sort, since their importance will only grow as devolution advances. In addition, we suggest several complementary areas where foundations can play a facilitating role. First, as the need for cooperation and information exchange across states and localities increases dramatically under devolution, the mechanisms to accomplish these functions must also evolve. Foundations can provide initial funds to establish these important links across jurisdictions. The Midwest consortium described above, funded by the Joyce Foundation, is a concrete example of the horizontal linkages states must make.

Second, we recommend that foundations help the academic community and the policy community to forge stronger links. Developing and refining social indicators where good measures are currently lacking requires basic research. Another important task is the development of cost-efficient means by which states and localities can measure and track these indicators. Academics and policy makers must develop theories and models to direct the use of social indicators for various purposes. Although we expect that the federal government will help fund such linkages, we believe that foundations must also make investments. Social indicators are by their nature cross-cutting, while federal

funding tends to be area-specific due in part to the compartmentalization of its agencies. Foundations have much greater flexibility to support efforts which are by their nature integrative, comprehensive, or cross-cutting.

The Research Community

Public administrators will be relying on social indicators under devolution. The social and political consequences associated with their use will also continue to increase. It becomes vital, therefore, that governments and communities have at their disposal the most sensitive and accurate measures possible. The research community has a crucial role to play in refining existing indicators and developing new measures. This includes developing new measures and supporting basic research.

As an area of academic interest, social indicators received a moderate amount of attention in the 1960s and 1970s, before virtually disappearing during the 1980s. Recently, social indicators have been enjoying something of a renaissance in academic circles, beginning with a major national conference on social indicators of children's well-being in the fall of 1994 (see Institute for Research on Poverty 1995). The work has been carried forward by researchers affiliated with the NICHD Child and Family Research Network, who have been working with federal agencies through the Interagency Forum on Child and Family Statistics to create new measures for the federal statistical system. In addition, researchers affiliated with the Aspen Institute's Comprehensive Community Initiative have been working to identify social indicator measures which can be used at the community level (see Connel et al. 1995).

Academia, research organizations, foundations, and governments at all levels must find ways to sustain and increase academic involvement in this area, and to focus that work on issues of greatest importance to those who use social indicators for policy-related purposes. Possible strategies include the establishment of research networks or institutes to focus specifically on social indicators, the development of a cross-disciplinary journal on the subject, and the establishment of specific links between interested academics and policy makers with individual states and localities.

Summary

Devolution is creating new opportunities and new pressures to reinvent the ways in which government at all levels serves its people. Many of the emerging strategies of reinvention (outcomes-based accountability, system-wide coordination and integration, competitive awarding of service contracts) make substantial use of social indicators. Good measures, good data, the skills to use them well, and the will to use them wisely are, we believe, prerequisites for their success.

We have identified the major technical and political challenges that must be met if social indicators are to be used effectively to implement these strategies for public administration in the age of devolution. There is much work to be done, and the clock is ticking. It will require that all of the actors discussed above—the federal government, state and local governments, academics, and foundations—invest and engage in a serious and sustained collaborative effort to meet these challenges, and truly reinvent the ways in which we do the public's business. It will not be cheap, nor will it be easy. But it is almost certainly our best alternative.

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