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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

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Kenneth Prewitt, Christopher D. Mackie, Hermann Habermann, Editors; Panel on Measuring Social and Civic Engagement and Social Cohesion in Surveys; Committee on National Statistics; Division of Behavioral and Social Sciences and Education; National Research Council

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CIVIC ENGAGEMENT AND SOCIAL COHESION

Measuring Dimensions of Social Capital to Inform Policy

Panel on Measuring Social and Civic Engagement and Social Cohesion in Surveys

Kenneth Prewitt, Christopher D. Mackie, and Hermann Habermann, *Editors*

Committee on National Statistics

Division of Behavioral and Social Sciences and Education

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PANEL ON MEASURING SOCIAL AND CIVIC ENGAGEMENT AND SOCIAL COHESION IN SURVEYS

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This report is the product of contributions from many colleagues, whom we thank for their insights and effort. The project was sponsored by the Corporation for National and Community Service; additional input toward its initiation and development was contributed by the National Conference on Citizenship (NCoC) and the U.S. Office of Management and Budget. Early on during the panel's work, Nathan Dietz and Christopher Spera (Corporation for National and Community Service), John Bridgeland and David Smith (NCoC), and Brian Harris-Kojetin (U.S. Office of Management and Budget) provided the panel with guidance regarding goals for the study. They also presented crucial background information about the status of the Serve America Act of 2009 (which calls for the Census Bureau and Bureau of Labor Statistics to "collect annually, to the extent practicable, data to inform the Civic Health Assessment"), about publications such as *America's Civic Health Index* and related state and city projects led by NCoC and The Center for Information & Research on Civic Learning and Engagement, and about the Current Population Survey (CPS) Civic Engagement Supplement.

This report has been reviewed in draft form by individuals chosen for their diverse perspectives and technical expertise in accordance with procedures approved by the Report Review Committee of the National Research Council (NRC). The purpose of this independent review is to provide candid and critical comments that assist the institution in making its reports as sound as possible and to ensure that the reports meet institutional standards for objectivity, evidence, and responsiveness to the study

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

charge. The review comments and draft manuscript remain confidential to protect the integrity of the deliberative process. The panel thanks the following individuals for their review of this report: William P. Eveland, Jr., Department of Communication, Ohio State University; Nancy Folbre, Department of Economics, University of Massachusetts, Amherst; Lewis A. Friedland, Center for Communication and Democracy, University of Wisconsin–Madison; D. Sunshine Hillygus, Duke Initiative on Survey Methodology, Duke University; Michael Hout, Department of Sociology, New York University; Cheryl Maurana, Advancing a Healthier Wisconsin Program, Medical College of Wisconsin; Jack Needleman, Fielding School of Public Health, University of California, Los Angeles; Robert J. Sampson, Department of Sociology, Harvard University; Nora Cate Schaeffer, Department of Sociology, Center for Demography and Ecology, University of Wisconsin–Madison; Matthew Smith, Division of Integrations, Lingotek, and Brigham Young University-Idaho; Eric (Ric) Uslaner, Department of Government and Politics, University of Maryland; and Burton A. Weisbrod, Department of Economics, Northwestern University.

Although the reviewers listed above provided many constructive comments and suggestions that resulted in a greatly improved report, they were not asked to endorse the conclusions or recommendations, nor did they see the final draft of the report before its release. The review of the report was overseen by Jennifer L. Hochschild, Department of Government, Harvard University; and John C. Bailar III (professor emeritus), University of Chicago. Appointed by the NRC's Report Review Committee, they were responsible for making certain that the independent examination of this report was carried out in accordance with institutional procedures and that all review comments were carefully considered. Responsibility for the final content of the report rests entirely with the authoring panel and the NRC.

The panel would also like to thank the following individuals who attended meetings and generously presented material to inform panel deliberations: Robert Putnam, Harvard University, one of the leading and most influential research pioneers on the topics covered in this report, provided an overview of the importance of, challenges facing, and opportunities in the measurement of civic engagement and social cohesion; Peter Levine, Tufts University, informed the panel about the innovative work by the Center for Information & Research on Civic Learning and Engagement and Marco Mira d'Ercole, Organisation for Economic Co-operation and Development, reported about ongoing data projects in Europe and discussed implications of the Stiglitz/Sen/Fitoussi Commission recommendations on measuring social connections and political engagement.

Robert Groves, U.S. Census Bureau; Jim Lynch, Bureau of Justice Statistics; Thomas Nardone, Bureau of Labor Statistics; and Sunil Iyengar,

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

National Endowment for the Arts; presented to the panel from the perspective of U.S. statistical agencies. Each provided insights about approaches to measuring national well-being and progress and their many components, and about how government data collection in the areas of civic engagement and social cohesion could potentially inform policy.

Andrew Gelman, Columbia University, discussed small-area/community-level estimation methods and potential nonsurvey (and nongovernment) data sources; Lisa Clement, Robert Kominski, and Christopher Laskey, U.S. Census Bureau, provided a range of insights about the performance of the CPS Civic Engagement Supplement and the potential role of American Community Survey and other government data collection vehicles. David Grusky, Stanford University, presented to the panel on the topics of intergenerational mobility, including data requirements for measuring it, as well as about the relationship of social and economic mobility to social capital and civic health.

The panel could not have conducted its work efficiently without a capable staff. Constance Citro, director of the Committee on National Statistics, and Robert Hauser, executive director of the Division of Behavioral and Social Sciences and Education, provided institutional leadership and substantive contributions during meetings. Kirsten Sampson Snyder, Division of Behavioral and Social Sciences and Education, expertly coordinated the review process. Eugenia Grohman provided thoughtful and thorough editing. Michael Siri provided logistical support throughout the many meeting of the panel and contributed substantively to the report compiling tables and documenting information sources. Christopher Mackie and Hermann Habermann served as staff leads on the project and contributed substantively and organizationally throughout the study.

Most importantly, I would like to thank the panel members for their patience, creativity, hard work, and graciousness. Representing a number of disciplines—political science, sociology, and economics—they brought extensive collective expertise and contributed generously with their time and effort. It was a pleasure working with each of them.

Kenneth Prewitt, *Chair*
Panel on Measuring Social and Civic
Engagement and Social Cohesion in Surveys

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Contents

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

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Summary

People's engagement in society, their associations and networks, and the characteristics of their communities profoundly affect their quality of life. The attributes commonly discussed under the rubric "social capital"—political participation; engagement in community organizations; connectedness with friends and family and neighbors; and attitudes toward and relationships with neighbors, government, and groups unlike one's own—are often associated with positive outcomes in many areas of life, including health, altruism, compliance with the law, education, employment, and child welfare. It has also been observed that civic engagement, social cohesion, and other dimensions of social capital are sometimes related to negative outcomes. Under certain circumstances these actions and processes may contribute to social tension and community fragmentation; in others to social cooperation and integration.

Recognizing the value of understanding these relationships, the Corporation for National and Community Service (CNCS) requested that the Committee on National Statistics create a panel "to identify measurement approaches that can lead to improved understanding of civic engagement, social cohesion, and social capital—and their potential role in explaining the functioning of society." The statement of task called for the panel to consider conceptual frameworks, definitions of key terms, the feasibility and specifications of relevant indicators, and the relationship between these indicators and selected social trends. It also called on the panel to weigh the relative merits of surveys, administrative records, and nongovernment and nonsurvey data sources, and to assess the appropriate role of the federal statistical system.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

To fulfill its charge, the panel assessed the role of the Civic Engagement and Volunteer Supplements of the Current Population Survey (CPS), conducted by the U.S. Census Bureau and currently the most visible federal survey with questions about social capital. The panel also considered the broader contextual questions implied in its charge

- Which social capital variables (dimensions) are most relevant to policy, research, and general information needs—and which are measureable?
- What are the most promising approaches—survey and nonsurvey, government and nongovernment—for collecting this information?
- What should be the role of the federal statistical system, recognizing a rapidly changing data collection environment?
- How might disparate data sources—including administrative data and unstructured digital data (that is, the vast range of information produced on an ongoing basis, and usually for purposes other than statistics and research)—be exploited?

CONCLUSION 1: Data on people's civic engagement, their connections and networks, and their communities—aggregated at various levels of demographic and geographic granularity—are essential for research on the relationships between a range of social capital dimensions and social, health, and economic outcomes, and for understanding the directions of those effects. This research in turn informs policies that seek to maximize beneficial outcomes and minimize harmful ones.

The panel emphasized the importance of data collection and measurement of social capital dimensions on the basis of (1) evidence connecting them to specific, measurable outcomes in domains such as health, crime, education, employment, and effectiveness of governance; (2) their value in providing descriptive information capable of generating insights about society; and, relatedly, (3) their research and policy value.

KEY MEASUREMENT CONCEPTS

Though the relevant literature is extensive, there is no universally agreed-upon definition of social capital or taxonomy of its components. The first key term referenced in the study charge, "civic engagement," is, according to Ehrlich (2000, p. vi), comprised of individual activities oriented toward making "a difference in the civic life of . . . communities and developing the combination of knowledge, skills, values and motivation

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

to make that difference. It means promoting the quality of life in a community, through both political and nonpolitical processes." Volunteerism is one defining characteristic of civic engagement in that most if not all such activities are discretionary.

The second key term in the charge, "social cohesion," can be viewed as having multiple dimensions, including: belonging or isolation, inclusion or exclusion, participation or noninvolvement, recognition or rejection, and legitimacy or illegitimacy (Jensen, 1998). By implication, as articulated by Forrest and Kearns (2001, p. 2128), "a society lacking cohesion would be one which displayed social disorder and conflict, disparate moral values, extreme social inequality, low levels of social interaction between and within communities and low levels of place attachment." Specification of the geographic unit of analysis (spatial scale) is an essential dimension of social cohesion. Neighborhoods, states, or other groups can be in conflict with one another while demonstrating strong internal social cohesion. Portes (1998, p. 6) emphasizes the capacity of personal and group connections and other support resources to affect "the ability of actors to secure benefits by virtue of their membership in social networks or other social structures."

Civic engagement and social cohesion are often viewed as components of the charge's third key term—social capital. Francis Fukuyama (2002, p. 27) describes social capital as "shared norms or values that promote social cooperation, instantiated in actual social relationships." He emphasizes the role of certain subjective states and attitudes, such as trust, which ". . . acts like a lubricant that makes any group or organization run more efficiently" (Fukuyama, 1999, p. 16). Putnam (2003) introduces two types of social capital: bridging and bonding. The former is exemplified by voluntary associations and horizontal ties based on common interests that transcend differences of ethnicity, religion, and socioeconomic status in communities; the latter refers to social ties built around homogeneous groups that do not span "diverse social cleavages."

The key terms in the study charge are constructs with uncertain boundaries.

CONCLUSION 2: Because the terms "social capital," "civic engagement," and "social cohesion" refer to broad and malleably-defined concepts that take on different meanings depending on the context, they are not amenable to direct statistical measurement. However, dimensions of these broad constructs—the behaviors, attitudes, social ties, and experiences—can be more narrowly and tangibly defined and are thus more feasibly measured.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

Measures of social capital can also be differentiated in terms of those that are behaviors (e.g., participating in a political campaign), those that capture attitudes (e.g., trust in neighbors or political representatives), and those that are experiences (e.g., being discriminated against). Many of these are rooted at the individual level, though they may typically be studied as properties aggregated at group levels ranging from families, to neighborhoods, to communities, to regions, to nations. Others, such as voter identification laws or school segregation, are inherently group concepts. And the relevant unit of observation can be suggestive of the appropriate data collection mode. If one is interested in total voter turnout or total membership in associations, administrative and other nonsurvey data sources may be adequate. If the focus is attributes of individuals engaged in various behaviors or with specific attitudes, microdata are essential.

PRIORITIZING MEASURES, DATA COLLECTION STRATEGIES

Studies of social capital have covered a broad range of topics in the social, health, and economic policy domains, including:

- personal connectedness and employment outcomes;
- effects of social cohesion, self-reported "trust," and other dimensions of neighborhood social capital on crime and public safety;
- cohesion and community resiliency;
- home ownership and civic engagement;
- social connections and self-reported well-being;
- isolation and health effects;
- social capital and mental illness;
- social relationships and health mechanisms; and
- social capital and child outcomes.

Depending on the question of interest, a given dimension of social capital may be seen as a mechanism whereby change can be affected (i.e., through policy levers) or as the primary focus itself. For example, reducing social isolation or improving trust in a neighborhood may be tools to improve health and reduce crime, or they may be the policy objectives in and of themselves.

CONCLUSION 3: For data collection related to social capital, the theoretical or policy issue of interest is critical for identifying clearly defined components and developing instruments (survey or otherwise) designed to measure these components.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

Empirical research has produced valuable insights and advanced understanding of a range of phenomena related to social capital. However—with some exceptions, such as social isolation as a risk factor for health—to date, it has produced only sketchy evidence of causal relationships between social capital and outcomes of policy interest or, conversely, of how a given indicator is predictive of changes in the level of social capital (e.g., the link between home ownership and extent of participation in the community). Even so, data collected from large population surveys are still essential because of their value in providing descriptive information and because evidence continues to accumulate that phenomena described as social capital play an important role in the functioning of communities and the nation.

CONCLUSION 4: The study of social capital, though a comparatively young research field, is sufficiently promising to justify investment in data on the characteristics of communities and individuals in order to determine what factors affect their condition and progress (or lack thereof) along a range of dimensions. Improved measurement, additional data, and resulting research findings are likely to find uses in policy making.

Although there are difficult challenges of demonstrating causation, this (along with wrestling with vague concepts) is familiar in nearly all social science research fields, especially early in their development. Studies based on highly granular, ongoing, and multisource datasets appear to offer the greatest promise for untangling the circularity of causal pathways—for example, to what extent does deterioration of job growth in a city weaken social ties and lead to group conflict over scarce resources, and vice versa? To what extent does interaction and trust among neighbors contribute to reductions in crime, and to what extent do reductions in crime encourage greater neighborhood connectedness?

With these and other research questions in mind, statistical agency programs may prioritize (1) improvement in the near-term data collection, focusing primarily on existing survey vehicles, or (2) longer term visions that anticipate the potential of combining government surveys with one another, with administrative data, and with unstructured digital data generated as the by-product of day-to-day business, communication, social, and other activities.

RECOMMENDATION 1: For data collection in areas of social capital, a multipronged strategy should be pursued in which large population surveys conducted by the federal statistical system play a role, but one that is increasingly complemented

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

and supplemented by new, innovative, experimental alternatives. The greatest promise lies in specific-purpose surveys such as those focused on health, housing, and employment issues (especially those that have a longitudinal structure) and in the exploitation of nonsurvey sources ranging from administrative data (e.g., local-level incident-based crime reports) to digital communications and networking data that are amenable to community-level analyses. Many of the surveys will continue to be conducted or funded by the federal government, while many of the nonsurvey sources will originate elsewhere.

The quality of the nation's information and its research capacity will in large part be determined by the effectiveness with which these increasingly disparate data sources can be exploited and coordinated by the statistical agencies and users of their products.

THE CPS SUPPLEMENTS

That the government collects data about civic engagement signals that these topics are important to the nation. The purpose of the CPS Civic Engagement Supplement—fielded in 2008, 2009, 2010, 2011 and, with a half sample, 2013—as stated in justification documentation prepared by CNCS for the U.S. Office of Management and Budget (2011, p. 3), is to

> . . . collect data for the Civic Health Assessment, an annual report mandated by the Serve America Act that is produced in partnership with the National Conference on Citizenship (NCoC). The Civic Engagement Supplement provides information on the extent to which American communities are places where individuals are civically active. It also provides information on the number of Americans who are active in their communities, communicating with one another on issues of public concern, and interacting with public institutions and private enterprises.

At national and state levels, the Supplement fulfills several elements of this mandate for descriptive information.

CONCLUSION 5: Current Population Survey (CPS) supplements, which offer only a limited amount of survey space (about 10 minutes is allotted for a given monthly supplement), are most appropriate for collecting data on variables that (1) can be estimated from a small set of questions, (2) deal with people's behaviors, (3) would be difficult to ascertain through nonsurvey methods, and (4) need to be correlated with personal attributes that are also captured on the survey in order to study how they inter-

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

relate for groups such as the elderly, minorities, or immigrants. Also critical is that the CPS data are useful when the research and policy questions of interest require information aggregated at the federal-, state-, or (in some cases) metropolitan-area level.

By these criteria, the Civic Engagement and Volunteer Supplements are well suited for generating statistics on a subset of well-defined activities. Volunteering is a particularly important form of engagement because, unlike "memberships," which are also often asked about, it requires action.

CONCLUSION 6: Information about the population's political participation and voting activities can be adequately captured with a small number of questions. Likewise, the Current Population Survey (CPS) has proven useful for understanding volunteering rates and patterns—especially when linked with data from the survey's time use (American Time Use Survey) module. Thus, the CPS Volunteer (September) and Civic Engagement (November) Supplements are best focused on political and civic participation.

The CPS Supplements are less useful for generating data on dimensions of social capital such as social cohesion, connectedness, and trust.

CONCLUSION 7: Although even a short module can generate useful information, the Current Population Survey does not offer a comparative advantage for data collection on complex behaviors and attitudes indicative of social cohesion, individual and group connectedness, and civic health generally. These phenomena cannot be satisfactorily characterized by data collected from a small set of questions.

Rich and detailed datasets are needed to capture the complexities of social capital, particularly since many of these phenomena take place most intensively as community-level social processes. Examples of this research model include the Kasinitz et al. (2008) study of immigrants in New York City and the Project on Human Development in Chicago Neighborhoods (Sampson et al., 1997, 2002, 2012b). These studies were designed to generate insights about the links between neighborhood characteristics, social organizations, community level factors, and broader social phenomena. They utilize a wide range of methodologies ranging from experimental designs to systematic observational approaches that benchmark data on neighborhood social processes.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

Determining the appropriate scope of the Civic Engagement and Volunteer Supplements begins by recognizing what can and cannot be measured well within the structure of the survey; budget realities also factor in. During planning for the 2013 supplements, CNCS was called on to consider cost-cutting options, which included (1) combining the civic engagement and volunteer supplements, with a reduced number of questions on each topic, in order to field both each year; (2) moving to a rotating schedule in which each is fielded as is, but only in alternating years; or (3) cutting sample sizes in order to field both supplements annually.

RECOMMENDATION 2: Due to the importance of substate and subgroup analyses, under a cost-reduction scenario the panel favors a combined civic engagement and volunteer supplement to the Current Population Survey (CPS) even though it would require reducing the number of questions in each category. Question streamlining would be accomplished by (1) narrowing the subject matter now covered in the Civic Engagement Supplement based on assessment of what information can and cannot be collected effectively in a short survey module; (2) identifying and eliminating redundancies across the CPS Civic Engagement and Volunteer Supplements; and (3) identifying and eliminating questions for which comparable data can be found in other government surveys or elsewhere, while recognizing there is analytic value in having both volunteering and civic engagement data, along with covariate information, for the same respondents.

BEYOND THE CPS

Developing a comprehensive data collection strategy requires consideration of other survey vehicles; the CPS supplements should not be evaluated in isolation. Although few surveys specialize exclusively on social capital, many include at least a few questions that relate to the context on which they focus. The primary focus of the CPS is the labor force. The American Time Use Survey (also a CPS supplement conducted by the U.S. Census Bureau for the Bureau of Labor Statistics) captures volunteering and is also important for studying time spent in various other nonmarket activities. The Health and Retirement Study (conducted by the Institute for Social Research at the University of Michigan) asks about people's support networks in the context of health among older Americans. The Panel Study of Income Dynamics Study (also conducted by the Institute for Social Research at the University of Michigan) asks about organizational memberships and contacts in the context of caregiving and

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

well-being. And the National Longitudinal Survey of Youth (conducted by NORC at the University of Chicago for the Bureau of Labor Statistics) asks about volunteerism, religious affiliation, and political attitudes in the context of education and work.

The new Neighborhood Social Capital Module—part of the American Housing Survey (conducted by the Census Bureau for the Department of Housing and Urban Development)—is a promising initiative that focuses on neighborhood effects. Data are collected on shared expectations for social control, social cohesion, trust within neighborhoods, and neighborhood organizational involvement. Further work will be needed to determine the precision of the small area estimates and statistical properties, but the survey sample size is considerably larger than the CPS—and it includes a longitudinal component.

RECOMMENDATION 3: The Corporation for National and Community Service should establish a technical (research and evaluation) working group tasked with systematically investigating the content of, and redundancies or overlap in, federal surveys in areas related to social capital measurement. A good place to start is with the Current Population Survey (CPS) Civic Engagement Supplement and the Neighborhood Social Capital Module of the American Housing Survey. Other candidates are the CPS Volunteer Supplement and the American Time Use Survey and the CPS Voting and Registration Supplement and other national election administration and voting surveys. The technical working group should be charged with finding effective ways to coordinate the content of these options.

Longer term aspects of the data collection strategy identified above involve looking beyond traditional survey vehicles. Measurement of the more complex components of social capital, in particular, requires multimodal data collections that include intensive and sustained research models.

RECOMMENDATION 4: For measuring relationships between such phenomena as social cohesion and neighborhood environment on one hand, and health, social and economic outcomes on the other, statistical and funding agencies should take an experimental approach, sponsoring studies at the subnational level and in-depth and longitudinal pilot data collections. This suggests that additional research and testing will be needed before committing to the content and structure of specific survey instruments. The statistical agencies' advisory groups may

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be especially helpful in thinking creatively about what kinds of research and survey projects offer the most promise.

In considering alternative measurement approaches and strategies for a rapidly changing data world, it has become increasingly necessary to statistical agencies to monitor developments taking place beyond the traditional government survey world.

Data Linking

Statistical information about the United States and its subpopulations will increasingly be assembled from an interconnected data system. Building a capacity to link across survey sources as well as administrative and other kinds of records is an obvious strategy for maximizing the value of resources. The value added stems from two factors: First, merging data sets allows for a broadening of covariates that may be correlated with measures of outcomes. Combining individual-level survey information with other sources can also provide contextual data about the geographic unit of interest. Second, and especially relevant to assessment of the CPS Civic Engagement Supplement, is that sample sizes associated with national-level population surveys are not typically adequate to support local-area analyses. Modelling methods can often take advantage of survey data augmented with additional records for the purpose of producing small area estimates that are essential to measuring neighborhood and community phenomena.

The panel recognizes and endorses linking work already pioneered by the Census Bureau and other government agencies and the ongoing and more intensive efforts underway. The panel also recognizes the conceptual problems that must be solved and the resources needed to undertake this work.

CONCLUSION 8: The Current Population Survey (CPS) cannot provide all the variables and the level of geographic detail necessary for research on social capital, social cohesion, and civic engagement. It is therefore essential that design strategies for the CPS be conceptualized with the presumption that this data source will need to be linked (even if only at the group level) to other data from the federal government and beyond. The national-level data collected on a regular basis should complement other sources, both government and nongovernment, for use by researchers. Research data centers operated by the federal statistical agencies can create opportunities for these kinds

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

of coordinated efforts, which must comply with respondent confidentiality and privacy requirements.

Nonsurvey Data Collection

Multimodal data collection, involving complements and substitutes for traditional government surveys, is necessitated by the fact that much of what is interesting and important about social capital takes place at the level of neighborhoods or communities, where general population surveys need to be augmented or, in some cases, replaced by data sources that allow for more targeted studies.

It has become commonplace to emphasize the potential—for solving problems in government, the private sector, and in scientific research—of the ever-growing volume of data created and captured digitally. Some kinds of information, such as the structure and density of people's online relationships and connections or their patterns of cellphone communication, are next to impossible to discern using conventional survey methods. However, while alternative data collection and analysis methods are no doubt flourishing, establishing the statistical validity of estimates based on "big data" sources is in its infancy. In addition, most unstructured digital data are generated by and owned by private sector entities where models for methodological transparency and privacy and confidentiality protection are undeveloped. These are but two reasons, among several, that a survey-centric approach—for which problems of data accuracy, quality, representativeness, and confidentiality have largely been contained or solved—will continue to play a central role in social science research for the foreseeable future.

Beyond social media, private-sector data generated by people's purchasing and other online activities and by automated payroll systems has created private-sector alternatives (or, in some cases, complements) to such key economic indicators as the Consumer Price Index (e.g., the Web-based MIT Billion Prices Index) and employment statistics (e.g., ADP employment reports). The emergence of big data, coupled with advances in computational science analytic techniques, raises the possibility of developing indicators of citizens' civic engagement and other social behaviors and attitudes that are less burdensome than surveys.

The statistical agencies are of course aware of the changing data landscape and are considering measures to adapt and take advantage to modernize their programs. Even so, the magnitude of upcoming changes argues that the statistical agencies be involved even more closely in these developing areas and engage in parallel data studies.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

RECOMMENDATION 5: Under the leadership of the U.S. Office of Management and Budget, the federal statistical system should accelerate (1) research designed to understand the quality of statistics derived from alternative data—including those from social media, other Web-based and digital sources, and administrative records; (2) monitoring of data from a range of private and public sources that have potential to complement or supplement existing measures and surveys; and (3) investigation of methods to integrate public and private data into official statistical products.

The research agenda outlined above is not simple. The U.S. statistical system is decentralized, comprised of more than 50 entities, about 15 of which are defined as principal statistical agencies. One of the drawbacks of such a system is the difficulty of generating critical mass for the purpose of major research undertakings that are broader than the mandates or needs of any one agency and that require a coordinated approach to be successfully pursued.

RECOMMENDATION 6: In mapping the way forward for the integration and exploitation of new data sources, the U.S. Office of Management and Budget should coordinate the exploration of alternatives for developing the necessary research capability across the federal statistical system. Among the alternatives are extensions of the current partnership between the Census Bureau and the National Science Foundation and the creation of a federally funded research and development center for this work.

Such a center for statistics, for which there is precedent, would allow a much needed focus to be placed on research topics that are common to the entire statistical system and not unique to one agency.

The measurement areas described in this report represent only a portion of those that factor into social science, urban planning, public health, and other research areas. But the nature of the activities, attitudes, and behaviors encompassed, along with the multiple geographic levels of interest and the role of group and individual interactions, make it an illuminating case study of the growing need for multimode data collection to underpin modern research and policy. And, because the study of social capital is a relatively new strand of social science inquiry, where methods are not as entrenched as elsewhere, it is a good testing ground for development of experimental measurement approaches that exploit the rapidly evolving data landscape. Because data users have fewer pre-

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

conceived notions of what the underlying statistical framework (and official statistics in the area) should look like, measurement of social cohesion, civic engagement, and other dimensions of social capital is a good place for statistical agencies to begin developing cutting-edge techniques for blending traditional survey data with new, nonsurvey data into integrated measurement programs.

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1

Introduction

1.1. WHY MEASURE CIVIC ENGAGEMENT AND SOCIAL COHESION?

People's bonds, associations, and networks—as well as the civil, political, and institutional characteristics of the society in which they live—can be powerful drivers affecting the quality of life among a community's, a city's, or a nation's inhabitants and their ability to achieve both individual and societal goals. Civic engagement, social cohesion, and other dimensions of social capital affect social, economic and health outcomes and, therefore, measurement of these phenomena is in the public interest.

The development in 2000 of the Social Capital Community Benchmark Survey by the Saguaro Seminar at Harvard University advanced the idea that distinct dimensions of social capital could be identified and measured. The survey built on the work of Coleman (1988), Putnam (2000), and many others who have argued that attributes commonly discussed under the rubric "social capital"—political participation; engagement in community groups and associations; connectedness with friends and family and neighbors; attitudes toward and relationships with neighbors, government, groups unlike one's own, and the like—are often positively associated with a range of desirable outcomes in such areas as health, altruism, compliance with the law, child welfare, and even self-reported well-being. However, those attributes may in some instances contribute to negative outcomes as well, depending on how community and group

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

resources are used.[1] Portes (1998) provided a balanced assessment of both the positive functions of social capital—for example, as a source of network-mediated benefits that are important for occupational mobility—and of the potentially negative consequences of the same processes, such as when privileged access to jobs by a specific ethnic group (or graduates from certain colleges) restricts the opportunities of outsiders.[2] While this capacity for negative effects is generally accepted, it does not nullify the widespread view that steps to increase social capital under conditions that lead to social benefits should be pursued (see, e.g., Halpern, 2004; OECD, 2001).

Data on civic engagement, social cohesion, and other aspects of social capital—terms we define below—have been collected for many years and for many purposes. To varying degrees, such data have been used to document conditions of policy importance, inform and enlighten the public more generally, and underpin social science research. Studies of these phenomena have raised critical questions, about casual relationships for example, but have also introduced new ways of thinking about the workings of civic society.

For half a century, the U.S. government has collected data and produced statistics on political participation and more general aspects of civic engagement; comparatively less has been done to measure social cohesion. Voting and registration data were first collected in the November 1964 supplement to the Current Population Survey (CPS) of the Census Bureau; data collection has been biennial since then. Data on volunteering were first collected in an April supplement to the CPS and again in a May supplement to the 1989 CPS.

With funding from the Corporation for National and Community Service (CNCS), an independent federal agency, annual collection of data on volunteering began with the September 2002 CPS supplement. Beginning in 2003, the American Time Use Survey (ATUS), administered monthly to outgoing rotation groups of the CPS, has collected time-use diaries on relevant activities, including volunteering, political participation, and other aspects of civic engagement. The ATUS also featured a module on

[1]At the extreme, Satyanath et al. (2013) trace, town by town, how the rise of Nazism was facilitated by unusually high levels of social capital—specifically a dense network of clubs and associations—in Weimar, Germany.

[2]Putnam has described this side of social capital as well. His public view evolved shortly after writing *Making Democracy Work*, in which he defined social capital as something that had to be positive for society, to explicitly acknowledge that social networks can lead to negative consequences. See http://www.the-american-interest.com/articles/2008/1/1/bowling-with-robert-putnam/ [May 2014].

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

subjective well-being in 2010, 2012, and 2013; it included questions on both experienced well-being and life evaluation.[3]

In reviewing these efforts and offering guidance for their continuation and improvement, the panel synthesizes and adds to the foundations developed by many others. Beginning in 2006, the National Conference on Citizenship (NCoC; a congressionally chartered independent organization), CNCS, and the Center for Information and Research on Civic Learning and Engagement at Tufts University (CIRCLE) undertook to develop indicators of "civic health," drawing from several ongoing surveys and specially commissioned small-scale surveys. The goal of the partnership was to insert relevant questions into federal surveys and, in particular, to establish a regular supplement to the CPS. In 2008, funded by CNCS, the November CPS supplement became the Voting and Civic Engagement Supplement; it included questions related to "civic health" in addition to those previously asked about voter and nonvoter characteristics and trends. In 2009 and 2010, a shorter, temporary list of questions was fielded in the supplement. The 2012 module was suspended for budgetary reasons, but both the civic engagement and volunteer supplements were restored with something close to the original battery of questions for 2013, albeit with half samples.

In 2009, the effort to make civic health and related indicators a staple of the federal government's statistical programs obtained statutory support in the Serve America Act (H.R. 1388). This act reauthorized and expanded national service programs administered by the Corporation for National and Community Service, and called for "sponsored data collection" for assessment of civic health indicators related to "(A) volunteering and community service; (B) voting and other forms of political and civic engagement; (C) charitable giving; (D) connecting to civic groups and faith-based organizations; (E) interest in employment, and careers, in public service in the nonprofit sector or government; (F) understanding and obtaining knowledge of United States history and government; and (G) social enterprise and innovation." The Act directed the Census Bureau and Bureau of Labor Statistics to collect this information—along with data that would allow analysis "by age group, race and ethnicity, education level, and other demographic characteristics of the individuals involved" (H.R. 1388, p. 75)—annually if possible, to inform the civic health assessment volumes published by NCoC.

Much of the intellectual content underlying the first (November 2008) CPS Civic Engagement Supplement was compiled by or originated with

[3]Historical time use data are also available from surveys fielded by the University of Michigan in 1965, 1975-1976, 1981, and 1985 and by the University of Maryland in 1992-1994, 1998, and 2001.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

the Harvard Saguaro Seminar. As noted above, the seminar began the Social Capital Community Benchmark Survey (SCCBS), the first large-scale measurement of social capital variables.[4] From this foundation, the Saguaro Seminar convened an informal steering group of social scientists to advise on what questions should be included in the CPS supplement module.[5] Since its beginning, the seminar's mission has been to improve social capital data and measurement and to investigate ways to build social capital at community and other levels.

Countries other than the United States have recognized the public importance of civic engagement and social cohesion and have initiated data collection programs for their measurement. In some cases, national statistical offices have been the leaders: one example is Statistics Canada, with such efforts as the 1996 General Social Survey on Social and Community Support.[6] Work on broad social well-being concepts is also underway in international agencies. For example, the World Bank, in an effort to understand causes, manifestations, and consequences of poverty, has engaged in a number of efforts to measure community engagement in developing countries through its Global Social Capital Survey.[7]

Statistical programs to measure population well-being were given additional impetus by the influential *Report by the Commission on the Measurement of Economic Performance and Social Progress* (Stiglitz et al., 2009). The key argument in that report was that gross domestic product (GDP) alone is not a satisfactory measure of the welfare of a population. The report recommended a shift in the focus of measurement from market production toward "people's well-being," and cited the relevance of social capital and its association with self-reported well-being.[8]

[4]For details, see http://www.hks.harvard.edu/saguaro/communitysurvey/ [February 2014]. The SCCBS (N = 30,000) was also fielded in 1992-1994, 1998, 2001 and 2006. An abridged 5-10 minute version of the 25-minute Benchmark Survey has also been developed.

[5]For a detailed account about the process whereby the 100+ questions from the SCCBS were streamlined into the much abbreviated CPS Supplement instrument, see Hudson and Chapman (2002).

[6]Franke (2005) comprehensively documented the many efforts internationally to define and measure social capital and related concepts.

[7]Among the "ground up" initiatives by the World Bank was the work by Narayan and Pritchett (1999) to construct a measure of social capital based on individuals' associational activities, and trust in people and institutions, using the Tanzania Social Capital and Poverty Survey.

[8]The idea that societal well-being and progress should be measured more broadly than GDP long predated this report; it was most conspicuous during the social-indicators movement among social scientists and public policy analysts during the 1960s. The international standard for compiling national accounts—the UN System of National Accounts—has long recognized this to be the case.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

Policy Relevance

Informing policy decisions is the primary rationale for government statistics.[9] Expanding statistical coverage of topics previously unmeasured frequently follows from research findings that identify factors influencing social conditions and behaviors that have obvious program and policy importance. For example, in early childhood development, research documented how the early treatment of children bears on subsequent educational and employment outcomes.

The rationale for expanding government data collection draws on sociological theory about why phenomena now summarized under the label "social capital" are broadly consequential for the functioning of societies. This theory dates most notably to Alexis de Tocqueville (*Democracy in America*) and to Emile Durkheim (1964, p. 28), who wrote that "A nation can be maintained only if, between the state and the individual, there is interposed a whole series of secondary groups near enough to the individuals to attract them strongly in their sphere of action and drag them, in this way, into the general torrent of social life." Drawing on this theory, scholars have comparatively recently begun systematically studying dimensions of social capital and outcomes relevant to policy. Below are examples (some of this literature is reviewed in more detail in Chapter 2)

- Measures of isolation or lack of social connection (such as the Social Network Index, which takes into account marital status, frequency of contact with other people, participation in religious activities, and participation in other club or organization activities) has under some conditions been as predictive of premature death as such clinical risk factors as smoking and hypertension (Berkman and Glass, 2000; Pantell et al., 2013; Steptoe et al., 2013).
- Neighborhood networks and characteristics have a significant impact on crime and safety (Sampson, 2006).
- The condition and development of social infrastructure help explain a community's resilience to natural disasters, such as hurricanes (Adger et al., 2005).[10]
- The effect of immigration and ethnic diversity on the social cohe-

[9]"Policy" extends to beyond government actions; corporations, universities, churches, charities, and other organizations also have policies that can be informed by data on civic health and elements of social capital. For example, many institutions have "diversity policies" that can be better informed through an understanding of society provided by government statistics.

[10]Klinenberg (2013) discussed how cities adapt and may best survive.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

> sion of communities has also been widely studied.[11] Researchers have also looked at the impact of the nature and extent of social capital present in destination locations on the success of immigrants moving to them. Evidence from longitudinal surveys shows that the presence of social networks (bridging and bonding types) available to immigrants is tied to employment outcomes and is a determinant of immigrant health. The density and ethnic diversity of friendship networks appears particularly important, having significant and positive effects, on immigrants' self-rated health status (van Kemenade et al., 2006; Zhao et al., 2010).[12]

These are suggestive rather than definitive research findings, but they are sufficient to warrant greater investments in data gathering for policy purposes. In the area of public health, the need for evidence linking social capital to risk factors such as smoking or obesity is an obvious example.

Public Information and Research Needs

A related rationale for improved data is the need for descriptive statistics that inform general public awareness about the state of society, where it has been, and where it is going. Data produced by government agencies that enter the official statistical system have common attributes, including high-quality standards, transparency, accessibility, and related professional norms. These norms guide practice in national statistical offices around the world and have been codified in principles promoted by the U.N. Economic and Social Council (see Box 1-1).[13]

In the United States, because of their importance to decision mak-

[11]See, among others, Farley and Alba (2002), Hirschman (2001), Portes and Rumbaut (2001), Rong and Brown (2001) and Waldinger and Feliciano (2004). Massey et al. (1993) is a seminal work depicting the role of networks in migration.

[12]Van Kemenade et al. (2006) found that "having access to close networks of people from the same cultural origin—as well as to programs that support these networks—is associated with the social and economic integration of immigrants in the host county and with their well-being."

[13]See, also, *Principles and Practices for a Federal Statistical Agency*, a report periodically updated by the U.S. National Academy of Sciences' Committee on National Statistics (National Research Council, 2013b), which identified "four basic principles that statistical agencies must embody in order to carry out their mission fully:

(1) They must produce objective data that are relevant to policy issues,
(2) They must achieve and maintain credibility among data users,
(3) They must achieve and maintain trust among data providers, and
(4) They must achieve and maintain a strong position of independence from the appearance and reality of political control."

The book also described 11 important practices to uphold these principles.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

BOX 1-1
Relevance, Impartiality, and Equal Access
Principle of Official Statistics

Principle 1—Relevance, impartiality and equal access*

Official statistics provide an indispensable element in the information system of a democratic society, serving the government, the economy and the public with data about the economic, demographic, social and environmental situation. To this end, official statistics that meet the test of practical utility are to be compiled and made available on an impartial basis by official statistical agencies to honor citizens' entitlement to public information.

Official statistics are one of the cornerstones of good government and public confidence in good government. Official statistics, by definition, are produced by government agencies and can inform debate and decision making both by governments and by the wider community. Objective, reliable and accessible official statistics give people and organizations, nationally and internationally, confidence in the integrity of government and public decision making on the economic, social and environmental situation within a country. They should therefore meet the needs of a range of users and be made widely available.

Second, to meet the test of practical utility, statistics must be relevant, of a quality suitable for the use made, and in a form that facilitates easy and correct use. The key to achieving this is maintaining an understanding of what statistical information users want and how they want it.

*This is the first of 10 principles laid out in the document.

SOURCE: United Nations (2014) and excerpts from United Nations Statistics Division (2013, p. 6). Reprinted with permission.

ers, some series—including gross domestic product (GDP), the consumer price index (CPI), and unemployment statistics—have been designated key economic indicators and special rules have been devised to ensure their unbiased and orderly dissemination. Because these statistical series are closely tied to economic policy and in some instances are used to adjust key government programs such as the level of social security payments, they appear on a publicly scheduled cycle. Many surveys are conducted less frequently or less regularly but, nevertheless, generate information that is useful to researchers and for descriptive monitoring purposes; the CPS supplements on civic engagement and volunteerism are examples. Over time, as knowledge deepens, these data may become essential to informing policy (or markets, or other kinds of decision makers), and the timing and process by which they are collected and disseminated may change accordingly. Indeed, the *potentially* critical importance

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

of social capital variables in explaining and perhaps predicting change in society is a strong argument for data collection.

Data that are initially primarily descriptive, when accumulated over time, may allow researchers to test hypothesized relationships among variables. For example, correlational analysis has demonstrated an association between neighborhood characteristics and school performance. When these are strong and consistent correlations, taking action can be justified—even in the absence of fully developed causal tests.

1.2. CHARGE TO THE PANEL

Statement of Task

The formal charge or statement of task to the Panel on Measuring Social and Civic Engagement and Social Cohesion in Surveys was as follows:

> The purpose of this study is to identify measurement approaches that can lead to improved understanding of civic engagement, social cohesion, and social capital—and their potential role in explaining the functioning of society. With the needs of data users in mind, the panel will examine conceptual frameworks developed in the literature to determine promising measures and measurement methods for informing public policy discourse. The panel's report will identify working definitions of key terms; advise on the feasibility and specifications of indicators relevant to analyses of social, economic, and health domains; and assess the strength of the evidence regarding the relationship between these indicators and observed trends in crime, employment, resilience to shocks (e.g., natural disasters), etc. The panel will weigh the relative merits of surveys, administrative records, and nongovernment data sources. The appropriate role of the federal statistical system will be considered, and recommendations will be offered for improving the measurement of civic health through population surveys conducted by the government—acknowledging an environment characterized by rapidly changing data and information infrastructures. The final report will also identify priority areas for research, development, and implementation flowing from the conclusions reached during the study.

This charge recognizes a number of related concepts and terminologies that are introduced here and considered in greater detail in Chapter 2. There are few standardized definitions for these terms, and terminological confusion, inconsistency, and ambiguity characterizes much of the research literature on which this report draws and summarizes.

"Civic engagement" has been characterized as comprising the activities of individuals that are oriented toward making "a difference in the

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

civic life of . . . communities and developing the combination of knowledge, skills, values and motivation to make that difference. It means promoting the quality of life in a community, through both political and nonpolitical processes" (Ehrlich, 2000). Activities include but are not limited to participating in community organizational life through elections, attending public meetings, and joining in community projects. Civic engagement can occur at neighborhood and local levels, and also at national and international levels. Volunteerism is one defining characteristic of civic engagement in that most if not all such activities are discretionary.[14] Although voting and direct political engagement are the most frequently measured indicators, they constitute a subset of what is treated as civic engagement.

Social cohesion refers to the extent to which groups—from communities to nations—are bound together by harmonious relations, work together, and feel obligated to act toward common purpose. Social cohesion is difficult to measure, given its many and complex dimensions: a shared sense of morality, values, and common purpose; levels of social order; extent of social solidarity created by income and wealth equalities; social interaction within and across communities or families; and sense of belonging to place. Inversely, as articulated by Forrest and Kearns (2001, pp. 2128-2129), "by implication, a society lacking cohesion would be one which displayed social disorder and conflict, disparate moral values, extreme social inequality, low levels of social interaction between and within communities and low levels of place attachment."

The geographic unit of analysis (spatial scale) is an essential dimension of social cohesion. Neighborhoods, states, or other groups could be in conflict with one another while demonstrating strong social cohesion internally. This possibility puts a premium on being clear in specifying how social cohesion is formed and that it functions at levels from family to countries, and many levels between. Important research in this area includes work by Sampson et al. (e.g., 2012b) on "collective efficacy," the willingness of a community's residents to intervene on behalf of the common good,[15] and by Putnam and others on bonding and bridging capital that manifests as social cohesion within and across group structures

[14]Fischer (2010) identified the historical roots of volunteerism in 18th century and discussed the persistence of both the attitudes and institutions that sustain and reproduce it.

[15]Sampson's work focused on the social cohesion of Chicago residents in terms of their inclination to get involved in righting social disorders, like children skipping school and hanging out on a street corner, children spray-painting graffiti, children disrespecting an adult, or residents fighting in front of one's house (Sampson et al., 1997).

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

respectively.[16] In contrast to civic engagement, which can be measured at the individual level and then aggregated to describe groups, social cohesion is a group property to begin with, and study of it often requires more complicated research methods.

Social capital is used in our report as an umbrella term; civic engagement and social cohesion are often, but not always, treated as dimensions of social capital (in Chapter 2, we give greater attention to the multiple dimensions of social capital). These constructs, though malleable, are treated in this report with as much specificity as feasible—thus, for example, we refer to voting, neighborhood resilience, and connectedness with friends rather than civic engagement, social cohesion, and social capital, except when a label is needed to denote the full breadth of phenomena under consideration. In so doing, we accept the conclusion of Sobel (2002, p. 145) who argued that, even though "the strengths of the analogy [to other forms of capital] are not persuasive enough to justify the terminology," the use of the term "social capital" is justifiable because existing literature has established "convincing evidence that the topics under the social capital umbrella are worthy of study, and application of economic principles can provide important insights. A vague keyword is not sufficient reason to condemn a promising line of research."

We are further guided by practice in statistical agencies. As described by Ruston (2002, p. 14), the U.K. Office of National Statistics identified five dimensions of social capital (used as the umbrella term): Social Participation, Social Engagement, and Commitment; Level of Empowerment, Control, Self-efficacy; Perception of Community; Social Networks, Social Support, and Social Interaction; and Trust, Reciprocity, and Social Cohesion. In a World Bank publication, Grootaert et al. (2003) develop an "Integrated Questionnaire" for measuring social capital across six domains: Groups and Networks, Trust and Solidarity, Collective Action and Cooperation, Information and Communication, Social Cohesion and Inclusion, and Empowerment and Political Action.

In the research literature, Putnam (1993, 2000) emphasized social values (especially trust) and social networks (especially voluntary associations) along with values and norms as pre-conditions for a well-functioning civil society and prosperous economy. Civic engagement—participation in public affairs—is part of Putnam's conception of active

[16]"Bonding capital" stands in contrast to "bridging capital," which refers to the type of social capital that links or cuts across different communities or groups. The extent and balance of bridging and bonding social networks help determine whether a community, even if civically active, is civically unhealthy, characterized by many sociometric islands that are not interconnected. Beyond the United States, Varshney (2001) studied the correlation between the presence of interethnic networks (bridging) versus intra-ethnic ones (bonding) on ethnic violence in India.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

citizens producing cohesive societies. Individuals' social relationships and connectedness is another frequently identified component of social capital. Bourdieu (1986, p. 249) emphasized these: "The volume of social capital possessed by a given agent . . . depends on the size of the network of connections that he can effectively mobilize."

"Civic health" also appears in the charge to the panel and could be accepted as an appropriate construct for organizing a set of indicators and for setting measurement priorities. Judging from the many civic health indexes in use (e.g., the NCoC state and national indexes), it is clear that many working in the area believe that term to be useful. Civic health has the added benefit that it is a concept that can be applied at the national level as well as to smaller geographic designations. Rating the civic health of a city, state, or nation involves a normative assessment drawing on a full array of measures and indicators ranging across civic engagement, social cohesion, and other aspects of social capital. In this sense, it is analogous to an assessment of economic health, which may be based on a range of measures that can be given different weights. One analyst might weight the employment rate or the number of jobs created more heavily while another one might give greater weight to wage rates, price inflation, or income inequality. In a similar way, civic health involves a normative assessment of the state of social capital in some geographic unit. However, there is little theory on what elements or factors constitute civic health, and little support to date for treating it as a single index. For example, we would not expect to find general public agreement on the optimum rate of divorce, let alone how heavily to weigh that variable in a civic health index. Consequently, the panel decided to focus on the more measureable and agreed-upon dimensions of social capital, focusing on civic engagement and social cohesion.

Interpreting the Statement of Task

In order to be responsive to the statement of task, the panel was required, at a minimum, to assess steps to improve data collection on dimensions of social capital in a manner that effectively informs research and policy—and to assess the role of the U.S. statistical agencies in the enterprise. Sponsors of the report requested guidance on information to be collected in government surveys, particularly in the CPS supplements. This assessment involved (1) assessing the CPS Civic Engagement and Volunteer Supplements, currently the most visible federal statistical system efforts to measure social capital; (2) evaluating which dimensions of key constructs are most amenable to measurement in the supplements; and (3) providing guidance on question content.

While this panel was convened to offer guidance about the CPS

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supplement—a task that shaped what was examined and concluded—it was clear that the broader context had to be examined to support the report's conclusions and recommendations. Restricting this study to the CPS—or even to current federal data collections—would overlook the possibility of alternative data sources, such as administrative records and digital data, whether from the government or other sources.

Our primary focus, however, is the appropriate role of the federal statistical system in improving measurement of social capital through its population surveys. The recommendations and conclusions herein acknowledge the growing importance of building strategies capable of exploiting the potential of nonsurvey data to supplement and work in coordination with the more traditional (and, at this point, more scientifically established) survey approaches mastered by National Statistics Offices over many decades. Consequently, we review the importance of methods and opportunities to link data systems—whether survey or nonsurvey based, government or private—to maximize the policy, information, and research value that can be extracted from them, taking up such questions as

- Which social capital variables (dimensions) are most needed for policy, research, and general information needs, and which are measureable?
- Which aspects of social capital are currently measured best and which are measured less well?
- What are the most promising approaches—survey and nonsurvey, government and nongovernment—for collecting information on key variables or indicators?
- What should be the role of the federal statistical system, recognizing a rapidly changing data collection environment that includes declining survey viability (in terms of costs and response rates), declining budgets of statistics agencies, and the emergence of other data—organic, big data, Web-based—that can substitute for and complement traditional government surveys?
- How might big data—the vast range of digital information produced daily, mainly in the private sector and usually for purposes other than statistical and research—be linked or otherwise used?

A key factor underscoring the need for multiple data collection modes and strategies, including those that might complement or substitute for traditional government surveys, is that much of what is interesting and important about social capital takes place at the community and neighborhood levels. When the objective is to improve the understanding of associations among variables that require highly localized neighborhood

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

or community information (e.g., at the block group or tract, in census terms), it will typically not make sense to do so by adapting national level, general population surveys; rather, specialized targeted studies may be more appropriate. Similarly, policy issues embedded in social capital, such as those associated with bridging and bonding social capital building strategies, necessitate disaggregation of information by relevant social groups—defined by race and ethnicity; urban, suburban, and rural makeup; and socioeconomic status. This need creates additional data demands, such as the need for larger samples or oversampling of groups of interest.

During its deliberations, the panel also agreed that a number of "big questions" were too ambitious to address meaningfully. We do not attempt to advance the notion of a unified theory in which, for example, the many dimensions of social capital might somehow be organized in terms of inputs that aggregate to some overall measure (analogous to economic accounting systems). Although elements of social capital, social cohesion, and civic engagement can be sensibly grouped into broader domains, it does not follow that these elements add up to a meaningful, overall measure that could be used as a key national indicator or monitoring statistic. In addition to the lacking conceptual precision, as noted above there is no theoretical basis for weighting various components of social capital when combining them into an "index." Most scholars in this field agree and downplay the idea of creating aggregate indexes of social capital. Putnam (2001, p. 2), for example, commented on the impracticality of a general measure of social capital:

> There are some forms of social capital that are good for some things and not for others. Now, it is not so easy to see yet exactly how we should add up all those forms in the same way that, I gather, it was initially not easy to see how we were going to add up all those different forms of physical capital. Accepting that there is no single form of social capital, we need to think about the multiple dimensions of social capital.

Whether or not such an integrated theory (and in turn framework for data collection) can ever be developed or makes sense is unknown at this time.

Additionally, although the panel was not explicitly charged with exploring the links between social capital indicators and measures of societal progress or well-being, these relationships are important. The growing movement of interest in subjective well-being and quality-of-life measurements, which was given impetus by the *Report by the Commission on the Measurement of Economic Performance and Social Progress* noted above (Stiglitz et al., 2009), has already generated insights into the role of social capital (as well as many other factors—ranging from income and employment status, to age and relationships, to access to green space

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

and neighborhood amenities) and people's experienced well-being and life satisfaction. The relationship between people's social connectedness, or lack thereof, and self-reports of the quality of their day-to-day experiences (and even their health) have, for example, been shown to be quite robust, particularly for the elderly.[17]

Well before the 2009 report, however, measures of subjective well-being have taken into account aspects of social capital. For example—though its validity remains highly contentious (Springer et al., 2006)—the Ryff Psychological Well-being Inventory (Ryff, 1989) includes a subscale for positive social relations (six items) to reflect the effect of supportive social relationships on psychological wellbeing and health. And, recently, Su et al. (2013) have included measures of "participation in local community" in a psychological well-being scale.

Many national statistical offices are pursuing data collection in the area of subjective well-being, and connectedness, civic engagement, and governance are frequently identified "domains" (along with more traditional ones, such as income, environment and health) that figure prominently in this work.[18] The domains of well-being identified in Stiglitz et al. (2009)—material conditions, economic insecurity, personal activities, health, education, social connections, political voice and governance, personal insecurity, environmental conditions—include a distinct "social capital" flavor. The European Union Sponsorship Group on Measuring Progress, Well-being, and Sustainable Development, the OECD *How's Life?* Initiative, and the Italian National Institute of Statistics have all adopted variants of the Stiglitz et al. (2009) approach to frame data collections. This reorienting of priorities has recast agency agendas (perhaps most notably in the UK Office for National Statistics) in such a way that the idea of measuring social networks and contexts and other aspects of social capital now fits in.[19] This trend toward measurement of well-being

[17]See, for example, Saito, Kai, and Takizawa (2012) and Chappell and Badger (1989) on the relationship between social isolation and subjective well-being among the elderly; Boehm and Kubzansky (2012) on associations between positive psychological well-being and cardiovascular health; and Thisted (2010) on evidence suggesting that changes in well-being may work through physiological channels taking place at the cellular level.

[18]The OECD publication, *The Well-being of Nations: The Role of Human and Social Capital* (2001) specifically asked the question "What is the impact of social capital on well-being?" It then laid out the sketchy and mixed evidence at the time, and suggested research for studying the links to answer the question.

[19]The UK Office for National Statistics (ONS) announced in November 2010 that it would start measuring subjective well-being to help guide national policy. Prime Minister David Cameron spoke about how well-being indicators would be used as a new measure of the country's progress, arguing that the government has the power to improve well-being by creating a climate in the country more conducive to the good life. Cameron discussed the shift to "measuring our progress as a country not just by how our economy is growing, but

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

more broadly has not gained the same traction among U.S. federal statistical agencies as it has in many other national statistical offices. While currently of great interest, the panel has judged the task of linking various social capital, cohesion, and engagement indicators to subjective (self-reported) well-being beyond the scope of the study.

The panel's approach for conceptualizing data collection is to assess and prioritize measurement of various social capital components on the basis of three factors:

1. evidence connecting them to specific, measurable outcomes in such domains such as health, crime, education, employment, effectiveness of governance;
2. their value in providing descriptive information to better understand society; and, relatedly,
3. their research value.

The spectrum of "indictors" emphasized in this report includes those that have, in the research, been defined and broadly identified with social capital and for which there is some agreement in terms of their status as either socially positive (high levels of trust in neighbors, volunteering, voter participation, charitable giving) or socially negative (social isolation, extreme polarization, corruption, incivility in the public sphere).

A number of social environment characteristics—which may affect or be affected by the social capital of a community or neighborhood and which are in principle measurable—fall in close proximity to the concepts identified in the panel charge and could arguably have been considered by the panel. Some of these, such as changing family structure, intergenerational (social and economic) mobility, political and social polarization, and fairness and discrimination have vast research literatures of their own that span multiple disciplines. The recent research on intergenerational income mobility by Chetty et al. (2013) was one example of the fascinating and important work in these areas. Their finding that upward mobility patterns for local areas (defined by census commuting zone) correlated significantly with extent of residential segregation by income, school quality, a social capital index, and other variables related to civic engagement and community cohesiveness is indicative of the salient connections between these phenomena and the topics central to this report. Although

by how our lives are improving . . . not just by our standard of living, but by our quality of life." The ONS was given the task of choosing several subjective well-being questions to be included in the Integrated Household Survey, the biggest source of social data on the United Kingdom after the census. See http://www.nationalaccountsofwellbeing.org/news/archive/David-Cameron-announces-UK-well-being-measure [February 2014].

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

the exact mechanisms at work studied by Chetty et al. (which included school quality and catchment area and the strength of transportation systems) requires more research, it is clear that there is substance and policy relevance to these research questions. The panel often felt compelled to consider these closely related phenomena, because they are so important, alongside the traditionally identified dimensions of social capital, and to weigh in on how they may interrelate with civic engagement and social cohesion. However, as acknowledged explicitly in Chapter 2, the idea that this panel could add meaningfully to the research addressing these big questions was unrealistic.

Report Audience

The audience for this report includes statistical agencies (both domestic and foreign), which oversee government data collection; the Corporation for National and Community Service, the study's sponsor, responsible for fielding the most useful CPS Civic Engagement and Volunteer supplements possible; academic researchers, who have advanced the broader understanding of social capital dimensions and established the need to measure them; national and local policy makers who, ideally, put research findings to good use; community-based organizations that often are best positioned to enhance or initiate programs related to civic engagement and community betterment; and the general public, which benefits from information about its society.

1.3. REPORT STRUCTURE

The remainder of the report is structured as follows: Chapter 2 identifies and defines the key measurement constructs that have been raised in this introduction. We present our views on what kinds of data should be collected and offer thoughts on how to measure various components of social capital. In Chapter 3, the strength of the evidence tying these components to social, economic, and other outcomes is assessed and criteria identified for prioritizing measures and driving a data collection strategy. Issues of causality (as they relate to policy relevance) are explored in the context of this assessment. A number of key measurement and technical survey issues—some unique to the social capital context and some not—are discussed.

Setting up the discussion of recommendations for action, the comparative advantages of competing data strategies are weighed in Chapter 4. The role of the federal statistical system in data collection on civic engagement and social cohesion is considered, as are specific, potentially exploitable government data sources. In Chapter 5, attention is given to alterna-

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

tive methods of measuring civic engagement, social cohesion, and other dimensions of social capital being created by the rapidly changing world of data collection and statistics generation. Both government ("official statistics") and nongovernment data strategies are discussed, along with experimental approaches that may involve pilot studies, public/private collaborations and partnerships, and exploitation of emerging technologies. These final chapters lay out next steps and a number of recommendations for advancing concepts, methodology, data collection, and research. The report's appendixes present background information on various topics.

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2

What Should Be Measured?

A range of factors having to do with the social capital characteristics of communities, and, more generally, of society, have been linked to outcomes in population health, economic performance, social functioning, and general well-being. To support analytic work that advances understanding of these linkages, high-quality data are necessary.

> **CONCLUSION 1: Data on people's civic engagement, their connections and networks, and their communities—aggregated at various levels of demographic and geographic granularity—are essential for research on the relationships between a range of social capital dimensions and social, health, and economic outcomes, and for understanding the directions of those effects. This research in turn informs policies that seek to maximize beneficial outcomes and minimize harmful ones.**

Exactly what kinds of data to collect, what methods to use, and who is best positioned to carry out the task, however, are largely unanswered questions. In the first part of this chapter, we consider the definitions that have been offered for key terms that appear in the study charge. In the second part, we consider which of the measureable subcomponents of social capital are most promising in terms of policy relevance, measurement feasibility, descriptive content, and evidence tying them to important social, economic, and health outcomes.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

2.1. DEFINITIONS AND KEY MEASUREMENT CONCEPTS

The statement of task to the panel (see Chapter 1) refers to three constructs: social capital, civic engagement, and social cohesion. However, there is little agreement on the definitions of these constructs, which is a major roadblock to quantifying them.

CONCLUSION 2: Because the terms "social capital," "civic engagement," and "social cohesion" refer to broad and malleably defined concepts that take on different meanings depending on the context, they are not amenable to direct statistical measurement. However, dimensions of these broad constructs—the behaviors, attitudes, social ties, and experiences—can be more narrowly and tangibly defined and are thus more feasibly measured.

The granular, tangible measures listed in Table 2-1 are possible to track over time and can be combined in ways that are appropriate for addressing various research and policy questions.

This idea—that social capital is not a construct that can be sensibly measured as a formulaic, catchall aggregate of a predetermined set of parts and that a more policy and context specific approach that breaks down the concept into better defined components is needed—has been made by many researchers. Grootaert and Van Bastelaer (2002, p. 5) wrote that a "concept that encompasses too much is at risk of explaining nothing" and that "the challenge for research . . . is to give meaningful and pragmatic content to the rich notion of social capital in each context and to define and measure suitable indicators."

Similarly, Stones and Hughes (2002, p. 40) wrote

> [There is] evidence . . . that measures of norms, networks and network characteristics do not cohere readily to form an overall measure of social capital, but rather that differences exist between these core elements. This raises the question of whether we should think about the different dimensions or elements as conceptually distinct. For example, it may be that norms of trust and reciprocity account for some types of outcomes, but that having limited or extensive networks accounts for others. Dense networks in which many members of a network know one another may result in different types of outcomes again.

We agree, but, it is still useful to consider the meaning of the top-level measurement constructs. Ultimately, many fundamental national statistics, such as worker or multifactor productivity, involve separate measurement and aggregation stages.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

Civic Engagement

Civic engagement is a cluster of individual efforts and activities oriented toward making "a difference in the civic life of . . . communities and developing the combination of knowledge, skills, values and motivation to make that difference. It means promoting the quality of life in a community, through both political and non-political processes" (Ehrlich, 2000, p. vi).

Civic engagement may arise in response to problems—a local crime wave, deteriorating schools, ineffective trash collection, or oppressive leadership—whose very existence can be the result of failures of citizens to collaborate on effective solutions, police themselves, or hold public leaders accountable. Civic engagement may also take place habitually (as may sometimes be the case with voting) or because someone is asked to participate (as may sometimes be the case with volunteering) rather than as a reaction to a particular event. The efficacy of engagement is at least partially a function of citizens' socialization, mastery of civic skills (e.g., running or chairing meetings, organizing petition drives), and knowledge of how to become involved. These skills are often learned in voluntary associations, political campaigns, and religious institutions.

Although political interest and action are primary components of civic engagement, they are not the only ways that citizens become civically active. People engage in a number of ways though their social networks. When friends and acquaintances are recruited to participate, the process is likely faster and more successful when embedded in a base of trust, reciprocity, and a sense of being a stakeholder in outcomes that affect one's community. Moreover, when the trust in these networks extends beyond friendship circles to include interactions with others (e.g., strangers, non-alike groups), trust and reciprocity are especially valuable in achieving collaborative action. Civic engagement is about much more than voting behavior and volunteerism, though these are certainly key elements.

The United States has a long tradition of rhetoric and action to foster voting, facilitating volunteerism to address community needs, and engaging citizens in various forms of social and political activity. As early as the 1830s, the French observer Alexis de Tocqueville commented on the vitality and significance of voluntary behavior in shaping American democracy. Beginning with the New Deal, there have been periodic federal government initiatives to provide formal opportunities for civic engagement. The Civilian Conservation Corps, launched in 1933, and the Volunteers in Service to America Program (VISTA), initiated in 1965, are examples. The Voting Rights Act of 1965 sought to remove barriers to voting. The 2009 Serve America Act, which reauthorized and expanded the AmeriCorps Program initially established in 1993, is a more recent example. Although these actions were organized at the national level

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TABLE 2-1 Broad Categories and Measurable Elements of Social Capital

Variable and Category	Relevant Unit of Observation or Analysis: Individual	Relevant Unit of Observation or Analysis: Group (neighborhood, community, state, nation)
Political Engagement		
Voted (all levels)	X	X
Contacted public official	X	
Discussed politics	X	
Worked for campaign	X	
Gave money to campaign	X	
Volunteering	X	X
Nonpolitical Engagement		
Member of commercial association	X	
Member of civic association	X	
Member of church	X	
Member of school association	X	
Charitable contribution	X	X
Volunteering	X	
Cohesion/Connectedness (organizational and nonorganizational; individual versus group)		
Frequency of interaction with friends/family	X	
Friend or family to help out (support network)	X	
Frequency of feelings of loneliness	X	
Participation in online chat groups	X	
Inter-group bridging (e.g., cross-group socialization, school integration, etc.)		X
Intra-group bonding		X
Presence of support networks	X	X
Trust		
In neighbors	X	X
Frequency of exchanging favors	X	
In workplace	X	
Attitudes toward groups other than own	X	X
In government	X	X
In law enforcement	X	X
Informed Citizenry		
Frequency of reading newspaper	X	X
TV, Internet news	X	X

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

Nature of Phenomena/Data Reporting			Promising Data Collection Modes	
Behavior (objective, observable)	Feelings (subjective, nonobservable)	Social Environment Characteristics	Survey	Nonsurvey
X			X	X
X			X	
X			X	X
X			X	
X			X	X
X			X	
X			X	
X			X	
X			X	
X			X	X
X			X	X
	X			X
X			X	X
X	X	X	X	X
			X	
X		X	X	X
X	X	X	X	X
	X		X	
X			X	
	X		X	
	X		X	X
	X		X	X
	X		X	X
X			X	X
X			X	X

Continued

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

TABLE 2-1 Continued

Variable and Category	Relevant Unit of Observation or Analysis: Individual	Relevant Unit of Observation or Analysis: Group (neighborhood, community, state, nation)
Confidence in Institutions		
Corporations	X	
Media	X	
Schools	X	
Legal system	X	
Fairness of Society/Civil Liberties		
Arrest patterns (equal treatment)		X
Profiling practices		X
Discrimination		X
Segregation (school, neighborhoods, etc.)		X
Access to education	X	
Political Polarization		
Percentage of votes along party lines		X
Number of "no compromise" issues		
Attitudes toward people not in own party	X	X
Social Integration		
Social mobility	X	X
Crime rates		X
Divorce rates		X
Income inequality		X

(though they have strong community-level missions—for example, the Summer of Service and Youth Engagement Zones), there are also many civic programs organized locally by schools, clubs, churches, and other organizations.

Social Cohesion

Social cohesion refers to the extent to which groups and communities cooperate, communicate to foster understanding, participate in activities and organizations, and collaborate to respond to challenges (e.g., a natural disaster or disease outbreak). Because actions and attitudes may integrate people or separate them, research on social cohesion also considers social cleavage between opposing groups that are each cohesive around their positions (e.g., advocates of gun rights versus advocates of gun control).

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

Nature of Phenomena/Data Reporting			Promising Data Collection Modes	
Behavior (objective, observable)	Feelings (subjective, nonobservable)	Social Environment Characteristics	Survey	Nonsurvey
	X		X	
	X		X	
	X		X	
	X	X	X	
X		X		X
X		X		X
X	X	X	X	X
X		X	X	X
X		X	X	X
X				X
			X	X
X			X	X
		X	X	X
		X	X	X
		X	X	X
		X	X	X

Civic engagement, as noted above, customarily involves taking action, while social cohesion is more about the conditions that may initiate and facilitate actions or are consequences of them. Though the primary focus is often on groups, the relevant unit of analysis in studies of connectedness and social cohesion—individuals, families, neighborhoods, nations, etc.—depends on the research (or policy) question of interest. It is imperative to identify the level of aggregation. For example, during a civil war, there are high levels of cohesion within factions, such as the Confederacy or the Union, but obviously not for the country as a whole.

Forrest and Kearns (2001, p. 2128) characterized social cohesion as reflecting "the need for a shared sense of morality and common purpose; aspects of social control and social order; the threat to social solidarity of income and wealth inequalities between people, groups and places; the level of social interaction within communities or families; and a sense of belonging to place." They added (pp. 2128-2129):

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

> [I]t is worth noting . . . that strongly cohesive neighbourhoods could be in conflict with one another and contribute to a divided and fragmented city. Equally, a society in which citizens had a strong sense of place attachment and loyalty to their respective cities could be in conflict with any sense of common national purpose, or macro-cohesion. Thus, whether society is said to face a crisis of social cohesion depends upon what spatial scale one is examining and the relative strength of the countervailing forces operating at each scale. Equally importantly, the question presupposes that cohesion is everywhere virtuous and a positive attribute, which it may not always be.

Although conceding that there is no single way of defining it, Jensen (1998) identified five dimensions of social cohesion: (1) belonging versus isolation, (2) inclusion versus exclusion, (3) participation versus noninvolvement, (4) recognition versus rejection, and (5) legitimacy versus illegitimacy. Chan et al. (2006, p. 290) defined social cohesion as "a state of affairs concerning both the vertical and the horizontal interactions among members of society as characterized by a set of attitudes and norms that includes trust, sense of belongingness and the willingness to participate and help as well as their behavioral manifestations." Differing levels of trust within and across groups may play a role in how social ties are formed and in how social cohesion can be fostered, but it can also lead to polarization. Political tolerance and willingness to compromise are other characteristics that affect the social cohesion of groups and populations.

Social Capital

Social capital is a term that has been used to portray many of the elements of civic engagement and social cohesion described above as well as others having to do with the connectedness of people to others. Although the research literature on social capital has produced numerous insights into the functioning of society, it has not produced a scholarly consensus about what the term includes.[1] One of the early scholars to use the term "social capital" was Hanifan (1916, pp. 130-131), who wrote about social cohesion and personal investment in the community:

> I do not refer to real estate, or to personal property or to cold cash, but rather to that in life which tends to make these tangible substances count for most in the daily lives of people, namely, goodwill, fellowship, mutual sympathy and social intercourse among a group of individuals and families who make up a social unit . . . If he may come into contact with

[1]In a review of 13 articles, Dasgupta and Serageldin (2001) found that 9 of them contained "extended discussion of what social capital means . . . authors recognize that if they are going to use the term, then they must define how they will use it" (cited in Sobel, 2002, p. 144).

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

> his neighbor, and they with other neighbors, there will be an accumulation of social capital, which may immediately satisfy his social needs and which may bear a social potentiality sufficient to the substantial improvement of living conditions in the whole community. The community as a whole will benefit by the cooperation of all its parts, while the individual will find in his associations the advantages of the help, the sympathy, and the fellowship of his neighbors.

Jacobs (1961) used the term when discussing how neighborliness contributed to more effective functioning of communities. His book, *The Death and Life of American Cities*, examined how the vitality of neighborhoods depends on social connectedness among its citizens and includes the now often cited example of the Greenwich village delicatessen owner who served as the "eyes of the neighborhood," even providing a service as custodian of apartment keys for local residents. From there, the literature flourished: Pierre Bordieu (1979) used data from the 1960s and 1970s to examine boundaries between classes in France; James Coleman and colleagues (1982) analyzed how the performance of Catholic schools benefited from a network of social relations characterized by trust; and Robert Putnam (2000) presented hypotheses about why American society was, in his view, unraveling in certain respects at the end of the 20th century.

Putnam (1993, 2000) argued that social capital is built most effectively through encouraging voluntary associations as a way to address social inequality and lack of cohesive social trust associated with ethnic diversity. He expects that increased voluntary associations between people will lead them to transcend differences and "come together" as a cohesive citizenry. As noted in Chapter 1, he introduced two types of social capital: bridging and bonding. Bridging social capital is exemplified by voluntary associations and horizontal ties based on common interests that transcend differences of ethnicity, religion, and socioeconomic status in communities. Bonding social capital refers to social ties that people build around group homogeneity, usually determined along ethnic, racial, or socioeconomic lines (Putnam, 2003).

Putnam considered bridging social capital more essential for the kind of social cohesion that allows minority ethnic groups to integrate beyond their immediate community and into wider society. He found that in diverse, mixed neighborhoods, citizens were overall less trusting of others relative to homogenous communities. This model associated immigration with ethnic diversity, which may result in social fractures of values and obligations in a community. Other studies (e.g., Laurence, 2011) have found that exposure to diversity strengthens some forms of social capital by facilitating the bridging of social gaps between ethnicities and improving perceptions and tolerance toward groups other than one's own. In all of the above studies, social capital building, through informal or formal

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mechanisms, is then posited as a mechanism for alleviating disruption resulting from increased diversity resulting from immigration or other sources. This line of reasoning suggests a number of policy and practical actions: for example, English language and citizenship courses for immigrant groups may be useful for promoting the creation of bridging social capital.

Bourdieu (1986, p. 248), distinguishing between economic capital, cultural capital, and social capital, defined the latter as "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition." Emphasizing the connectedness component, he continued: "the volume of social capital possessed by a given agent . . . depends on the size of the network of connections that he can effectively mobilize" (p. 249). Unlike economic capital, social capital is not depleted by use, but in fact depleted by nonuse.[2] In this respect, it is similar to human capital. Portes's (1998, p. 1) critical assessment of social capital research—which he argues too simplistically extends the concept "from an individual asset to a feature of communities and even nations"—is based in no small part on problems created by definitional ambiguity. Paxton (1999, p. 90) noted: "[T]he lack of an obvious link between theory and measurement has, in some cases, led to the use of questionable indicators of social capital. For example, voting should be considered an *outcome* of social capital rather than a part of social capital itself."

Francis Fukuyama (2002, p. 27) described social capital as "shared norms or values that promote social cooperation, instantiated in actual social relationships." He emphasized the role of certain subjective states and attitudes, such as trust, which: ". . . acts like a lubricant that makes any group or organization run more efficiently" (1999, p. 16). Bowles and Gintis (2002, p.1) stated: "Social capital generally refers to trust, concern for one's associates, a willingness to live by the norms of one's community and to punish those who do not." This relative agreement that trust is an important component of social capital[3] is reflected by the trend among statistical agencies and others to include trust questions in surveys—for

[2]Arrow (1999) and Solow (1999) also pointed out disconnects in the analogy between physical capital and social capital—missing analogs to rate of return and depreciation; that social capital is mainly a public good and does not belong to any one individual or firm; and that social capital is produced by societal investment but not in as direct a manner as human and physical capital.

[3]Knack and Keefer (1997) showed that a 1.0 increase in the standard deviation for a measure of country-level trust is associated with economic growth levels greater than 0.5 of a standard deviation. La Porta et al. (1997) found that, across countries, an increase in the standard deviation of 1.0 in the same measure of trust is associated with greater judicial efficiency (0.7 of a standard deviation) and lower government corruption (0.3 of a standard deviation).

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

example, do members of society trust that their votes count? Do people trust their neighbors so that they are comfortable leaving their houses to go to work? Do they trust that they and their neighbors will be treated equitably by those in authority? (Below we review recent research that has attempted to test the extent to which these kinds of specific questions track with actual levels of trust in experimental contexts.)

Stiglitz et al. (2009) highlighted subjective states and attitudes, defining social capital as "social networks and the associated norms of reciprocity and trustworthiness." They added (pp. 182-183):

> Since it is impractical to measure social networks at large geographic levels, researchers generally rely on proxies for these networks (e.g., number of close friends, political participation, membership in voluntary associations, religious involvement, doing favors, etc.). The core insight of the concept of social capital is that, like tools (physical capital) and training (human capital), social connections have value for quality of life.

Portes (1998, p. 7) emphasized the capacity of personal and group connections and other support resources to affect "the ability of actors to secure benefits by virtue of their membership in social networks or other social structures." Lin (2001) emphasized social relationships—investments, connections, and access to resources—associated with expected returns in the marketplace. As discussed below, comparatively strong evidence exists on the association between social connectedness—or, the opposite, social isolation—and health.[4]

There are many candidate indicators for representing the extent and nature of an individual's connections and networks: examples include memberships in organizations, numbers and diversity of friends, frequency of contact with friends and family, and mode of contact (face to face or virtual and remote). Granovetter (1973) made an important distinction between strong and weak ties. Strong ties are typically thought of as including immediate family and close friends who provide emotional support and often share resources. Weak ties typically extend to a much broader circle of people beyond immediate family and friends and therefore include more diverse connections. In the context of job search, for example, one person may find employment directly through a family connection (going to work in the family firm); another may take advantage of weaker ties to find out about job opportunities through what amounts to an informal employment referral system.

Proliferation of Internet and email use and, more recently, social media has enabled individuals to maintain increasingly large numbers

[4]For meta-analyses of the links between social relationships and mortality risk, see Berkman and Syme (1979), Cohen (2004), and Holt-Lunstad et al. (2010).

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

of weak ties (some, such as LinkedIn, are organized around a specific life domain—in this case, career). Focusing primarily on email and using data from the Pew Internet & American Life Survey, Rainie et al. (2006) addressed the question of what impact the Internet is having on Americans' relationships:

> . . . the Internet fits seamlessly with in-person and phone encounters. With the help of the Internet, people are able to maintain active contact with sizable social networks, even though many of the people in those networks do not live nearby. Moreover, there is media multiplexity: The more that people see each other in person and talk on the phone, the more they use the Internet. . . . People use the Internet to seek out others in their networks of contacts when they need help.

In the context of Putnam's analysis (1993, 2000), interactions facilitated by technology and social media would seem to have the potential to generate bridging social capital—that is, networking across socially heterogeneous groups. Weak ties facilitated by technology are more likely to include people from different social, ethnic, and occupational backgrounds. This contact with a diverse range of individuals creates access to a variety of knowledge sources and social opportunities, and has been shown to lead to more socially tolerant attitudes and openness to new ideas (Boase and Wellman, 2006).

The rapid pace of change in information exchange and communication technologies are also revolutionizing the ability, effectiveness, and nature of the way in which people take collective action. A decade or more ago, Putnam emphasized face-to-face interaction as being crucial to tapping the benefits of social capital. But, since then, texting, tweeting, Facebook, Instagram, and other tools have come into play not only for basic communication, but also to organize community rallies, group events, and even political actions. It is a research question whether and to what extent the use of new technologies has begun to repair (or added to degradation of) some of the perceived deterioration of connectedness and civic engagement that has taken place over the past few decades.

Recently, research has focused on computer-mediated communication and social ties created by social media—and whether the Internet increases, decreases, or supplements social capital (Wellman et al., 2001). Wellman et al. (2003) investigated the changes that the Internet has had on community life, found that it "is adding on to other forms of communication, rather than replacing them." They concluded that this has important implications for civic engagement (and, by extension for its measurement). The rapid saturation of social media in communication networks and interest in its impact on personal and social life (Das and Sahoo, 2011) had only added to the relevance of this research area, a

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

trend documented in a review of that scholarship by Boyd and Ellison (2007).

2.2. INDICATORS FOR MEASURING SOCIAL CAPITAL

As with assessments of the overall economic health of a nation, state, city, or community—which involves measuring such factors as unemployment, inflation, income distribution, and potentially many others—there are measureable pieces of social capital that provide evidence about the social and civic health of a nation, state, city, or community. The importance of a given indicator will vary by place and time and by the questions being asked. Putnam (2000) addressed the structural question, reporting on the collection of data for 14 key indicators in the areas of community or organizational life, engagement in public affairs, community volunteerism, informal sociability, and social trust (see Appendix A). *America's Civic Health Index 2009*, produced by the National Conference on Citizenship (NCoC), included 28 indicators organized into 10 areas: connecting to civic and religious groups, trusting other people, connecting to others through family and friends, citizen-centered engagement, giving and volunteering, staying informed, understanding civics and politics, participating in politics, trusting and feeling connected to major institutions, and expressing political views. The Civic Engagement Supplement to the Current Population Survey (CPS) typically includes 15-20 questions that have varied from year to year.

To go from a long list of questions, such as those in the Social Capital Community Benchmark Survey developed by the Saguaro Seminar[5] (and from which Civic Engagement Supplement questions were originally distilled) to a much smaller set of questions requires prioritization. There are some narrow topics for which one question can be revealing—for example, whether a person voted in the last presidential election. Others—for example, whether a person has adequate social networks to operate effectively in society—require many.

There is no consensus about what an optimal number of indicators might be for the purpose of assessing civic health or about what content is most valuable to nations, states, or cities. What is clear is that multidimensional, multimode data collection efforts facilitate far greater analytic flexibility for researchers than can a single indicator or even information

[5]The survey embodies a detailed conceptualization of social capital that includes more than 100 items, administered to both a national sample and to representative samples in 41 communities across the United States. The items cover 11 dimensions in the domains of trust, informal networks, formal networks, political involvement, and equality of civic engagement across the community (constructed measure across race, income, and education levels).

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from a single module in a national-level survey. As articulated by Paxton (1999, p. 90):

> Social capital is a general concept, and we should not expect that it can be captured with just one variable. Many different measures can be and have been posited as indicators of social capital. Without strong ties to theory, however, researchers can choose among many pieces of data that provide contrary pictures of the health of social capital in the United States. Also, using measures from a variety of different sources means that assessment is difficult due to incomparability in sampling designs and question wording (Wuthnow, 1997). Finally, by using single observed variables, researchers cannot account for measurement error, which we would expect to find in the survey questions used to assess social capital.

By contrast, multiple indicators allow for a fuller conceptual representation and make it possible to tailor a measure to specific applications. Drawing from Coleman (1988), Bourdieu (1983), and others, Paxton (1999, p. 93) suggested a two-component definition of social capital that distinguishes between more objective and more subjective aspects of resources that inhere in social relationships:

- objective indicators: for example, network structures that link individuals (such as voluntary association memberships), access to resources that can be tapped
- subjective indicators: for example, trust in others, norms of reciprocity (obligations created by exchanges of benefits or favors) obtaining among individuals in a community, extent of positive and negative feelings toward others (for example, levels of morale in a neighborhood)

This two-component classification—while not without its limitations[6]—reflects the traditional division in social theory between quantitative and qualitative dimensions, described by Simmel (1971), and could reasonably be extended to organize the content of civic engagement:

- objective indicators: for example, political engagement (voting, discussing politics, contacting politicians, participating in cam-

[6]In each category, one can marshal counterarguments: to what extent can social isolation really be measured objectively? Why are exchange relationships (reciprocity) less objective? And so on. Simmel's "form/content" distinction provides an alternative categorization and gets at some of these subtleties. He associated "content" with the purpose or motive behind a social phenomenon or interaction and "form" with the mode of the interaction.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

paigns); volunteering and giving; association memberships; frequency of interaction with neighbors
- subjective indicators: for example, attitudes about efficacy (do individuals believe they can make a difference in the community, help solve problems in the community?); civic values related to citizenship and to living in a community; civic culture

For social cohesion, objective and subjective elements could reflect the capacity of diverse members of a community or cohorts across disparate communities to collaborate on behalf of a shared sense of the greater good:

- objective indicators: for example, diversity of connections, extent and nature of network ties and of voluntary associations; network "embeddedness" of particular organizations; fractionalization—political and otherwise
- subjective indicators: for example, trust within and across groups (who is a citizen?); attitudes toward having people from "non-like" groups as neighbors, family members, or church members

The above distinctions are suggestive of how the broad concepts (social capital, civic engagement, and social cohesion) could be represented in a more granular and more tangible measurement and data collection framework. The content of Table 2-1 is illustrative of data elements that have been used to define or characterize social capital and highlights the heterogeneity of the data used in studies of social capital. That heterogeneity includes the variation in the unit of measurement or analysis, measurement strategies (e.g., survey or nonsurvey) and the distinctions between subjective and objective aspects and among feelings, experiences, and behaviors.

Table 2-1 does not map the universe of social capital—it is admittedly incomplete.[7] Community engagement, for example, might include activities like participating in a parade or charity run, buying Girl Scout cookies from neighborhood kids, engaging in a community or neighborhood listserv or message board. Any of these activities can happen without membership in an organization. And a survey respondent may be informed about a community without reliance on traditional news. Likewise, it is not clear how the boycott variable in the CPS supplement fits with existing notions of civic engagement, but it clearly representative of the kinds of topics that need further study. Thus, there is a need for broad measures of community engagement.

[7]Selected taxonomies used in research and in survey modules are in Appendix A.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

In order to construct a comprehensive taxonomy or relevant variables, a clear conceptual, definitional, and analytic objective is required, which in turn depends on the research or policy question of interest. One set of questions may be essential on a crime survey, another on a health survey, and yet another on a survey of social mobility among immigrants. For example, trust and interaction among neighbors may affect crime in a neighborhood (and crime may in turn affect trust), while connectedness with one's children and friends may be more important in explaining differences in health and longevity.[8]

The value in going through a list of candidate data elements organized along different dimensions is not to create a universally comprehensive list (which may not be possible), but to indicate how characteristics of social capital suggest types of analyses and alternative data collection modes. Ideally, as described in the next chapter, an empirical justification for data collection should be established using a case-by-case assessment of the strength of research evidence linking measures to social, economic, health, and political outcomes. However, for the immediate future, some data collection is needed for exploring if and where such linkages exist. It is encouraging that the evidence base shedding light on the relationships between components of social capital and important social outcomes is accelerating. Ever since Putnam (1993, 2000), interest in social capital has expanded rapidly in research and policy communities (see, e.g., Forsman, 2005; Widén-Wulff, 2007).

The broad categories in Table 2-1—political engagement, social cohesion, and trust—are not directly measureable, but they serve to group specific elements—voting, frequency of contact with people, attitudes toward neighbors—that often are. Depending on the context and the questions asked, different elements are linked to the mechanisms that produce change. For example, reducing social isolation or improving trust in a neighborhood may be tools to improve health and reduce crime, or they may be the policy objectives in and of themselves.

CONCLUSION 3: For data collection related to social capital, the theoretical or policy issue of interest is critical for identifying clearly defined components and developing instruments (survey or otherwise) designed to measure these components.

One prominent distinction among the variables listed in Table 2-1 is the relevant unit of observation (which may refer to either the unit on which measurements are taken or the unit used in analysis). Some ele-

[8]Many of these factors have appeared on various surveys including the American National Election Study and the General Social Survey.

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ments more naturally emphasize the individual; others focus on groups, ranging from families, to neighborhoods, to communities, to regions, to nations.[9] While important elements of social capital are possessed by individuals—such as connections that allow people to be more effective and efficacious in the world—many upstream precedents and facilitators of these individual capacities are community characteristics. Examples include the concentration or density of proximate individuals who have social capital and use it to assist others, and the institutions such as schools, churches, clubs, and local markets that facilitate making connections. The presence of individuals possessing social capital and access to facilitating institutions create a positive feedback loop that can reinforce and grow social capital in a community. Additionally, although in some cases the construct of interest is an aggregation of individual properties (e.g., unemployment rate for a state), it may nonetheless reflect effects that take place at other levels, such as for neighborhoods. But other properties of social, political, or economic entities exist only at the specified level; for example, unemployment insurance benefits are a property of a governmental unit within which the individual is located. These aggregations, and the way individual and group level concepts interrelate carry implications for statistical analysis and modeling (e.g., which unit of analysis has what property, how units of analysis are nested within each other).

The literature, at least since Coleman's landmark works (1988, 1990), has largely portrayed social capital as a community-level attribute, suggesting a need for place-based measurement and a data collection strategy that can provide estimates at the neighborhood, city, and state as well as national level. An increasingly massive and complex challenge for researchers is the fact that "communities" are becoming less and less defined by geography. A person in town A may volunteer in town B, go to church in town C, gives money to national offices of several organizations, and use Skype to talk with family members around the country or the world. Following each item in a survey with questions about where a contact lives or where an activity occurred would continue to exacerbate survey burden problems. This means that other (probably nonsurvey) data approaches will need to be implemented to analyze these complexities (see Chapter 5 for a more detailed discussion of alternative data sources).

Coleman (1988) and Putnam (1995) both conceptualized social capital as a property of groups rather than of individuals. Along these lines, the

[9]Indeed, something like the Gini index of income inequality is by definition distributional and does not describe any individual. But individual measures of income are the micro-level unit used to get to the structural indicator. The literature sometimes makes distinctions between compositional, structural, and global indicators (e.g., mean income, inequality, and proximity to wealth as respective examples).

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

former argued that, "unlike other forms of capital, social capital inheres in the structure of relations between actors and among actors. It is not lodged either in the actors themselves or in physical implements of production" (p. 98). The basic argument that social capital cannot exist without social relationships between at least two people is sensible. Individual members of a group can benefit from the social relations of others. A child, for example, may benefit from such "spillover effects" if his or her parents are socially well-connected with others who possess high levels of social capital characteristics such as trustworthiness and strong networks. And some group phenomena that interact with dimensions of social capital—for example, inequality—clearly take place at aggregations above the family or the community. Concerns about the top one percent or, at the other end of the ideological spectrum, about overemphasizing class conflict pertain to a loss of social cohesion that is not a local phenomenon.

Going the other direction on the spatial dimension scale, Coleman (1988) made explicit links between an individual's or a family's human capital and social capital. And Glaeser et al. (2002) analyzed the formation of social capital using a model of optimal individual investment decisions. In this economic approach, the emphasis is shifted from "institutions, norms, conventions, social preferences, and aggregate/group outcomes" to the individual's "social characteristics—including social skills, charisma, and the size of his Rolodex—which enables him to reap market and non-market returns from interactions with others" (p. 438). Likewise, Portes (1998) emphasized the individualist perspective. He noted the logical danger of models based on aggregate-level characteristics, such as crime rates, which could be interpreted simultaneously as affecting levels of social capital or as an outcome resulting from it. Portes illustrated this problem by observing that an indicator of social capital, such as the average number of neighbors known, would be much stronger for making causal claims if it could observed longitudinally both before and after a change in the crime rate.

The relevant unit of observation can also be suggestive of how to collect data appropriate to the analytic goals. Information about many actions or attitudes is collected through surveys of individuals, after which indicators of interest may be aggregated to various geographic levels. Surveys ask respondents if they voted or if they trust their neighbors, yet the ultimate interest may be in national level voter turnout trends or community levels of trust. If all one is interested in is total voter turnout, newspaper circulation in a media market, or total membership in associations, there are administrative and other kinds of data sources. But if one is interested in the attributes of individuals engaged in various behaviors or with specific attitudes, microdata obtained from individual respondents are essential. As the field moves forward, it is likely that

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nonsurvey, digital data will increasingly be combined to link records and build profiles of individuals (discussed in detail below).

Another level of differentiation shown in Table 2-1 is among behavior, feelings, and experience:

- Peoples' behaviors or actions, which are frequently quantifiable. Examples include participating in specific activities (political or nonpolitical, organized or nonorganized); interacting with family; and volunteering time and contributing money.
- Peoples' feelings, perceptions and attitudes, which often involve subjective assessments. Examples are trust in others and in institutions and support and sense of belonging or not belonging.
- People's experiences, which are generally measurable. They include such elements as social, geographic, or economic mobility; discrimination; and political polarization.

Data across these categories are typically gathered at the individual level, but the question of interest often involves reference groups: for example, what is the role of family support for health of elderly people or the education of children? What is the level of trust in government among Republicans in comparison with that of Democrats? What is the level of income mobility among immigrants originating from one country compared with those from another? This is just one dimension in what might be thought of as "nested" indicators, and data on these can be aggregated to create reference levels of engagement and cohesion at household, neighborhood, municipal, state, or national scales. These "nature of phenomena" distinctions do not by themselves establish a clear demarcation of what to cover and what not to cover, but they are important considerations in developing a data collection strategy.

Clearly defined activities or behaviors such as voting or volunteering can often be reported in a comparatively straightforward way with a few questions on a population survey.[10] Data on other observable actions, such as interacting using social media or donating money to charity, which can be asked about on surveys, may be obtainable using nonsurvey

[10]This distinction can be overdrawn. Sometimes "objective" phenomena are also difficult to measure. For instance it may seem that volunteering is easily measured by the single CPS question, "Since September 1st of last year, have [you/NAME] done any volunteer activities through or for an organization?" But asking people to remember what they did over an entire year can be fraught with error, not to mention that people may have dramatically different understandings of what volunteer activities mean. See Turner and Martin (1984) for an excellent treatment of this and other methodological and measurement issues related to surveying subjective phenomena.

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sources.[11] Other dimensions, such as self-assessments of trust in others or of loneliness require a subjective assessment of feelings or attitudes and may only be measurable by asking questions directly to people in the population of interest. However, word correlation mining tools applied to social media data or from records of communication patterns (e.g., telephone, texting) are now used as evidence even about these phenomena.[12] The frequency of such activities as interacting with friends and family, and even of political discussion, can be scraped from Twitter and other online forums, but knowing the relationship between discussants online would often be more ambiguous than would be possible with surveys.

Like feelings and emotions, the "experience" variables (mobility, discrimination) are also complex and difficult to measure. Experience variables often serve as contextual data in studies—things that need to be looked at alongside the central inquiry. For example, neighborhood crime, discrimination, social mobility, or changing family structures could all factor into levels of reported trust, and trust or lack thereof may in turn have an impact on these conditions. The last three categories in the table—fairness, political polarization, and social integration—are examples of characteristics of the social environment that relate to social capital but that are major topics in their own right, each with deep research literatures. Certainly, this is the case for research on the causes and effects of political polarization (see, e.g., Glaeser and Ward 2006; McCarty et al. 2006; Prior, 2013). The "fairness" variables relate to the social, legal, and economic environment, but they are not often identified as social capital, though they may be reflective of the elements that are.

Similarly, intergenerational mobility may not be considered an element of social capital, yet a lack of it may in turn undermine trust and community cooperation and cohesion. Studies of the transmission of social capital (e.g., Borjas, 1991) have shown that social ties developed by parents have a significant impact on children's economic and social mobility. Weiss (2012, p. 212) uses data from the National Longitudinal Study of Adolescent Health on this point:

> [I]n addition to individual characteristics, neighborhood-level factors, and school-level variables, parental social capital is an important predictor of adolescent social capital . . . [and] that the intergenerational transmission of social capital functions, in part, through family structure

[11] In these cases, webscraping and administrative data from the Internal Revenue Service would be principal options.

[12] For example, happiness indexes have been compiled by tracking individual positive and negative words used in Twitter tweets or Facebook posts, which show day-to-day variation along with factors underlying happiness (Christmas) or sadness (a mass shooting): see http://www.hedonometer.org/index.html [February 2014].

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and that structural differences account for only a relatively small share of the variation in adolescent social capital.

Economic and social mobility and the other social environment variables listed in Table 2-1 are important (and related) measurement topics; for some analyses, they are key covariates and possibly a reflection of civic engagement and social cohesion. However, they are beyond the scope of this report. We leave it to others to decide whether or not, for example, the CPS should include a question on parents' education or occupation or whether it is better asked on other surveys or instruments. However, we note that our recommendations on the timing and frequency of the CPS supplement questions (see Chapter 5) have an impact on whether space may be available for such additions.

As with mobility, income inequality—while not typically treated in the research literature as a dimension of social capital per se—is a particularly closely related issue (it is also one that is too expansive to deal adequately in this report; fortunately the topic has been the focus of a number of careful studies). Kawachi et al. (1997) is the most frequently cited paper on the relationship between social capital, income inequality, and health. While the authors did not establish a causal linkage between income inequality and "increased mortality via disinvestment in social capital" (p. 1491)—they do lend support to the hypothesis by demonstrating that income inequality is correlated with social capital[13] and, in turn, that social trust and group membership are associated with total mortality and deaths attributable to coronary heart disease, malignant neoplasms, and infant mortality. An interesting aspect of Kawachi et al. is that their hypothesized linkages posit social capital both as effect (i.e., higher levels of inequality reduce social capital) and as a cause (i.e., affecting health and mortality). Along these lines, Kennedy et al. (1998) and Lin (2001) explored the interactive relationship between income inequality and such phenomena as social capital formation, firearm violence, and health.

A number of the themes from Kawachi et al. were picked up and given high visibility by Wilkinson and Pickett (2009), who explored the effects of inequality on mental and physical health and educational outcomes. Using data from a wide range of sources (including the United Nations, the World Bank, the World Health Organization and the U.S.

[13]The indictors of social capital used in the paper, derived from the General Social Survey, are social trust (measured by responses to the question "Do you think most people would try to take advantage of you if they got the chance, or would they try to be fair?"; and level of agreement with the statements "You can't be too careful in dealing with people" and "People mostly look out for themselves"). Per capita density of group membership (measured by the per capita number of groups and associations to which residents in each state belonged) was also included in the analysis.

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census), they presented the case that, among developed countries, societies characterized by more equal income distribution tended to be happier and healthier than those with greater income disparities. Deaton (2001) explored the connection between income inequality and health in both poor and rich countries. He cites work by both Wilkinson and Kawachi to acknowledge the possibility that "equal societies have more social cohesion, more solidarity, and less stress, they offer their citizens more social support and more social capital, and they satisfy humans' evolved preference for fairness" (p. 113). Elsewhere, Bartels' (2005) examination of economic inequality and political representation called into question whether Robert Dahl's (1971, p. 1) observation that "a key characteristic of a democracy is the continued responsiveness of the government to the preferences of its citizens, considered as political equals" still applies in the United States. Examining voting records on divisive issues (such as abortion and the minimum wage), Bartels found that legislators' votes do not equally reflect the views of people in the bottom, middle, and top thirds of the income distribution. Specifically, "senators appear to be considerably more responsive to the opinions of affluent constituents than to the opinions of middle-class constituents, while the opinions of constituents in the bottom third of the income distribution have no apparent statistical effect on their senators' roll call votes" (p. 1). The research cited above, and many other studies, examined how inequality interacts with civic engagement, social cohesion, and other dimensions of social capital: this work is suggestive of the kinds of data needed to advance understanding of these relationships.

A wide range of additional factors—beyond income inequality, including access to education opportunities, outdoor space, clean water and air—also can be linked at some level with trends and variation in social capital. Even phenomena such as home ownership—postulated to reduce geographic mobility and incentivize investment in neighborhood-specific social capital (DiPasquale and Glaeser, 1999)—create channels whereby the health of neighborhoods and society at large are affected. Depending on the type of analysis, some of these background or environmental factors may themselves be outcome measures—related to crime and safety, effectiveness of government and other institutions, community resilience and efficacy—which suggests a strong feedback loop between the outcomes associated with social capital and the individual measurable pieces of it.[14]

One could continue to make reasonable links into domains even fur-

[14]For discussions of embedded unfairness, links to arrests and opportunity, and similar factors and on the link between income inequality and health and social problems, see Stiglitz (2013).

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ther afield from the core areas of social capital to include such interacting factors as education, immigration, technology, the rapidly changing global economic structure, and—even very reasonably—to climate change. For example, on the latter, Sampson (2013, p. 1) has noted:

> The prospect of more extreme weather has focused attention on the urgent need to adapt, with most of the discussion revolving around the physical infrastructure. . . . But in the drive to reduce the impact of future calamities another vital element that saves lives tends to get forgotten—the social infrastructure. . . political scientist Daniel Aldrich found that communities with robust social networks coped better in Kobe, Japan, after the earthquake in 1995 and in Tamil Nadu, India, following the catastrophic Indian Ocean tsunami in 2004. These examples suggest the social infrastructure of a community plays a critical role in how prepared a city is when disaster strikes.

These kinds of characteristics are fascinating and no doubt should be measured because they affect social, economic, and health outcomes in profound ways. However, it is not possible to consider all possible factors that are connected with the concept of social capital in one report; happily, these are ongoing major areas of investigation.

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3

Prioritizing Measures and Framing a Data Collection Strategy

3.1. CRITERIA FOR ASSESSING DATA COLLECTION OPTIONS

Several criteria can be considered for assessing the viability of the Current Population Survey (CPS) and its comparative advantage as an instrument for collecting data on social capital. In the first section of this chapter, we discuss some of those criteria—specifically: (1) How accurately and validly can a given component of social capital be measured? (2) What is the nature and strength of the evidence linking measurable elements of social capital with social, economic, and health outcomes? and (3) What is the potential of data sources other than federal surveys to yield comparable or better[1] information at comparable or lower cost? Following this discussion, we consider in greater detail the role of causal and correlative evidence in establishing priorities, along with technical survey issues that create some additional data collection constraints.

Accuracy and Validity

Information must be sufficiently accurate to be viewed as credible and to allow researchers to investigate linkages among variables. Part of this criterion is embodied in the question: "Are we measuring what we think

[1]"Better" can involve many factors, and we do not pretend such a judgment is easy. Suppose, for example, that a data source allows for more timely and smaller area estimates but is more biased, and the bias is not precisely known. Is this comparable or better? We address some of these issues in Sections 3.3 and 5.1.

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we are measuring—has construct validity has been established?" The concept of "trust" as approached in some of the social capital literature illustrates this point. The General Social Survey (GSS) asks, "Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?" Glaeser et al. (2000) examined whether behavior in a trust game corroborates survey-based measures of trust, derived from questions such as this from the GSS, and found that it does not always do so. The authors reached three important conclusions, among others (Glaeser et al., 2000, p. 841): (1) "[S]tandard survey questions about trust do not appear to measure trust . . . [though] they do measure trustworthiness, which is one ingredient of social capital"; (2) to measure trust, surveys should be redesigned to include "questions about past trusting behavior"; and (3) the most promising strategy for measuring trust (and trustworthiness) is to develop instruments that combine both experiments and surveys.

Other studies (e.g., Bellemare and Kroeger, 2007; Sapienza et al., 2007) have found stronger positive correlations between responses to trust questions and actions in experiments. In an experiment using the German Socio-Economic Panel Study, Naef and Schupp (2009, p. 32) found that survey-derived trust scales tend to measure only one dimension of trust, such as trust in strangers, among the many that are possible and important, such as trust in institutions or an index of trust in known others. The position adopted in much of the experimental economics literature that attitudinal survey questions are poor predictors of trusting actions in games seems, in light of some of these recent studies, slightly premature. Nonetheless, for the central question of this report, the current evidence is suggestive that the CPS supplements are not optimal for generating data for studying complex relationships between trust and other outcomes of interest. In general—beyond trust—more research experiments are needed to interpret what is being measured by questions in surveys such as the CPS Civic Engagement Supplement and to begin understanding the accuracy of the data and their relationship to the underlying concept of interest.

Nature and Strength of the Evidence

Decisions about what data to collect should be guided by the ability of the information to reveal trends in health, crime, employment, resilience to shocks, and other outcomes of interest. Evidence on the importance of explanatory variables generated from pilots, experiments, and small-scale data collections is critical for making these decisions. That is, the utility of a measure in decision making and policy evaluation is a basic crite-

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rion when making the case for government-supported data collection—particularly in flagship surveys where there is great competition for space.

The strength of correlative or causative connections, as well as the perceived importance of the hypothesized outcome, are key criteria for setting data collection priorities. For example, if trust in others in a neighborhood is strongly associated with crime rates and weakly associated with, say, mental health, it suggests that trust may be more useful to measure in a crime and victimization survey than it would be in a health survey. However, if mental health is considered a larger social issue than crime, the weaker linkage for the latter would be offset in determining the focus of data collection resources.

The Potential of Alternative Data Sources

The U.S. Office of Management and Budget and the agencies responsible for the federal statistical system determine standards and guidelines and appropriate content for surveys on an ongoing basis. In addition to such benefits as larger sample sizes, higher standards for methodological transparency and documentation, better archiving and access, and increased likelihood of being repeated over time, government surveys also typically enjoy higher response rates than do those in the private sector. And for some elements this is critical. Information about people's volunteering activities is an example. Abraham et al. (2009) showed that high response rates are important for measuring volunteerism because people who engage in these activities are also most likely to participate in surveys such as the American Time Use Survey (ATUS); thus selection bias (associated with nonresponse, in this case) would be exacerbated in a low response rate survey. This finding suggests an area of comparative advantage for the CPS Volunteer Supplement.

Administrative data sources—both government and nongovernment—are becoming prominent in the alternative data landscape. Sometimes these data, produced as a by-product from program or other (nonstatistical) needs, can be linked with survey and other data to allow richer analyses than would be possible with survey data alone.[2] The optimal data strategy for one data set or survey therefore cannot be sensibly designed without consideration of other elements of the data infrastructure. The ability to link government data sources means that covariate information may not be limited to the fields on the primary survey vehicle. Tax data, Social Security records, and information on program participation are all

[2]For example, Chetty et al. (2013) combined administrative tax data from the Internal Revenue Service and local area variables to analyze patterns of intergenerational occupational and earnings mobility.

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examples of administrative data that could contribute to research of questions related to social capital.

The criteria discussed above provide the basis for our recommendations in Chapter 5 about the questions and modules to develop and include in surveys and about the role of the federal statistical system operating in a world characterized by rapidly expanding survey and nonsurvey data collection alternatives. However, these considerations do not provide an unambiguous basis on which to proceed with data collection.

In addition to the task of quantifying issues, decisions about what to include would require weighting each criterion, which is subjective and context dependent. It is not always clear, for example, what would be of greater use: data on a variable that is weakly associated with quality of life (typically considered a very important indicator of people's well-being), or data on a variable that is a strong predictor of voter turnout (arguably less important to well-being).

Similarly, easy-to-measure indicators are not necessarily the most useful to policy makers or researchers. Current city, state, and national indices of civic health (such as those developed by the National Conference on Citizenship) include dashboards of indicators that often simply reflect what data are available rather than what would be most desirable for research, policy, and public information purposes. For example, voting rates are comparatively easier to measure accurately and regularly than are multidimensional concepts like social cohesion, but that does not mean it is the "right" thing to measure for a given purpose. It is worth asking to what extent are the currently available data elements simply a function of what is feasible to collect, rather than a reflection of what the analytically optimal metrics would be. The answers to these questions are not clear, but these are the tradeoffs that should be considered when developing data collection strategies.

3.2. EVIDENCE OF CAUSALITY AND ASSOCIATIONS—AND POLICY IMPLICATIONS

While its antecedents go back further, much of the modern literature on social capital traces back to Putnam (1993, 2000) and the work of the Saguaro Seminar (see Chapter 1). This literature extends broadly across multiple social science disciplines and into a number of research domains: the social capital of firms (e.g., Humphrey and Schmitz, 1998); the role of trust in neighborhood vitality and safety (e.g., Jacobs, 1961; Sampson and Graif, 2009); and political participation and democracy (e.g., Giugni and Lorenzini, 2010; Verba and Nie, 1972). The work has also covered a range of empirical approaches, including individual and group-level analyses (e.g., Glaeser et al., 2002) employing fixed-effect and instrumental

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variable models (e.g., d'Hombres et al., 2010; DiPasquale and Glaeser, 1999) and observational and experimental methods (e.g., Naef and Schupp, 2009). Some researchers have focused on developed countries while the interests of others has been on transitional economies (e.g., Narayan and Pritchet, 1999) or cross-national studies (e.g., Gesthuizan et al., 2011).

The impacts of any given element of social capital on measurable outcomes are still largely unknown. Indeed, the nature and strength of the relationships vary over time and across places. In some cases, it is difficult to even distinguish where and when more (or less) of a phenomenon is clearly "good" (or "bad") and, in turn, whether the policy objective should be to raise or lower it, or by how much. For example, it is not obvious what the optimal levels of group cohesion or of individual connectedness are, especially for situations in which activities create bonds within groups while simultaneously eroding bridges across groups. The same is true with such indicators as divorce rates or income equality. Similarly, the positive returns from being connected with neighbors, or having trust in them, almost certainly differ in remote villages and large cities.[3] These complexities notwithstanding, social capital research has produced valuable insights (which we document next) and advanced understanding of a range of social phenomena covering a broad range of topics in the social, health, and economic policy domains.

Illustrative Studies

Statistical agencies, in consultation with the Office of Management and Budget and with legislators, determine the content of the CPS and other major surveys modules.[4] In making those decisions about social capital content, they need to answer the question, "what data have been most usefully applied in studies of and policies related to civic engagement, social cohesion, and other aspects of social capital?" In this section we selectively review the literature to provide an indication of the breadth and quality of evidence tying various components of social capital to

[3]Some aspects of social capital have been shown to be higher in rural than urban areas (Coleman, 1990; Knowles and Anker, 1981; Krishna and Uphoff, 1999; Narayan and Pritchett, 1999; Putnam, 2000), even though social connections between people decrease substantially with physical distance and transportation costs (Glaeser et al., 2002). These differentials are likely changing in step with the expansion of communication modes (cell phones, Internet) that have radically reduced the costs of "connectedness," especially in remote areas.

[4]Standards for new items to be included in surveys generally dictate that they have a proven track record in other (academic or smaller) surveys or be put through a rigorous testing process. However, agencies will usually accept items that have been shown to work. Prior testing of many of the elements of the questions on the CPS Civic Engagement Supplement took place in the Social Capital Community Benchmark Survey, which saved time in development.

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outcomes in social, health, and economic policy domains (essentially criterion 2, above).[5] This review is suggestive of how social capital relates to measurable individual and societal outcomes; it also assesses the state of development of research on the topic and where needs exist for more data and research. The domains (each with at least some policy relevance) discussed are connectedness and social outcomes, the effects of neighborhood social capital on crime and public safety, social cohesion and community resiliency, home ownership and civic engagement, social connections and self-reported well-being, the health effects of isolation, and social capital and mental illness.

Connectedness and Employment Outcomes

Extensive research exists on the role of social contacts in obtaining jobs, much of it suggesting causal links (e.g., Granovetter 1995; Loury 2006). According to Ioannides and Loury (2004), the use of personal networks in job search is highly prevalent, with 25 to 80 percent of jobs obtained through personal networks (as opposed to applying through employment agencies or approaching employers without referral)—though jobs may more often be found through "weak-ties" (acquaintances) than "strong-ties" (family and friends) (Granovetter, 1973). A literature review by Mouw (2006, p. 82) focused on this kind of network social capital—specifically, claims that "the characteristics and resources of friends, contacts, and groups may affect individual outcomes"—because the problem of causality in this area is particularly clear. He argued (p. 80) that "much of the estimated effect of social capital simply reflects selection effects based on the myriad nonrandom ways in which people become friends" and discussed ways in which progress has been made in dealing with nonrandom selection due to homophily—the tendency of people to associate and bond in nonnegative ways with similar others.[6]

Mouw (2006) reviewed a number of studies that employ inventive identification strategies to generate statistical evidence of the effect of connectedness on various outcomes. For example, in order to examine the extent to which the strength of people's social networks affects their

[5]For more comprehensive reviews of the social capital literature (of which there are many), see Portes (1998) on its origins and applications in sociology and Halpern (2004) on social capital of interest to policy communities. A number of reviews conducted by international agencies—especially the UK Office for National Statistics OECD—are also available.

[6]There is also substantial research on peer effects is outside the employment literature. For example, Kremer and Levy (2008) explored peer effects (associated with drinking) and college achievement (GPA) using data on randomly assigned roommates; Duncan et al. (2005) examined the impact of peer effects on alcohol and drug use using quasi-experimental data from randomized housing studies.

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employment opportunities, Bayer et al. (2004) used census data for Boston to show that a person's residential proximity to others with jobs and who can easily share job information leads to employment opportunities. A block-group fixed-effects model was developed to test for reverse causality—that is, the possibility that coworkers share information when searching for houses or apartments. The authors took measures to properly identify the effect of interest by restricting data to respondents who lived in the neighborhood for at least 2 years and who worked at their current job less than 40 weeks the previous year. Such efforts involving creative use of data can begin to get at the direction of effects—in this case, between connectedness and employment opportunities.

Researchers have examined this relationship between connectedness and employment outcomes in the context of immigrant integration by looking at interactions between characteristics of destination communities and outcomes of those who have located there. Van Kemenade et al. (2006, p. 19) found that "having access to close networks of people from the same cultural origin—as well as to programs that support these networks—is associated with the social and economic integration of immigrants in the host county and with their well-being." Munshi (2003) found that the network size of immigrant communities has a substantial effect on employment probabilities among Mexican immigrants.[7]

In terms of policy implication, the above findings may be interpreted as ambiguous. If—unlike public health, social trust, crime rates, or happiness—employment is a zero-sum game, such that connectedness does not increase the number of employment opportunities in the aggregate; rather it only influences who gets a job, presumably those with stronger connections. In this case, public policy seeking to increase connectedness would only alter how employment outcomes are distributed. If government intervention increased connectedness uniformly, perhaps nothing would change. If it equalized connectedness among people, the factor would merely be minimized as a meaningful variable in employment outcomes. Again, this observation may be particularly relevant to policies in the contentious immigration debate. A program to improve immigrant connectedness to new communities could lead to (or be perceived to lead to) an immigrant taking a job that could have gone to a native worker. Colussi (2013) explored the role of immigrant social networks and job search outcomes.

[7]Elsewhere, Ooka and Wellman (2006) found that educational attainment is positively associated with being in heterogeneous friendship networks; first generation immigrants with postsecondary education were found to be more likely to be in a heterogeneous network than those with less education. Hagan (1998) documented the role of networks in Houston's Latino immigrant communities. Massey et al. (1993) is a seminal work that depicted the role of networks in migration.

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Effects of Neighborhood Social Capital on Crime and Public Safety

Communities or neighborhoods in which people have high levels of interaction and trust have been shown to be more immune to social ills, such as crime, and more likely to share resources for the general good (Sampson et al., 1997). The literature on determinants of crime examines many aspects of the issue: community structure and policing and crime (Sampson and Groves, 1989); the role of neighborhood-level collective efficacy—defined as "social cohesion among neighbors combined with their willingness to intervene on behalf of the common good—in reducing violent crime" (Sampson et al., 1997); social order and violence (Sampson et al., 2008); the relationship between differential social organization, collective action, and crime (Matsueda, 2006); and the role of disadvantage and institutions in neighborhood violent crime (Peterson et al., 2000). Studies about cities or regions provide a deep understanding of what can be learned about complex phenomena that shape people's communities and cities.[8] Such research underscores the need for specialized, subnational level data projects for understanding local area phenomena.

The area of crime provides an excellent case study of how social capital variables can play either the role of cause, effect, or both and of other complicating methodological factors, such as selection effects. It is easy to tell a story about how certain neighborhood characteristics create the environment for crime. However, there may be circular, feedback mechanisms at work as well. When a neighborhood carries a reputation as unsafe, having poor schools, and lacking social amenities, higher income households have the means to look elsewhere to live (or to leave), which can in turn lead to further deterioration as measured by some set of social capital indicators. Sampson et al. (2002) addressed the most pressing methodological problems encountered in the study of neighborhood effects—most notably selection bias—and concluded that approaches for dealing with them require experimental designs and observational approaches that deal directly with spatial and temporal dynamics of social processes.

Halpern (2004) pointed out that high crime is not just limited to poor neighborhoods, but also to areas of low social capital and high mobility—that is, a "high degree of accessibility" created by the presence of major thoroughfares and permeable boundaries. High crime areas, he continued tend to be characterized by less social cohesion, as is the case when fewer neighbors know or trust one another. Halpern acknowledged

[8]One outstanding example is a major study, funded by the Russell Sage Foundation, of evidence about the social, cultural, political, and economic lives of second-generation residents of New York City, comparing how they fare relative to their first-generation parents and native-born counterparts (Kasintz et al., 2008).

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and explored the difficulty of determining the extent to which low social cohesion leads to higher crime, and vice versa, and the more subtle question, "could it be that the accessibility, and perhaps social mix, of certain neighbourhoods cause both higher crime and lower social cohesion independently?" (p. 124). He conceded that the direction of these effects is difficult to disentangle while acknowledging that the work of Sampson et al. (1997) on Chicago neighborhoods using localized surveys and other data sources, along with multilevel modeling methods, gets closest to doing so—specifically showing convincingly that collective efficacy does reduce crime through a number of mechanisms.

Social Cohesion and Community Resiliency

A relatively new research field is emerging to address relationships between a community's characteristics and infrastructure, both physical and social, and its preparedness for disasters and other exogenous shocks. Implicit in such reports as *Disaster Resilience: A National Imperative* (National Research Council, 2012) is the idea that nations and communities have much to gain (or avoid losing) by investing in infrastructure—both physical and social—that enhances resilience to natural and human-caused disasters. Much of this research involved recognizing the role and importance of social capital in the process of a community's reaction. For example, this factor has been hypothesized as playing a key role in why New Orleans suffered so much graver and persistent consequences post-Katrina than did Vermont after the damaging 2006 floods.[9]

Although social capital indicators are often correlated with income, inequality, marital status, socioeconomic status, and other objective measures related to people's well-being, Sampson (e.g., 2012) and others have shown that community resilience and flourishing is "not wholly a dependent variable of the income and education of the community's residents" and that there are examples of low-income communities that demonstrate more collective efficacy than high-income communities.[10] Disentangling these effects is the challenge in this research. The work done in connection with the 1995 Chicago heat wave is a good example of convincing evidence generated through a well-documented natural experiment. The research found that neighborhoods showed differential resiliency; death

[9]For an overview of this research, see Klinenberg (2013).

[10]"Collective efficacy" is a term that can be applied beyond the context of neighborhoods; it can be relevant to collective interests based on class, race/ethnicity, gender, citizenship, or age. Also, as described in the Introduction, there are cases in which highly fractured pursuits of collective efficacy undermine social cohesion; civic engagement and social cohesion do not always go together. For instance, the civil rights and women's movements were forms of civic engagement that were accused of undermining social cohesion.

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tolls varied dramatically across neighborhoods with similar per capita incomes but with different social structure characteristics.

Home Ownership and Civic Engagement

A number of researchers have investigated the hypothesis that home ownership gives people higher stakes in a community and more incentive to invest time and effort to its functioning and livability, although the results from this research have not been consistent. Data from the General Social Survey (GSS) and the American National Election Survey (ANES) revealed that homeowners report higher rates of voter participation, political knowledge, and associational memberships than do renters (Blum and Kingston 1984; DiPasquale and Glaeser, 1999; Rossi and Weber 1996). And a study of "the influence of home ownership and mobility on civic engagement among low-to-moderate income households" found evidence that homeowners are more likely to participate in some types of civic engagement, but that the relationship between home ownership and hours of volunteering was not significant (Paik, 2013). Using CPS data, McCabe (2013) showed weak links—relative to education, residential stability, and income—between ownership and voting or civic engagement, calling into question tax policies favoring home ownership, as well as programs that promote low-income home ownership.

Social Connections and Self-Reported Well-Being

Self-reported (subjective) well-being has been shown to correlate strongly with people's connectedness with friends and family and with their neighborhood's characteristics. Stiglitz et al. (2009, p. 183) assessed the evidence:

> Much evidence at both the aggregate and individual level suggests that social connections are among the most robust predictors of subjective measures of life satisfaction. Social connections have a strong independent effect on subjective well-being, net of income. Moreover, the available evidence also suggests that the externalities of social capital on well-being are typically positive, not negative (Helliwell, 2001; Powdthavee, 2008). In other words, increasing my social capital increases both my own and my neighbors' subjective well-being, and thus represents a coherent strategy for improving QoL [quality of life] for the country as a whole. . . . The analysis of the effects of social connections on subjective well-being is in its infancy. Much of it does not account for unmeasured individual characteristics, and most of it relies on cross-sectional data. That said, recent analyses have strengthened the case that the link between at least some forms of social connections and subjective well-being is causal. Krueger et al. (2009) report that, when controlling for individual fixed

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> effects (such as personality traits), most pleasurable activities involve socializing—religious activities, eating/drinking, sports, and receiving friends. Similarly, in a recent large-scale U.S. panel survey on religious attendance and subjective well-being, Lim and Putnam (2008) found that religious attendance at time 1 (or time 2) predicted subjective well-being at time 2, controlling for levels of subjective well-being at time 1, as well as many other covariates; the essential mechanism involved in this relation is neither theological nor psychological, but rather the strong effect of "friends at church" on well-being. Fowler and Christakis (2008) also report evidence suggesting that subjective well-being can spread in a beneficially "contagious" way from one person to another.

The authors concluded that, "for no other class of variables (including strictly economic variables) is the evidence for causal effects on subjective well-being probably as strong as it is for social connections."

The evidence is far from complete on these questions, however. There have been some highly visible critiques in the literature regarding causal claims—such as those by Fowler and Christakis (2008) that were based on their analysis of Framingham Heart Study participants—about the relationship between personal networks and self-reported happiness or other outcomes.[11] Much of the debate about the Fowler and Christakis article was on the effects of social networks on propensity toward obesity. Lyons (2011) found evidence of this transmission mechanism—for example, if a person's close contact became obese, the person himself was more likely to become obese—to be weaker than initially claimed. Lyons' interpretation of the data led to the conclusion that shared environments and self-selection both explain the clustering of obesity in social networks—that is, people with lifestyles conducive to obesity may well gravitate toward one another. While debates about both descriptive inferences and the causal implications are extremely important, the central point here is that analyses such as the one by Fowler and Christakis are particularly valuable for investigating causal effects because of their longitudinal structure.

The Health Effects of Isolation

The links between cohesion, connectedness, and other aspects of the social environment and population health outcomes are among the best established by research, and the evidence accumulating from this research is expanding rapidly and convincingly. This research goes further than in many other domains in that it is suggestive of pathways between social contacts (or isolation) and health, particularly for elderly people

[11]This survey indirectly generated data on social networks in that it asked participants to name a friend who could help researchers locate them in the case that they moved.

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(Wilkinson and Marmot, 1998). Longitudinal data (such as those exploited by Steptoe et al., 2013) on individual characteristics and behavior are needed to distinguish between codeterminants and effects; for example, if isolation leads to depression and illness or if less healthy people choose more isolated lives.

Elements of social capital may also be used to deter unhealthy activities, such as drug use and alcoholism (Frank et al., 2006; Sampson et al., 1997). However, this work is complicated because the analyses has to be able to separate out material and economic determinants of health, which may be highly correlated with the presence of high social capital characteristics in a society.[12] A recent meta-review examined 148 research studies on social relationships and mortality risk (Holt-Lunstad et al., 2010). The authors noted that rapid growth in research on the links between social relationships and mortality was triggered by House et al. (1988, p. 541), who proposed a causal association between the two: "Social relationships, or the relative lack thereof, constitute a major risk factor for health—rivaling the effect of well-established health risk factors such as cigarette smoking, blood pressure, blood lipids, obesity and physical activity." Holt-Lunstad et al. (2010, p. 14) ultimately interpreted the evidence as supporting the 1988 claim by House et al.:

> Data across 308,849 individuals, followed for an average of 7.5 years, indicate that individuals with adequate social relationships have a 50% greater likelihood of survival compared to those with poor or insufficient social relationships. . . . The overall effect remained consistent across a number of factors, including age, sex, initial health status, follow-up period, and cause of death, suggesting that the association between social relationships and mortality may be general, and efforts to reduce risk should not be isolated to subgroups such as the elderly. . . . This meta-analysis also provides evidence to support the directional influence of social relationships on mortality. Most of the studies (60%) involved community cohorts, most of whom would not be experiencing life-threatening conditions at the point of initial evaluation. Moreover, initial health status did not moderate the effect of social relationships on mortality. Although illness may result in poorer or more restricted social relationships (social isolation resulting from physical confinement), such that individuals closer to death may have decreased social support compared to healthy individuals, the findings from these studies indicate that general community samples with strong social relationships are likely to remain alive longer than similar individuals with poor social relations.

[12]The intertwined social capital, distribution of resources, and economic effects on health are discussed in Altschuler et al. (2004) and Islam et al. (2006).

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They conceded, however, that:

> [C]ausality is not easily established. One cannot randomly assign human participants to be socially isolated, married, or in a poor-quality relationship. A similar dilemma characterizes virtually all lifestyle risk factors for mortality: for instance, one cannot randomly assign individuals to be smokers or nonsmokers. Despite such challenges, "smoking represents the most extensively documented cause of disease ever investigated in the history of biomedical research." The link between social relationships and mortality is currently much less understood than other risk factors; nonetheless there is substantial experimental, cross-sectional, and prospective evidence linking social relationships with multiple pathways associated with mortality. Existing models for reducing risk of mortality may be substantially strengthened by including social relationship factors.

Holt-Lunstad et al. (2010, p. 14) drew a parallel to research on high mortality rates among infants in custodial care (i.e., orphanages):

> Even when controlling for pre-existing health conditions and medical treatment . . . lack of human contact predicted mortality. . . . This single finding, so simplistic in hindsight, was responsible for changes in practice and policy that markedly decreased mortality rates in custodial care settings. Contemporary medicine could similarly benefit from acknowledging the data: Social relationships influence the health outcomes of adults. . . . Efforts to reduce mortality via social relationship factors will require innovation, yet innovation already characterizes many medical interventions that extend life at the expense of quality of life.

In a study of the effects of individuals' social relationships and their physical health and the mechanisms through which influences may work, Cohen (2004, p. 677) concluded that social support is integral to stress buffering:

> [It] eliminates or reduces effects of stressful experiences by promoting less threatening interpretations of adverse events and effective coping strategies. . . . [Social integration] promotes positive psychological states (e.g., identity, purpose, self-worth, and positive affect) that induce health-promoting physiological responses; provides information and is a source of motivation and social pressure to care for oneself.

However, he pointed out that relationships can also create negative interaction that "elicits psychological stress and in turn behavior and physiological concomitants that increase risk for disease" (Cohen, 2004, p. 677).

A study of international differences in mortality at older ages (National Research Council, 2011) illustrated the difficulty of establishing the relationship between health and social factors more generally. The

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study used data from the English Longitudinal Study of Ageing (ELSA) and the U.S. Health and Retirement Survey (HRS), but the differences in societal characteristics are small in the two countries. Ideally, to uncover effects, one would need to look at countries with bigger differences that also have high quality and comparable data. A major element linked to health outcomes seems to be whether or not elderly people are connected strongly enough to friends and family to have a support structure, that is, to avoid isolation.

For measuring isolation, the question content in HRS and ELSA includes a sufficiently deep set of variables to allow multidimensional "indexes of isolation and loneliness" to be calculated. In a study of social isolation, loneliness, and all-cause mortality in older men and women, Steptoe et al. (2013) constructed such an index for individuals in the sample based on their responses to questions about three factors: marital or cohabiting status; contact with children, other family members, and friends; and their participation in various clubs, organizations, and groups. They concluded (p. 5797) that "both social isolation and loneliness are associated with increased mortality, but it is uncertain whether their effects are independent or whether loneliness represents the emotional pathway through which social isolation impairs health." In a similar study for the United States using HRS data, Coyle and Dugan (2012) found that the proportion of Americans who reported they had no one to talk to about important matters rose from 10 percent in 1985 to 25 percent in 2004. The authors suggest that this finding argues for policies to increase social connection and support for the elderly, especially as populations have become more solitary.

Finally, work on the social environment as a health determinant is also proceeding in the physical sciences. Dobbs (2013) summarized research demonstrating measurable effects on the human immune system associated with people's social lives, quoted biologist Steve Cole: "We typically think of stress as being a risk factor for disease. . . . And it is, somewhat. But if you actually measure stress, using our best available instruments, it can't hold a candle to social isolation. Social isolation is the best-established, most robust social or psychological risk factor for disease out there. Nothing can compete." Continuing, Dobbs wrote:

> This helps explain, for instance, why many people who work in high-stress but rewarding jobs don't seem to suffer ill effects, while others, particularly those isolated and in poverty, wind up accruing lists of stress-related diagnoses—obesity, Type 2 diabetes, hypertension, atherosclerosis, heart failure, stroke. Despite these well-known effects, Cole said he was amazed when he started finding that social connectivity wrought such powerful effects on gene expression.

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Social Capital and Mental Illness

In an examination of links between social capital and mental illness in 21 studies, DeSilva et al. (2005, p. 619) found that the evidence was strongest for "an inverse association between cognitive social capital and common mental disorders"; evidence was less convincing for establishing associations between cognitive social capital and child mental illness and combined measures of social capital and common mental disorders. Some of the studies reviewed use individual-level measures of social capital (e.g., respondents' rating of trust in others, or their self-reported participation in organized activities); others use "ecological" indicators of social capital taken from an aggregated statistic (e.g., the crime rate in a neighborhood or turnout in an electoral ward). DeSilva et al. concluded that "the strength of the current evidence, in particular that from studies measuring ecological social capital, is inadequate to inform the need for or development of specific social capital interventions to combat mental illness." They recommended (p. 626) that the current methodological and empirical weakness could begin to be addressed by a research program that includes the following steps: "(1) Measure all dimensions of social capital—that is, cognitive, structural, bridging, bonding, and linking; (2) Use validated social capital measures; (3) Be explicit about causal pathways between social capital and mental illness; (4) Examine associations longitudinally; (5) Research developing world and rural populations."

Since the DeSilva review, Welsh and Berry (2009, p. 588), using the Household, Income and Labour Dynamics Survey in Australia, found that "structural and cognitive components of social capital were each related to both mental health and satisfaction with a wide range of aspects of life . . . [and that] social capital was better at predicting mental health scores for men than for women, but the opposite was true for satisfaction." Similarly, Berkman and Glass (2000) found that mental health may be affected through such pathways as provision of social support and promotion of healthier behaviors. Given the current state of evidence, one could reasonably conclude that the relationship is unlikely to be unidirectionally causal from social capital to mental illness; thus, at this point, the policy implications are still unclear.

Social Capital and Educational Outcomes

Research on the relationship between social capital and educational outcomes has a long tradition, dating back at least to Coleman (1988) who studied the effects on communities when social networks are "closed." One of his key findings was that test scores were better in schools where teachers knew many of the students' parents and vice versa—that is,

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where both were part of students' networks. The networks closed when teachers and parents knew each other.

Analogous with other research areas described in this section, it is difficult to decipher the extent to which social capital in students' communities leads to school success and the extent to which stronger social ties tend to emerge in more successful schools. However, promising causal modeling methods are becoming more commonplace. Lopez Turley et al. (2012, p. 9), for example, tested the effectiveness of the Families and Schools Together (FAST) Program, "designed to develop relations of trust and shared expectations among parents, school staff, and children" and to improve children's outcomes, specifically the reduction of behavioral problems. Their study follows a cluster-randomized design in which the researchers were able to assign half of a sample of 52 schools (drawn from San Antonio and Phoenix) to participate in FAST and the other half to operate as usual, without the program. Results from the experiment's multilevel models revealed (Lopez Turley et al., 2012, p. 1):

> . . . strong positive effects of treatment assignment on parent social capital and more modest but statistically significant effects on reducing children's behavioral problems. Complier average causal effect (CACE) models show that the strongest effects on parent social capital occurred for families that participated fully in the intervention, whereas the CACE models were less consequential for child outcomes. Instrumental variables models suggest that the social capital effects may be regarded as causal, and causal mediation models suggest that the intervention effects on child outcomes are mediated by social capital.

Compiler average causal effect (CACE) modeling techniques build on the Angrist, Imbens, and Rubin (Angrist et al., 1996) instrumental variable methods and are designed to generate unbiased estimates of the difference in outcomes for a group of compliers of an intervention with those who could have but did not engage in a treatment. These methods have been used extensively in randomized controlled trials to examine effects for children engaged or not engaged with interventions. This and similar techniques can be extended to other applications; the effects of job training on job search outcomes for the unemployed is one example explored by Yau and Little (1996). While CACE models involve challenging statistical assumptions, the inherent structure is often of policy interest because it allows examination of the effects of an intervention for groups of individuals who receive treatment services.

The important point for the discussion here is that methodological advances in statistical techniques, such as CACE and mixture modeling methods, create opportunities for research on social capital to make advances in addressing causality. Experimental manipulation, such as in

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the studies cited above, offers a methodological pathway for testing the causal effects on outcomes from various dimensions of social capital.

Implications from the Research

Our interpretation of this literature is that—with the exception of social isolation as a risk factor for health—compelling evidence of causal relationships between social capital indicators and outcomes of policy interest has not yet been established, though insightful information about correlative associations often has been. Conceptual ambiguity of the term "social capital," as described above, and the fact that empirical work on the topic has primarily been limited to correlational analyses, make it difficult to distinguish whether "social capital is a reflection of unobserved variables, a matter of selection (individuals who are alike tend to associate with one another), or a matter of influence (social capital and behavioral outcomes are causally related)" (Lopez Turley et al., 2012, p. 1). A central example of the chicken-and-egg problem is the question: Do successful groups succeed because they have lots of social capital or do successful groups surround themselves with social capital because they have the means to do so? Or, as posed by Durlauf (1999, p. 3): "[D]o trust-building social networks lead to efficacious communities, or do successful communities generate these types of social ties?"

Although the study of social capital seems particularly difficult, understanding causal properties is challenging in many areas of social science. Heckman (2000, p. 91) described the economics case:

> Some of the disagreement that arises in interpreting a given body of data is intrinsic to the field of economics because of the conditional nature of causal knowledge. The information in any body of data is usually too weak to eliminate competing causal explanations of the same phenomenon. There is no mechanical algorithm for producing a set of 'assumption free' facts or causal estimates based on those facts.

The problem of establishing causality is found in Putnam's work as his measures of social capital were highly correlated with good educational outcomes (higher income), good health, and well-functioning government (Sobel, 2002, pp. 141-142). Putnam acknowledged this, but much of his work took the tone that higher levels of social activities led to good outcomes. For example, he wrote (Putnam, 2000, p. 328): "e.g., if one wanted to improve one's health, moving to a high-social capital state would do almost as much good as quitting smoking."

Durlauf (2002, p. 464) examined the way in which empirical evidence has been developed in investigations of the link between social capital and socioeconomic outcomes. His focus was on the econometric issues

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that arise in studies of social capital, which "typically compare outcomes for individuals or aggregates who have social capital versus those who do not." These studies, he argued, are hamstrung by the problem that, "without a theory as to why one observes differences in social capital formation, one cannot have much confidence that unobserved heterogeneity is absent in the sample under study."[13]

Durlauf was clear that empirical studies in social science—he used Furstenberh and Hughes (1995), Narayan and Pritchett (1999), and Knack and Keefer (1997) as exemplars—are not typically "right" or "wrong"; rather, they offer evidence of causal links of varying strength. This, he argued, is also the case for research on social capital and socioeconomic outcomes which, for the most part, fails to distinguish between social capital effects and those associated with other individual and contextual or endogenous effects such as income, mobility, and education. He added that the definitional ambiguity underlying "social capital"—which makes identification impossible and has led to questionable validity of instrumental variables and untenable exchangeability assumptions—has exacerbated the causality problem for this field of research (Durlauf, 2002, p. 474):

> . . . the literature seems to be particularly plagued by vague definition of concepts, poorly measured data, absence of appropriate exchangeability conditions, and lack of information necessary to make identification claims plausible. These problems are especially important for social capital contexts as social capital arguments depend on underlying psychological and sociological relations that are difficult to quantify, let alone measure. These problems suggest . . . in using observational studies . . . that researchers need to provide explicit models of the codetermination of individual outcomes and social capital, so that the identification problems that have been analyzed may be rigorously assessed.

Durlauf (2002) concluded that studies have not yet established empirically the importance of social capital in explaining various socioeconomic outcomes (p. 459) and that observational data does not go far in establishing an evidence base tying social capital variables to important social, economic, and health outcomes (p. 477). On the second point, he noted (p. 477):

> . . . in light of the vagueness of the concept, I believe that the use of observational data to identify substantive forms of social capital is unlikely to be successful. The relatively more compelling evidence from the social

[13]For a discussion of the obstacles in econometric modeling of social interactions, see Manski (2000).

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> psychology literature, in contrast, suggests that economic experiments may be a more promising way to obtain empirical insights.

To establish causal links, Durlauf, Sobel, and others argued that social psychological experiments, such as that reported by Glaeser et al. (2002) in a study of trust, hold more promise for establishing social interaction effects related to trust and other social capital elements. Durlauf (2002, p. 475) cited, as a good example of the kind of detailed data needed to truly understand how social capital (which is concentrated mainly at localized geographic units), the Project on Human Development in Chicago Neighborhoods:

> [The project is] designed to produce a rich data set on attitudes among Chicago residents on a wide range of issues. In 1995, over 8,000 individuals were surveyed across over 300 neighbourhood clusters. What is critical in the study is the rich set of information that is produced which allows for the integration of information about individual characteristics with information on individual attitudes in order to study how these relate to communities, i.e., the social environment. This data set has provided insights into a very wide range of phenomena. . . . Sampson et al. (1999), for example, find that even if one restricts attention to poorer neighbourhoods, there is wide variation in the residents' expectations of the behaviour of their neighbours and that this variation helps predict differences in neighbourhood social problems. For example, for poor neighbourhoods where individuals feel unable to rely on neighbours to report truancy or call the police in response to observing illegal activity, various social pathologies will be more serious. This sort of finding in turn is very suggestive of the role of community institutions in ameliorating social problems and indeed fulfils the authors' objective of moving beyond the typical vague formulations of social capital. . . .

And:

> Relative to standard empirical analyses of social capital, this work has several advantages. First, the data set gathered in this project provides much richer controls for individual heterogeneity than are typically available. Second, the detailed attitudinal measurements in the study extend social capital analyses in directions that are far more conducive to the description of the causal mechanisms by which social capital is created. The expectation of neighbours' behaviour which Sampson et al. describe gives a far more compelling vision of the role of community networks in influencing group outcomes than a cross-country regression of growth rates on vague measures of trust. Third, the detailed nature of the study may provide ways to characterise the endogenous formation of social capital, something that is critical for establishing identification of social capital effects.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

Studies based on highly granular, ongoing, and multisource datasets appear to offer the greatest promise for untangling the circularity of causal pathways—e.g., to what extent does deterioration of job growth in a city lead to social problems and desolation, and vice versa; to what extent does connectedness lead to reduced crime, and to what extent does reduced crime lead to connectedness—and to consider the extent to which engagement and cohesion are just symptoms. This kind of intensive empirical analysis allows for investigation of the causes of social capital and not just the effects of social capital on outcomes, an issue raised by Glaeser et al. (2000), who considers the theoretic and empirical evidence on the formation of capital.

Our assessment of implications for data collection from the above literature can be summarized as follows:

- Although the social capital literature is extensive and provocative, it has yielded numerous compelling observations and correlations and has produced claims very much worth studying. The evidence tying its essential components to specific social, economic, or health outcomes in a causal way is a work in progress. Research findings continue to accumulate, however. Work on the causal effects of social capital on children's outcomes is indicative of how advanced modeling methods are being used in this research. Multiple casual modeling approaches are used, which "provide stronger evidence than previous studies that social capital improves children's outcomes and that these improvements are not simply a result of other factors that explain the selection of social relations but rather that these improvements result from the social relations themselves" (Lopez Turley et al., 2012, p. 23).
- Among the areas for which social capital concepts have been applied most convincingly are health research looking at the relationship between social isolation or loneliness and the mental and physical health of older populations; and the role of community characteristics in creating resilience to economic downturns or to disasters. Another important example is the work noted above on child outcomes that demonstrates how newer statistical modeling methods can be brought to bear in an experimental context to establish causal links and, because it deals with interventions, in a policy-explicit setting.
- Data collected in the CPS Civic Engagement Supplement have not yet been successful in strengthening evidence of the casual links between various dimensions of social capital and important economic, social, and health outcomes, nor have these data been used extensively in academic research. CPS supplement data

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have typically been used in publications that summarize the data (such as the various civic health index reports), but they cannot support research that models codeterminants of individual outcomes and social capital in a way that address identification and other econometric problems.

- The real promise for developing a deep understanding of how neighborhood and community-level factors interact to affect aspects of people's lives requires study of a rich set of variables from diverse data sources that allows for the integration of information about individual characteristics and on individual attitudes in order to study how they relate to communities and to the social environment, and over long periods of time.

CONCLUSION 4: The study of social capital, though a comparatively young research field, is sufficiently promising to justify investment in data on the characteristics of communities and individuals in order to determine what factors affect their condition and progress (or lack thereof) along a range of dimensions. Improved measurement, additional data, and resulting research findings are likely to find uses in policy making.

And—though data collected from large population surveys have not been widely used in research attempting to advance understanding of the causal links between various elements of social capital and outcomes that can be affected by policy—such data are still essential because of their value in providing descriptive information and because evidence continues to accumulate that phenomena described as social capital play an important role in the functioning of communities and the nation.

3.3. TECHNICAL SURVEY ISSUES

Data quality and practical survey methodology issues are also important in constructing an overall data collection strategy—that is, when considering what aspects of social capital should be given priority for measurement using the CPS supplements and which ones should be left for other surveys or for nonsurvey instruments. The measurement and survey issues discussed in this section are not unique to social capital and are well covered in a very deep research literature. And, given its long history dealing with surveys, the U.S. statistical system is well equipped to handle most of them or to judge the extent to which, for a module to be used for measuring social capital, these factors constrain what can realistically be accomplished.

Following the list in Hudson and Chapman (2002), the survey issues

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identified below—survey length, time, and structure; item appropriateness and sensitivity; item development and quality; sample size, and use of proxy interviews—should factor into any evaluation of elements being considered for inclusion in the CPS Civic Engagement and Volunteer Supplements (or other survey options). These issues become even more critical if the civic engagement and volunteer supplements were to be combined into a single module.

Survey Length, Time, and Structure

The CPS allows about 10 minutes for respondents to complete a survey supplement. This time limit necessitates decisions about tradeoffs in terms of the frequency with which questions can be asked—for example, more questions, but not included in every year of a supplement versus fewer questions asked with greater frequency. Alternatively, the sample can be divided so that random subgroups are asked different questions. This method has been used in federal data collections, though it reduces item precision by lowering the effective sample sizes for each question. Split samples can also be used to experiment with questionnaire designs. For studies of social capital, as with other topics for which causality is difficult to establish, the importance of longitudinal data, or at least regularly repeated cross-sectional questions, is clear.

Item Appropriateness and Sensitivity

Many people view certain topics as inappropriate for government surveys, and there are questions that people are uncomfortable answering (of course, the sensitivity of topics varies across individuals). Questions about religion, attitudes about race relations (and other aspects related to "bridging" social capital), or about numbers or kinds of friendships are just a few examples of questions that are sensitive for some respondents. And different survey modalities may lead to different levels of positive (or negative) response bias. Participants may be less forthcoming on surveys administered by interviewers relative to more impersonal Internet instruments. It is also possible that survey mode has a differential impact on responses to "objective" questions (e.g., did you vote in the last election) and "subjective" questions (e.g., trust in neighbors, quality of friendship ties). As described by Hudson and Chapman (2002, p. 8): "Some agencies also shy away from opinion items. This restriction may make it difficult to measure some aspects of social capital—e.g., the norms and trust that are engendered by community-building—forcing instead a greater focus

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on measurable activities as a proxy for underlying attitudinal concepts."[14] Another factor is the questionnaire context, which plays a role in determining the scope of appropriate questions. The CPS is primarily a labor force survey; questions on volunteering were added because of their relationship to paid work.

Item Development and Quality

Through the U.S. Office of Management and Budget, the federal statistical agencies maintain standards for items to be included in their surveys. Rigorous testing of questions is part of the process. Prior testing of the Social Capital Community Benchmark Survey by the Saguaro Seminar (see Chapter 1) allowed many of the questions on social capital to be included in the CPS. Similarly, questions being incorporated into the Neighborhood Social Capital Module of the American Housing Survey were developed and tested over a long period by Robert Sampson and colleagues for the Project on Human Development in Chicago Neighborhoods. But, as pointed out by Hudson and Chapman (2002), "not all 'proven' items are automatically acceptable for inclusion;" they still must be determined to be relevant to the survey's subject matter and justifiable on other grounds.

Sample Size

We have repeatedly made the point that phenomena associated with civic engagement, social cohesion, and other dimensions of social capital are often most interesting when studied at neighborhood and community levels or for specific subpopulations; this has obvious implications for data collection. Again, from Hudson and Chapman (2002, p. 8):

> For aggregate national estimates, a survey with a sample size of as few as 1,000 individuals would be sufficient. However, from a policy perspective, the underlying issues of equality and access embedded in social capital necessitate disaggregation among policy-relevant social groups, such as racial/ethnic groups; residents of urban, suburban, and rural communities; socio-economic groups; and adults of various ages. The greater the degree of disaggregation desired, the larger the sample must be in order to produce reliable data; oversampling of small groups also becomes an important sampling feature.

[14]Whether or not agencies should dismiss attitudinal measures out of hand is a matter of opinion. One could reasonably argue that, if such questions are critical to understanding the outcomes of interest, it may be justifiable. Still, government-funded academic surveys may provide a comparative advantage in such cases.

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For researchers studying the impact of local events (plant closings, natural disasters, etc.) and for understanding why or predicting which localities are better prepared to recover from a natural or other shock, sources other than national surveys are required, unless those surveys can be funded at levels to support very large sample sizes. When national surveys are not possible or efficient, planning is needed so that information can be collected consistently on features of communities. This kind of planning will increasingly rely on unstructured and uncoordinated data sources. As discussed in some detail in Chapter 5, combining individual- and community-level information that goes well beyond survey data, as was done in the Chicago Neighborhoods Study, will become increasingly important.

Use of Proxy Interviews

A drawback of the CPS is that, in order to obtain information for every adult household member, it uses proxy responses (i.e., a person answering the survey for a household can answer questions about other household members).[15] Proxy responses are particularly problematic for questions about attitudes. Two questions on the 2011 CPS Civic Engagement Supplement ("can you trust people in your neighborhood" and one asking about confidence in institutions) specify that they are not to be asked for proxy respondents, which is good for accuracy but results in empty data fields. This characteristic reduces the value of the CPS as a vehicle for measuring dimensions of social capital; this point was made by Hudson and Chapman (2002, p. 9):

> For the typical factual questions included in many surveys (basic demographic information, work status, earnings, etc.) proxy interviews are usually acceptable. However, some dimensions of social capital involve typically private, subjective judgments (e.g., questions about trust, interest in politics). It is doubtful that these dimensions can be validly assessed using proxy interviews. Disallowing proxy interviews necessarily restricts the surveys that can be considered as carrier instruments.

These considerations will become ever more important in the current environment in which agencies are reluctant to increase the number of survey instruments or survey questions they administer without a federal mandate or indications of clear, central policy relevance.

[15]The accuracy of proxy reporting has been well studied; see, for example, Tourangeau et al. (2000).

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4

Competing and Complementing Data Strategies: The Role of the Federal Statistical System

In this chapter, we explore options for advancing collection of data on dimensions of social capital. Our starting point is the federal statistical system, particularly the Civic Engagement Supplement of the Current Population Survey (CPS). Later, we consider complementary and substitute data options—public and private, survey and nonsurvey, along with experimental strategies, some of which involve administrative or "big data" sources.

The recommendations in this and the next chapter are intended to improve information about civic engagement, social cohesion, and other elements of social capital for research and policy purposes. They fall into two categories: (1) those directed toward improving data collection in the near term, taking advantage primarily of existing survey vehicles; and (2) those that are more forward looking in a way that anticipates the role of government surveys alongside emerging data sources, including unstructured digital data produced as the by-product of day-to-day business, communication, and social and civic activities. Underscoring our guidance is the recognition that the viability of large national surveys is at a crossroads; a real possibility exists that major surveys conducted by the federal statistical system will take a starkly different form in the not too distant future.

RECOMMENDATION 1: For data collection in areas of social capital, a multipronged strategy should be pursued in which large population surveys conducted by the federal statistical

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system play a role, but one that is increasingly complemented and supplemented by new, innovative, experimental alternatives. The greatest promise lies in specific-purpose surveys such as those focused on health, housing, and employment issues (especially those that have a longitudinal structure) and in the exploitation of nonsurvey sources ranging from administrative data (e.g., local-level incident-based crime reports) to digital communications and networking data that are amenable to community-level analyses. Many of the surveys will continue to be conducted or funded by the federal government, while many of the nonsurvey sources will originate elsewhere.

Some of the data from nongovernment sources are traditional survey based (e.g., from Pew, Gallup, and similar organizations), and some originate from private-sector activities organically generating information as a byproduct of day-to-day processes. The quality of the nation's information and its research capacity will in large part be determined by the effectiveness with which these disparate data sources can be exploited and coordinated to work in a complementary fashion.

Some elements of social capital are best measured through surveys of individuals or households while, for others, it is possible to gather information using nonsurvey methods. Among the data elements for which surveys are required, some can be effectively collected using instruments administered to national samples while others are better approached using specialized, more focused ones. As discussed in Section 5.1., measurement of some behaviors, actions, and attitudes may also be enhanced by linking survey data to nonsurvey sources and through modeling or other methods.

In this section, we discuss the prospects for data collection on civic engagement and volunteering using existing federal surveys. We describe attributes of the federal statistical system that enhance data collection and those which create constraints. The role of the CPS, specifically the September and November Supplements, is considered, as are other federal survey options.

4.1. THE COMPARATIVE ADVANTAGE OF THE STATISTICAL AGENCIES

Data collection performed by the federal statistical system has the advantage of methodological transparency and, in turn, credibility with users. The objective of federal statistics is to produce information that is publicly available—with adequate privacy and confidentiality protection—and that meets the quality and accuracy standards required by

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decision makers. As articulated in Capps and Wright (2013), ". . . official statistics in the United States are grounded in the scientific method and constantly subject to scientific review; they are understood, they are authoritative, and they are credible."

Government surveys and statistics have also historically offered regular, replicated content that provides continuity over time. This long history has yielded a wide range of methodological advances in probability sampling methods that allow population estimates to be generated, assessment of nonsampling errors, dissemination of data and access to data by users, and protection of privacy and confidentiality of respondents. Perhaps most importantly, the distributional properties of the government's survey samples are known, and decades of research have honed the statistical agencies' ability to collect reliable data and interpret their meaning. As a result, when key information on covariates has been included in carefully designed surveys, research that can support inferences has been possible.

That the government collects data about civic engagement—specifically, volunteering and voting—also sends a signal that these activities are important to society. And the historically high response rates of government surveys (e.g., 92-94 percent for the CPS in 2003-2005 and 86-88 percent for the volunteer supplements) give them a comparative advantage over nongovernment surveys. This advantage is particularly important for measuring activities such as volunteerism for which participation in the survey correlates with the propensity to volunteer.[1] Moreover, if other sources of national data on voting and volunteering (such as the American National Election Studies funded by the National Science Foundation) are discontinued at some time, the CPS Voting and Registration Supplements would become all the more vital.

Government data collection also has limitations. As noted in Chapter 3, some questions may be viewed by the public as inappropriate for inclusion in government surveys on grounds of privacy or sensitivity (e.g., political or religious affiliation or sexual orientation). Though the government does ask about sensitive matters such as drug abuse, alcoholism, and people's habits, some questions—such as those about trusting

[1]The high variability in survey estimates of volunteering is due to the "greater propensity of those who do volunteer work to respond to surveys" (Abraham et al., 2009, p. 1129). The authors analyzed data from the American Time Use Survey (ATUS)—based on a sample drawn from the CPS—and the CPS Volunteer Supplement to show that "CPS respondents who become ATUS respondents report much more volunteering in the CPS than those who become ATUS nonrespondents" (ibid). And this bias, replicated within subgroups, cannot be corrected for using conventional adjustment methods. Although nonresponse "leads to estimates of volunteer activity that are too high, it generally does not affect inferences about the characteristics of volunteers" (p. 1129).

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particular political parties or about some personal social behaviors—are generally considered beyond the scope of what government should be asking about. Indeed, the CPS was initially rejected as a home for a civic engagement module on the grounds that, to maintain high response rates, questions judged to be politically, morally, or otherwise sensitive should not be included. This concern could be interpreted to apply to questions about "religious activities and interactions with individuals of specific racial or ethnic groups—key components of social capital within the U.S." (Hudson and Chapman, 2002, p. 5).

While government has traditionally not ventured very far into the realm of asking citizens about attitudes, the movement to measure subjective (self-reported) well-being may be changing this view. This change is clear in some countries—including Brazil, Canada, Chile, and the United Kingdom—where questions about life satisfaction and day-to-day emotions are being fielded in flagship surveys. In the U.S. federal statistical system, the stance has been more wait and see. For the purpose of assessing people's social connectedness, group cohesion, attitudes toward others in the community and the like, establishing convincing links to outcomes in specific policy realms (health, crime, resilience to disaster) would support the case for survey coverage in these areas. That is, if it is established that when characteristics x, y, and z are present, communities are shown to be better off and, where they are absent, communities are worse off, there would be a strong argument for collecting relevant data. In some cases, other organizations such as Pew and Gallup have a comparative advantage in doing this kind of attitudinal work. Gauging the public's consumer confidence (as done by a survey conducted by the University of Michigan's Survey Research Center for the Conference Board, a nonprofit research group) is an example where the nongovernment sector has shown a comparative advantage in data collection.

4.2. THE CPS SUPPLEMENTS

It is not possible or desirable to make the CPS the source for all data related to social capital needed for policy, research, and general information purposes. The primary purpose of the core, monthly CPS is as an employment survey, and adding a major new component could increase respondent burden and jeopardize its high response rates.

The purpose of the CPS Civic Engagement Supplement—which has now been fielded in 2008, 2009, 2010, 2011 and, with a half sample, in 2013—was stated in the justification document to the U.S. Office of Management and Budget (OMB) (2011, p. 3):

> . . . collect data for the Civic Health Assessment, an annual report mandated by the Serve America Act that is produced in partnership with

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the National Conference on Citizenship (NCoC). The Civic Engagement Supplement provides information on the extent to which American communities are places where individuals are civically active. It also provides information on the number of Americans who are active in their communities, communicating with one another on issues of public concern, and interacting with public institutions and private enterprises.

At national and state levels, the CPS Civic Engagement Supplement fulfills several elements of this mandate for descriptive information.[2] As we argue above, some elements of social capital data collection are well served by broad population surveys fielded by the federal statistical system, while others are not—not because they are unimportant, but because they either require a different measurement approach can be collected using less costly vehicles.[3]

CONCLUSION 5: Current Population Survey (CPS) supplements, which offer only a limited amount of survey space (about 10 minutes is allotted for a given monthly supplement), are most appropriate for collecting data on variables that (1) can be estimated from a small set of questions, (2) deal with people's behaviors, (3) would be difficult to ascertain through nonsurvey methods, and (4) need to be correlated with personal attributes that are also captured on the survey in order to study how they interrelate for groups such as the elderly, minorities, or immigrants. Also critical is that the CPS data are useful when the research and policy questions of interest require information aggregated at the federal-, state-, or (in some cases) metropolitan-area level.

By these criteria, the Civic Engagement and Volunteer Supplements to the CPS are well suited for generating statistics on a subset of narrowly defined dimensions of civic engagement (see the top two rows in Table 2-1 in Chapter 2).[4] The series produced from these data have, historically, proven to be useful, particularly for describing national-level trends. Volunteering is a particularly important form of engagement because, unlike

[2]The data have been used to describe characteristics at more local levels (though not for generating statistically valid estimates) and, in combination with other data sources, to motivate community action. See, for example, the Greater New Haven Community Index Project, compiled by the nonprofit organization, DataHaven: available: http://www.ctdatahaven.org/communityindex [February 2014].

[3]An example is Hersch (2013) who replaced traditional survey approaches with voter lists and digital obituaries data to reveal patterns of political behavior among post-9/11 victims.

[4]As described in Chapter 1, the Civic Engagement Supplement has been fielded most years since 2008. The Volunteer Supplement has been fielded each September since 2002. See Appendix B for a complete schedule of CPS supplements.

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"memberships," it requires a time commitment. Working for a campaign, for example, is a stronger indication of civic engagement than simply belonging to a political party or even voting.

CONCLUSION 6: Information about the population's political participation and voting activities can be adequately captured with a small number of questions. Likewise, the Current Population Survey (CPS) has proven useful for understanding volunteering rates and patterns—especially when linked with data from the survey's time use (American Time Use Survey) module. Thus, the CPS Volunteer (September) and Civic Engagement (November) Supplements are best focused on political and civic participation.

These supplements are less optimal for generating data on dimensions of social cohesion, connectedness, trust, and characteristics of the broader social environment (e.g., the bottom three rows in Table 2-1). Relative to voting and volunteering behavior, these attitudes and interactions are quite complex.[5] Measuring social cohesion and related constructs requires a larger number of questions and perhaps the use of nonsurvey methods that are beyond the scope and acceptable burden levels of the CPS.

CONCLUSION 7: Although even a short module can generate useful information, the Current Population Survey does not offer a comparative advantage for data collection on complex behaviors and attitudes indicative of social cohesion, individual and group connectedness, and civic health generally. These phenomena cannot be satisfactorily characterized by data collected from a small set of questions.

Even for a comparatively well-defined element of social capital, such as individuals' connectedness, it can be misleading to rely on one or very few proxy measures. For example, if a survey asks about family ties, it may miss a trend whereby friendship networks are increasingly substituting for those centered around family. And asking only about in-person contacts will miss increasing use of remote personal communication and

[5]Forrest and Kearns (2001) summarized this complexity well, stating that studies of social cohesion may emphasize "the need for a shared sense of morality and common purpose; aspects of social control and social order; the threat to social solidarity of income and wealth inequalities between people, groups and places; the level of social interaction within communities or families; and a sense of belonging to place" (p. 2129).

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social networking options that may substitute for or complement conventional interpersonal interactions (a person may be almost as happy to hear from a distant grandchild or friend by email, Skype, or Facebook as in person). An exclusive focus on family or on in-person relationships may miss possible counterbalancing trends. Ultimately, the number of measures needed is an empirical question to be tested; there are examples where researchers have been able to successfully reduce lengthy scales into even a single item that is valid and reliable, a process that has typically involved robust psychometric assessment of the underlying concepts early on.

4.3. DESIGN OPTIONS FOR THE CIVIC ENGAGEMENT AND VOLUNTEER SUPPLEMENTS

In the current budgetary environment, cost reduction has become an increasingly prominent objective. Strategies relevant for the CPS include (1) combining the Civic Engagement and Volunteer Supplements, with a reduced number of questions on each topic, in order to field both each year; (2) moving to a rotating schedule in which the full content of each is fielded, but only in alternating years; or (3) cutting sample sizes in order to field both supplements with the full complement of questions annually. Indeed, this was essentially the set of alternatives faced by Corporation for National and Community Service (CNCS) during planning for the 2013 supplements. CNCS ultimately chose to implement option (3)—using smaller samples—so that both the volunteer and civic engagement question sets could be fielded; it was also an option that did not require a questionnaire redesign or cutting content, processes that would have involved a redesign study (such as that described below).

The major cost of selecting the reduced sample option, fully acknowledged by CNCS, is that it increases the standard errors of estimates,[6] thereby compromising the ability of data users to conduct subgroup analyses or to produce statistically valid findings at the metropolitan statistical area level. While this was a practical short-term decision, it would not be the best approach long term.

RECOMMENDATION 2: Due to the importance of substate and subgroup analyses, under a cost-reduction scenario the panel favors a combined civic engagement and volunteer supplement to the Current Population Survey (CPS) even though it would require reducing the number of questions in each category.

[6]See Appendix C for standard error estimates for state-level samples for the September 2011 CPS Volunteer Supplement for full- and half-sample scenarios.

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Question streamlining would be accomplished by (1) narrowing the subject matter now covered in the Civic Engagement Supplement based on assessment of what information can and cannot be collected effectively in a short survey module; (2) identifying and eliminating redundancies across the CPS Civic Engagement and Volunteer Supplements; and (3) identifying and eliminating questions for which comparable data can be found in other government surveys or elsewhere, while recognizing there is analytic value in having both volunteering and civic engagement data, along with covariate information, for the same respondents.

Moreover, it is not necessary to have identical content each year since some behaviors change slowly over time. Therefore, CNCS and the Census Bureau should experiment with the periodicity of various questions. For items where change and granularity are needed, sample size and frequency tradeoffs can be exploited such that a core set of questions is asked each year; other questions could be asked less frequently. We cover the first two parts of this streamlining plan in the rest of this section; the third part is covered in Section 4.4.

Setting Appropriate Scope

If one accepts the position articulated above—that, while it is possible to measure some dimensions of social capital in a short survey module, others are too complex to address meaningfully—a logical first step in streamlining to a combined supplement is to limit it to volunteering and civic (particularly, political) engagement topics. In order to stay within CPS time and length requirements, priority questions must be identified.[7] Precise question wording, ordering, and other aspects of survey design require development testing.[8] The details of such testing are beyond the panel's charge, but we offer for consideration some general ideas (illustrated with a few examples) for recasting the supplements to take advantage of its strengths and rethink its limitations.

Intragroup (bonding) and intergroup (bridging) cohesion, for example, are phenomena with the potential to affect the dynamics of political and social movements and should be measured and studied. But questions falling into these categories (listed in the lower rows of Table 2-1)

[7] Although the volunteering supplement contains 19 questions, plus some follow-up questions, many respondents do not answer all of them. Those who reply "no" to the first two questions establish whether or not the person volunteered to take a very short survey.

[8] In 2011, CNCS contracted with Abt Associates for such testing.

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cannot be adequately covered in a 10-minute supplement that is also covering volunteerism and civic engagement activities. One content area of the Civic Engagement Supplement to consider scaling back is about interactions with friends, family, and neighbors (see questions S12-S16 in Appendix E). Questions about activities such as, "How often did you eat dinner with other members of your household?" (S12) and "How often did you see or hear from friends or family . . . ?" (S13), are examples for which data may be collected more comprehensively and in a better connected way elsewhere. The connectedness topic is important, but these questions need empirical backing, and more research is needed to understand what they are measuring. For example, the phrasing "How often did you hear from or see . . ." does not identify the intensity of contact—does "hi" on the street equal a long visit?

For questions on social connectedness, Pew and Gallup have developed survey models that are conducive for measuring weak and strong ties as well as diversity and cohesion.[9] Alternatives to the current types of attitudinal questions on connectedness and polarization might be phrased along the following lines

- "In your personal life—for example, in choosing friendships—how important are each of the following: religion, race, ethnicity, language, politics?" This formulation of a social networking stem questions is similar to those used in some general social surveys.
- "Do you want your child to marry *x*, live next door to *x*, be friends with *x*?" where *x* is a person of a different race, political view, religion, etc. Similarly, "Do you have strong preferences in the *x*, *y*, and *z* of people you associate with?"

Data from these kinds of questions provide insights into general attitudes about tolerance and diversity.

Internet use (Civic Engagement Supplement, question S3) may also be peripheral to the core volunteer and engagement constructs coverable by the CPS, and it is likely that better nonsurvey sources of this information exist. The assessment by Abt Associates (2011) found that respondents had trouble interpreting the questions about Internet activities; similarly, respondents were uncertain about what kinds of organizations "counted" in questions about participation (S5) and also about what level of participation qualified as a "yes" to the question. Question (S2) asks people whether they have expressed views to public officials—without specify-

[9]For the Pew questions on social isolation and new technology, see http://www.pewinternet.org/~/media//Files/Reports/2009/PIP_Tech_and_Social_Isolation.pdf [February 2014].

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

ing whether in person or not (e.g., by phone or email), and question (S3) specifically asks how often a respondent has expressed political or community views using the Internet. In order to characterize the interaction, it is important to differentiate mode more precisely—a person who spends all day at home posting opinions on social media may not have the same level of engagement as a person writing op-eds that are published, but the two kinds of activities may appear similar with the current questions.

Survey questions also require periodic updating to account for changes taking place in a society's norms, habits, and activities. For example, membership in civic or service organizations such as the American Legion, Rotary, and Lions Club (asked about in question S5) is no longer as commonplace as it once was in the United States.[10] One way to accommodate such changes is to use more generic categories; for example, for most purposes, it will not matter whether a respondent is a member of the Lions Club, the Rotary Club, or some other club, so new response options may be needed. This would also apply to questions in other areas, such as those in Box 4-1. For example, the question about communication technology use (Facebook, Twitter, Instagram, or Snapchat) might have the most meaningful value as part of long-term longitudinal data collection efforts if the question ended generically at ". . . network site."

Another option is to structure questions, such as S5, in an open-ended "yes/no" fashion parallel to question S1 of the volunteer supplement ("Since September 1st of last year, [have you/has NAME] done any volunteer activities through or for an organization?) A "no" response ends the line of questioning. A "yes" prompts (unconstrained) identification of the organization. Among the advantages of this more open-ended structure is that it: (1) captures the changing nature of organizations, modes of engagement and communication, etc., and eliminates preconceived notions about what kinds of organizations, volunteer activities, and personal interactions should "count"; (2) streamlines a survey since "no" answers allow respondents to move quickly to the next item, thus reducing burden; and (3) allows analysts to interpret results in greater detail (e.g., motivations for volunteering at church, at a homeless shelter, or for a political candidate may be quite different). Modern computing offers tools to take advantage of such data which are richer, and which reflect the direction surveys appear headed in the future.

[10]Meeting attendance for such clubs has, by Putnam's (2000) estimates, declined by 50-60 percent at the end of the 20th century. Of course, changing norms affect many aspects of society and the economy in ways that leave statistics out of date. For example, standard industrial classification systems required updating as manufacturing sectors become relatively less dominant while service and high-tech industries grew to account for a larger share of economic activity.

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BOX 4-1
Sample Open-Ended Engagement Questions

Please tell me if you have done any of the following in the last year (Yes/No) (can be face to face, Internet, in writing):

1. Donated money or goods to a charitable or political cause.
2. Attended a meeting to discuss a public issue.
3. Contacted the media or a public official to express your opinion about a public issue.
4. Talked to family, friends, or coworkers about a public issue.

Are you currently registered to vote?

(if YES to above): To your knowledge were there any local elections in the last year for which you were eligible to vote?

(if YES to above): Did you vote?

Do you currently have (and/or have access to?) Internet access in your home?

(if YES): Do you currently participate in a social network site (such as Facebook, Twitter, Instagram, or Snapchat)?

In the past year have you volunteered your time for any social, political, or charitable cause?

(IF YES: some follow-ups on type of activity, amount of time)

Are you currently affiliated with or a member of any volunteer organizations or associations (give some examples of types)?

IF YES: ask a few follow-ups on types, number.

Eliminating Overlap Among the Supplements

Minimizing overlap within the CPS supplements is another source for streamlining and is no doubt something that will be studied during the design of the a combined instrument. As just one illustrative example, the question on participation in groups or organizations in the Civic Engagement Supplement (S5, S6) could be merged with the questions on the

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Volunteer Supplement (S3, S4) about "organizations volunteered for."[11] Both versions of these participation questions are likely not needed in a single supplement.

The panel did not examine the idea of integrating the CPS Voting and Registration Supplement into the combined instrument. The main reason is that the Civic Engagement (November) and Volunteer (September) Supplements have been fielded every year, except for 2012 when the Civic Engagement Supplement was skipped due to budget reasons. The Voting and Registration Supplement is only fielded in even-numbered (election) years. Thinking about the amount of space available on a 2-year cycle basis, and assuming it is important to have at least a core of civic engagement and volunteer questions fielded every year, it may not be efficient to try to combine all three supplements. However, it may be worthwhile to consider moving specific questions from one supplement to the other with the needed frequency (every year versus every other year) being a key criterion. A combined Civic Engagement/Volunteer Supplement could be fielded in either the September or November slot. The current supplement schedule (see Appendix B) suggests that there is less competition for the September slot since it is already occupied by the Volunteer Supplement. The Voting and Registration Supplement obviously needs to remain in November.

Furthermore, the content of the Voting and Registration Supplement—which asks about participation and registration in national elections and about reasons for not voting—might be changed in one respect. Data from this supplement allows states to ascertain demographics and voting registration information; and, historically, CPS data have proven very useful for quantifying and understanding voting and registration behavior by population age, education, sex, race, and Hispanic origin and for analyzing such policies as the effect of absentee voting and same day registration on voter turnout. Voting data are important in the calculation of statistics used to assess the strength of democracy (see Dalton, 2008). If the local election question (S1) in the Civic Engagement Supplement were transferred to the voting supplement, it could possibly be dropped from the civic engagement supplement.

The nonprofit sector relies heavily on surveys of volunteer activities. Data from the survey performed by Independent Sector—published in *Giving and Volunteering in the U.S.*—is comprehensive and frequently cited; however, this survey is conducted irregularly. Although there are difficult questions of compatible definitions, standards, editing, and other

[11]Question S5 of the 2011 Civic Engagement Supplement reads: "Next, I will give you a list of types of groups or organizations in which people sometimes participate. (Have you/Has NAME) participated in any of these groups during the last 12 months, that is since November 2010." Five preset categories follow (see Appendix E for the exact question wording).

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elements, it may be possible to coordinate these efforts. Also, it is important to note that the time spent in various volunteer activities can be estimated using the American Time Use Survey, which could be used in place of question S6 of the Volunteer Supplement if the two sources can be shown to produce comparable estimates (or if the supplement version is shown to be less accurate). Space could thereby be freed up and refocused on other important research questions such as why respondents choose to volunteer and what type of volunteering is being done.

Tradeoffs in Sample Size and Question Frequency

At the end of Chapter 3, we identified basic survey characteristics that at least indirectly guide what kinds of information can be effectively collected and used for measurement purposes. Here, we apply some of these considerations as they relate to the CPS Civic Engagement and Volunteer Supplements.

The CPS maintains a sample size of about 60,000 households per month which is, by design, sufficient to generate national and state employment and unemployment statistics. Additionally, substate data are published for 54 large metropolitan areas, 22 metropolitan divisions, and 41 cities, although this requires pooling data over the course of the year to create annual averages. The Civic Engagement and Volunteer Supplements are both conducted annually, budget permitting (the Civic Engagement Supplement was *not* fielded in 2012). This schedule allows for year-to-year tracking of responses, though the monthly sample size constrains research to the national- and, in some cases, state-level data analyses. Unlike, say, the American Community Survey (ACS), CPS sample sizes data are not large enough for county, much less neighborhood, research. Thus, activities, actions, attitudes that are inherently interesting and important to track at only those levels are not strong candidates for the CPS.

Additionally, the frequency of data collection—whether annual or at longer intervals—has an impact on the precision of estimates. One approach for estimating smaller areas is to accumulate data over time, creating moving averages or "period prevalence estimates," as is routinely done with the ACS (e.g., many statistics are derived using 5-year moving totals that allow users to drill down to construct local area estimates). Less frequent data collection reduces an analyst's ability to estimate change measures and to pool data across time to increase precision for smaller geographic areas and shorter time periods.[12]

Reducing the frequency of questions to a monthly survey fielded only every other year—as would also be the case if the Volunteer and Civic

[12]CNCS has pooled data across years of the Civic Engagement Supplement to publish more precise estimates for smaller geographic areas.

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Engagement Supplements were rotated each November (or September)—reduces the effective sample size on an average annual basis by half. To maintain confidence interval widths, data pooling would have to encompass a time period twice as long. And it obviously would not be possible to estimate year-to-year changes, even nationally or at the state level.

The characteristics of interest, and the way they change temporally or vary spatially, create opportunities for sample design tradeoffs and experimentation with the periodicity with which questions appear on a module. Particularly with a combined November supplement, as described above, it may not be optimal to have identical content each year, and it is important to assess which information would suffer least from less frequent collection. For phenomena that do not change rapidly, less frequent sampling is not a bad tradeoff to exploit. If, for example, patterns of volunteering abroad (question S15) do not change quickly, that question could be a candidate to be fielded every other year, which would open up survey space for other questions. If there is not much demand to do research on short time interval trends in participation, voting, and other phenomena, there is less need for annual data collection. On the other hand, if one wanted to track erosion in a population's confidence in a rapidly changing political climate for purpose of anticipating social unrest, an infrequent survey is an ineffective option (indeed, even a more frequent survey might not be the best way to tap into such feelings). If measuring trends is a priority (as is the case, for example, for survey data on which monthly unemployment rates are based), adequate sample size becomes important for establishing statistical significance.

The 2-year cycle framework suggests a core set of questions to be asked each year and another set that might be asked every 2 years, or even less frequently, thereby clearing space for additional biannual questions. Core questions would be reserved for items where change and granularity, to the extent it exists among the current topics, are needed (or one or the other); where neither is needed, questions become candidates for less frequent inclusion, on a rotating basis.

Another issue that supports our recommendation for a combined supplement—as opposed to separate, biannual Volunteer and Civic Engagement Supplements—involves the way the overall CPS survey sample is rotated. Currently, analysts can take advantage of the fact that the sample overlaps from year to year because respondents are in the sample for 4 months, out for 8 months, then back in for 4 additional months. This sample rotation format means that half the sample respondents in any given month were also present in the sample 1 year earlier; therefore, more precise estimates of annual change can be obtained, a feature that would be lost if only 2-year change estimates were possible.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

Conclusions

The above discussion leads to the following conclusions

- The content of an annual combined Volunteer and Civic Engagement Supplement need not be identical each year. While some questions should be asked annually, others could appear less frequently. Such a strategy should be considered for items where research suggests that the measurement objective pertains to phenomena that do not change rapidly. Of course, this strategy cannot be exploited without negative consequence if a level of geographic granularity is desired that requires pooling data across years. And there is also the chance of a big event occurring (e.g., 9/11, Katrina) that creates a need and value for greater temporal information.
- A rotating question schedule would allow for collection of data on a greater range of variables—for example, many researchers of immigration and social mobility have called for a question on parents' occupation, earnings, or country of birth (which might fit in well to the CPS, though the ACS is really the goal due to its capability to produce more granular geographic estimates).
- Respondent burden can also be reduced by rotating questions or using split sample questionnaires. The latter involves asking different sets of questions to random subsamples of respondents. The downside of this approach is that increased costs (for the same total sample size) and reduced item precision due to lowered sample sizes for a given question.
- Given the nature of subject matter falling under the social capital rubric, the frequency and geographic specificity of data from the CPS is inadequate for measuring many of its dimensions. Since the panel recommends refocusing the CPS Civic Engagement Supplement to volunteering and voting primarily, question rotation—while still potentially useful—becomes less crucial because the scope of the survey content will have been narrowed.

4.4. BEYOND THE CPS

Developing a comprehensive data collection strategy in the areas of social capital requires consideration of other survey vehicles with potentially greater relevance and direct applicability to research on specific domains; the CPS supplements should not be evaluated in isolation. In weighing what to prioritize for the CPS, it is also necessary to identify

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overlapping content of the Civic Engagement and Volunteer Supplements with other federal government surveys.

While, as indicated in Table 4-1 (and the accompanying Appendix D, which gives greater detail of questionnaire content), there are few ongoing surveys specializing in social capital, there are many that ask questions touching on relevant topics.[13] Several of these surveys provide the covariate context required for deeper analysis of the relationship between social capital variables and outcomes in specific domains. The primary focus of the CPS is the labor force, and it asks about union membership and contacts (the supplements then delve more deeply into voting, volunteering, time use, and nonmarket activities). The ATUS also captures volunteering and is important for studying labor expended in the production of nonmarket goods and services; time-use measurement makes sense within the CPS because of its relationship with market labor hours. The American Housing Survey, under the auspices of the U.S. Department of Housing and Urban Development (HUD), asks about trust and neighborhoods in the context of housing. The Health and Retirement Study asks about support contacts in the context of health. The Panel Study of Income Dynamics asks about organizational memberships and contacts in the context of caregiving and well-being. The National Longitudinal Survey of Youth asks about volunteerism, religious affiliation, and political attitude in the context of education and work. The Health and Retirement Study and the English Longitudinal Study of Ageing each include a series of questions about connectedness with one's children or grandchildren, which are useful for supporting research examining the effects of interpersonal relationships on the health, longevity, and happiness of older people. When justifying the addition of questions to surveys, it is highly persuasive when a specific purpose such as those noted above can be identified.

It was beyond the charge to this panel to go through the entire battery of government surveys for which development and placement of social capital questions may be appropriate or useful. However, we can generalize to say that specific research and policy questions (and the covariate information demanded by these questions) dictate the content of many of these surveys. While the panel recognizes that surveys often have different design standards, and transparency is not uniform across them,

[13]Some of these surveys—the National Crime Victimization Survey, the American Time Use Survey, and the Neighborhood Social Capital Module of the American Housing Survey—are fully sponsored and administered by the federal statistical system. Others—such as the Health and Retirement Study, the national longitudinal surveys, the General Social Survey, the American National Election Survey, the Social Capital Community Benchmark Survey, and Giving and Volunteering in the United States—are supported in part by the federal government and administered by nongovernment institutions.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

the working group proposed in Recommendation 4 below would review and investigate the ability of existing data collection instruments to serve multiple purposes and to be streamlined.

One of the most compelling and timely examples of a promising survey vehicle for data on social capital is an addition to HUD's 2013 American Housing Survey (AHS) (conducted by the Census Bureau): the neighborhood social capital module was designed to help researchers study neighborhood effects. The module was created as a "rotating topical module that collects data on shared expectations for social control, social cohesion, and trust within neighborhoods, and neighborhood organizational involvement."[14]

The content of this new AHS module included 21 questions—about trust, values of neighbors, how well people get along, etc.—each drawn from existing neighborhood-level surveys that have been field tested and revised over the past 18 years. The design of this module drew heavily from research by Sampson (e.g., 2006, 2012, 2013) described above and were intended to measure the "extent of social cohesion among residents and their willingness to intervene on behalf of the common good [collective efficacy]" (Sampson, 2013). It does so by asking questions about respondents' attitudes—such as how likely they would be to intervene if a fight were to break out among neighbors—and about levels of trust and willingness to help out in the community. The presence of such a survey module (if it were to become permanent), and the coverage it creates, should allow the CPS Civic Engagement Supplement to focus more narrowly on traditional political and civic participation questions.

The AHS module seems like an ideal fit for studying neighborhood effects—and the survey is large enough to allow for analysis of these small areas.[15] Documentation in the data collection request for the AHS (OMB supporting statement 2528-0017) reveals that:[16]

> While the content is nearly identical to previous surveys, the previous surveys have only been administered in a small number of metropolitan areas, including Chicago. Therefore, the AHS will provide a much larger and geographically diverse sample, thereby permitting detailed neighborhood social capital assessments in 25 metropolitan areas. . . . HUD PD&R consulted with Robert Sampson (Harvard University) and Cathy Haggerty and Michele Zimowski (NORC at the University of Chicago) to identify a group of questions that it expects will provide the best

[14]As described in HUD's supporting statement 2528-0017 to OMB. Available: https://www.google.com/#q=OMB+2528-0017+ [May 2014].

[15]In statistical terms, a small area was defined as "a domain of interest for which the sample size is insufficient to make direct sample-based estimates of adequate precision" (National Research Council, 2013a).

[16]See footnote 14.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

TABLE 4-1 Social Capital, Civic Engagement, and Social Cohesion Content of Major U.S. Surveys

Survey	Agency/ Organization	Primary Focus	Frequency
Current Population Survey	Census & BLS	Labor force statistics	Monthly
Civic Engagement Supplement	Census & BLS	Civic engagement	Resource and policy driven
Volunteer Supplement	Census & BLS	Volunteering	Annually
Voting and Registration Supplement	Census & BLS	Voting and registration	Biannually
ASEC Supplement	Census & BLS	Income, poverty, geographic mobility/ migration, and work experience	Annually
NCVS	BJS	Characteristics of criminal victimization	Biannual
NHES Civic Involvement	NCES	Adult and youth civic involvement	Resource and policy driven
ATUS (CPS)	BLS & Census	Time use, employment	Annual
AHS - Neighborhood Observation/ Social Capital	HUD	Housing	Biannual
HRS	NIA & SSA (U. of Michigan)	Health and aging	Biennial

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	Most Recent Year	Population Sampled and Sampling Mode	Capacity for Small-Area Estimates
	2013 (ongoing)	Probability selected sample of about 60,000 occupied households/ CATI & CAPI	State and 12 select MSAs
	2011 (full sample); 2013 (half sample)	"	State and 12 select MSAs
	2011 (full sample); 2013 (half sample)	"	"
	2012	"	"
	2013	"	"
	2013 (ongoing)	Nationally representative sample of about 90,000 households/CAPI & CATI	National
	1999	Nationally representative random-digit-dialing sample	
	2012 (ongoing)	Nationally representative sample of about 25,000 people/CATI	National
	2013 (ongoing)	190,000 housing units, address based, longitudinal; computer-assisted personal interview	National and 29 large metropolitan areas
	2012 (ongoing)	Varies by wave, but generally over age 50	National

continued

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

TABLE 4-1 Continued

Survey	Agency/ Organization	Primary Focus	Frequency
NLSY97	BLS	Educational and labor market experiences, relationships with parents, contact with absent parents, marital and fertility histories, dating, sexual activity, onset of puberty, training, participation in government assistance programs, expectations, time use, criminal behavior, and alcohol and drug use	Annually 1997–2013, now biannual
NLSY79	BLS	Labor force behavior, educational attainment, training investments, income and assets, health conditions, workplace injuries, insurance coverage, alcohol and substance abuse, sexual activity, and marital and fertility histories	Annually 1979-2010, now biennial
NLSY79 Child & Young Adult	BLS	Schooling, training, work experiences and expectations, health, dating, fertility and marital histories, and household composition	Began in 1986 for ages 0-14. Since 1994 ages 15+. Biennial
NHIS	CDC/NCHS & Census	Health of adults and children	Annual
Sample Adult Core	CDC/NCHS & Census	Health conditions, limitations, behaviors, access and utilization of insurance	Annual

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

Most Recent Year	Population Sampled and Sampling Mode	Capacity for Small-Area Estimates
2013 (ongoing)	8,984 respondents born between 1980 and 1984	National
2012 (ongoing)	American youth born 1957-1964; 9,964 respondents remain in the eligible samples	National
2010	Children of NLSY79 females	National
2013 (ongoing)	Varies, around 40,000 households and 100,000 individuals	National
2013 (ongoing)	Varies, around 40,000 households and 100,000 individuals	National

continued

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

TABLE 4-1 Continued

Survey	Agency/ Organization	Primary Focus	Frequency
PSID	U. of Michigan with funding from multiple government agencies, foundations, and other organizations	Employment, income, wealth, expenditures, health, marriage, childbearing, child development, philanthropy, education of families over multiple generations	Biennial
Disability and Use of Time Supplement of the PSID	U. of Michigan with funding from multiple government agencies, foundations, and other organizations	Detailed well-being, caregiving, time diary (24 hrs.) from previous day	Every 4 years
Transition into Adulthood Supplement of the PSID	U. of Michigan with funding from multiple government agencies, foundations, and other organizations	Health and emotional well-being, time use, community involvement, self-identity and perception, expectations for the future, family, peer, and romantic relationships, work, schooling	Biennial
GSS 2012	NSF (conducted by NORC)	Societal trends in behavior, attitudes, and opinions	Biennial
ANES	NSF (conducted by Stanford and U. of Michigan)	Voting, public opinion, and political participation	Biennial

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Most Recent Year	Population Sampled and Sampling Mode	Capacity for Small-Area Estimates
2013	Began with nationally representative sample of over 18,000 individuals living in 5,000 families (sample additions/drops depend on demographics and funding throughout 45-year history)	National
2013	394 married couples over age 50 from PSID main	National
2011	Over 1,500 aged 18 years and older; no longer attending high school; participated in the CDS baseline interview (1997, 2002/2003, or 2007); and participated in main PSID 2009 interview	National
2012 (ongoing)	National probability sample; two waves with sample target of 1,500 adults for each wave. Face-to-face CAPI (online option added in 2012), some CATI	Census region
2012	Cross-section, equal probability, sample. 5,916 face-to-face, CAPI, and Internet	National

continued

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

TABLE 4-1 Continued

Survey	Agency/ Organization	Primary Focus	Frequency
SCBS 2000	41 local community groups	Social capital and civic engagement	One time
SCCS 2006	Consortium of charitable foundations and local community groups		One time
Giving & Volunteering in U.S.	Consortium of charitable foundations and Independent Sector (conducted by Westat)	Volunteering and giving patterns and the motivations that correlate with such behavior	Biennial, 1988-2001

NOTES: ANES, American National Election Studies; ASEC, Annual Social and Economic Supplement; BLS, Bureau of Labor Statistics; CAPI, computer-assisted personal interviewing; CATI, computer-assisted telephone interviewing; CDC, Centers for Disease Control and Prevention; GSS, General Social Survey; NCHS, National Center for Health Statistics; NHIS, National Health Interview Survey; HUD, Department of Housing and Urban Development;

> insights into the scalability of results from neighborhood-level surveys of social capital to larger areas. . . . Ten of these questions were cleared by OMB as part of the Choice Neighborhoods Demonstration—baseline research project.

Further work will be needed on the new module to determine the precision of the small-area estimates and statistical properties. The survey should approach a sample size of 179,000 (though this includes both a national sample and a metropolitan area sample), which is considerably larger than the CPS—and it is longitudinal. Since a complete sample and questionnaire redesign is scheduled for the AHS in 2015, this is a crucial time for studying options for the permanent core questions and topical supplements.

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Most Recent Year	Population Sampled and Sampling Mode	Capacity for Small-Area Estimates
2000 (inactive)	National sample of 3,000 respondents and community respondents in 42 communities nationwide (across 29 states) covering an additional 26,700 respondents	National and 41 communities
2006 (inactive)	National adult sample of 2,741 respondents and 22 communities sample (11 of which were from the 2000 SCBS) totaling 9,359 community respondents	National and 22 communities
2001 (inactive)	Nationally representative sample of 4,216 adults aged 21 and older, random digit dialing	National

NCVS, National Crime Victimization Survey; NIA, National Institute of Aging; NLSY79, National Longitudinal Surveys 1979 wave; NSF, National Science Foundation; PSID, Panel Study of Income Dynamics; SCBS, Social Capital Benchmark Survey; SCCS, Social Capital Community Survey; SSA, Social Security Administration.

RECOMMENDATION 3: The Corporation for National and Community Service should establish a technical (research and evaluation) working group tasked with systematically investigating the content of, and redundancies or overlap in, federal surveys in areas related to social capital measurement. A good place to start is with the Current Population Survey (CPS) Civic Engagement Supplement and the Neighborhood Social Capital Module of the American Housing Survey. Other candidates are the CPS Volunteer Supplement and the American Time Use Survey and the CPS Voting and Registration Supplement and other national election administration and voting surveys. The technical working group should be charged with finding effective ways to coordinate the content of these options.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

The reference list of surveys in Table 4-1 provides a further roadmap for this assessment.

Ideally, both parts of the data collection strategy identified in Recommendation 1—national population surveys conducted by the statistical agencies and detailed special studies—should be pursued. A viable approach to optimizing the value of public resources would be to give priority to supporting sustained, locally intensive research models (e.g., the Chicago neighborhoods and NYC immigration studies).

RECOMMENDATION 4: For measuring relationships between such phenomena as social cohesion and neighborhood environment on one hand, and health, social, and economic outcomes on the other, statistical and funding agencies should take an experimental approach, sponsoring studies at the subnational-level and in-depth and longitudinal pilot data collections. This suggests that additional research and testing will be needed before committing to the content and structure of specific survey instruments. The statistical agencies' advisory groups may be especially helpful in thinking creatively about what kinds of research and survey projects offer the most promise.

New, innovative work might involve conducting experiments (i.e., randomized treatment and control), but it might also include observational analysis, focus groups, cognitive interviews, and the like. Conducting experiments to identify causal effects is not the comparative advantage of the federal statistical agencies—they are best suited for collecting large-scale, high-quality, representative measures of political, economic, and societal indicators with the goal of tracing trends in society over time. Such data collections (whether from surveys or administrative records) then enable scholars to leverage exogenous shocks (or randomized treatments) to test causal claims. And now is the right time to move on the measurement and design issues implied in the above recommendation because federal statistics in this subject matter area have not yet become deeply rooted.

Additionally, numerous national polling organizations regularly conduct surveys intended to gauge various aspects of civic engagement and social cohesion. These data collections, such as the Gallup World Survey and various surveys conducted by the Pew Research Center, have high value and are often more nimble in reacting to changing conditions and the emergence of new issues and questions. The Pew 2012 survey project, Civic Engagement in the Digital Age, is one example.

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5

Alternative Measurement Approaches: Strategies for a Rapidly Changing Data World

The analytic value of the ever-growing volume of data created by and captured from digital sources—from Internet-based storage and computing services to sensors scattered across cities and smart devices operated by millions of people—is now widely acknowledged. While alternative "big data" methods are being enthusiastically pursued, sustained work on the statistical validity of analyses based on them (e.g., the sample representativeness in a voluntary Internet-based survey) is not well established. For this reason, the primary means at this time for compiling information about civic engagement, social cohesion, and other dimensions of social capital remains household surveys.

Nonetheless, the changing data-creation landscape holds promise. There are at least four reasons for considering alternatives to traditional survey methods:

- The field of survey research is at a crossroads, facing numerous challenges affecting the viability of telephone-implemented and other conventional mode surveys, as well as the validity of their findings. The Current Population Survey (CPS) is conducted through a combination of in-person and telephone surveys. This partially insulates it from these survey viability concerns, since government face-to-face surveys have thus far maintained very high response rates. Nonetheless, this approach is extremely expensive, raising concerns about whether this method is sustainable in the long run. The increasing cost of government surveys

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is also creating greater competition for the limited space available on questionnaires.

- Alternative survey modalities—most notably online instruments—have emerged, some with promising results.[1] Although the underlying sample biases are not adequately known and require much more study, as do techniques for interpreting results, the knowledge base about this modality will grow rapidly. Even if these surveys do not enjoy the same levels of transparency and generalizability as traditional government surveys, their cheaper cost and more timely results may make them increasingly the information vehicle of choice for many uses.
- The emergence of big data that can be captured from a variety of (largely though not exclusively) digital information and communication technologies, coupled with advances in computational science analytic techniques, raises the possibility of developing less obtrusive indicators of citizens civic engagement and social cohesion behaviors, and perhaps even their opinions. And, as noted by Einav and Levin (2013, p. 3): "[T]he recording of individual behavior does not stop with the internet: text messaging, cell phones and geo-locations, scanner data, employment records, and electronic health records are all part of the data footprint that we now leave behind us." Big data—whether drawn from Web searches, people's browsing habits, social media, sensor signals, locational data from smartphones, road use data from "smart passes," or genomic information and surveillance videos—has the potential to revolutionize measurement.
- The demand for small-area estimates—that is, for geographic areas or population domains for which the sample size is inadequate to provide precise (direct) estimates—and for more timely data will continue to increase. As detailed above, it will not be possible for traditional federal survey instruments alone to meet this need. There is already an increased emphasis on modeled estimates to meet the demand for small-area data. Such demands will increase the pressure to use both massive datasets and alternative survey vehicles.

In this context, it is important to think about substitutes (and complements) for government surveys that could generate valuable informa-

[1] At this point of online survey development, sample validity requires a closed population sample, such as the workforce of a corporation, in which it is known that all potential respondents have Internet access. For a thorough discussion of characteristics of Web surveys and their capacity to collect accurate data, see Tourangeau et al. (2013).

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

tion. As we discuss in Chapter 4, there are major advantages of those surveys—methodological transparency and generalizability—which, with confidentiality and privacy protection, make them credible. However, costs of and demands for more timely information motivate consideration of alternative or complementary data sources.

In addition, as we argue above, national-level surveys do not always represent the most efficient way to gather data. For measuring social cohesion—important for purposes such as anticipating a city or community's resilience to weather or other natural disasters, or providing an early warning system of social breakdown and civil unrest—the CPS supplement cannot capture its multidimensional character at the community levels of aggregation; and, in many cases, the data are not timely or frequent enough to capture the interesting trends. Appropriate data collection in the areas of social cohesion and connectedness will increasingly rely on nonsurvey methods, many of which may be beyond the scope of current government programs. Therefore, in considering the measurement of social capital, it is important to consider to the full range of options, both within and beyond the federal statistical system. The rest of this chapter discusses data linking and nonsurvey data collection methods and recommendations for how to exploit them.

5.1. DATA LINKING

The simultaneous demands to lower costs and provide more integrated information suggest that the U.S. federal statistical system should substantially improve its ability to link information among federal surveys and with administrative information. The potential to link across survey sources and to draw from administrative and other kinds of records is a clear strategy for analyses that require a wide range of variables or for situations in which data are needed for targeted purposes.[2] The capacity to link across surveys and to administrative records can add a broader set of demographic and socioeconomic variables to analyses and also carries the potential to improve the accuracy of the survey data fields.

"Data linkage" refers to merging methods which vary and are motivated by different analytic objectives. First, there is sometimes a need to augment the data obtained from a survey by adding information available for a respondent from administrative record sources. Individual level records on items ranging from income and demographics to place of residence, program eligibility and participation, and employment reside

[2]The Health and Retirement Study is a good example of the latter; it is a survey with linkages to the administrative records of the Social Security Administration that is designed to facilitate research of health and pension policy questions (see Gustman and Steinmeier, 1999).

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in administrative sources (e.g., tax and social security records) while other variables—such as many of those represented as elements of social capital represented in Table 2-1 (in Chapter 2)—are more commonplace in the form of direct responses (surveys). For studying community resilience, neighborhood engagement, or other aspects of social capital, it is easy to envision the value of being able to link survey data with localized information.

A second reason for data linking is to reduce the variance of small-area estimates. It is commonplace for federal surveys to have insufficient sample sizes to support local level estimates that would be useful to policy communities; this has made small-area modeling crucial. Such estimation methods include generalized linear mixed models (e.g., Fay-Herriot, 1979) or hierarchical models (e.g., Lindley and Smith, 1972). Data linking comes into play in methods using linear combinations of direct survey estimates and model-based estimates in which the dependent variable is a function of survey responses, and the predictors are from administrative sources.

The CPS's sample sizes allow accurate estimates of labor force characteristics and employment and earnings status of the population at the national and state levels. With the exception of some large metropolitan areas and when data can be pooled across years, any geographic entity smaller than that—such as a congressional district—would be considered a small area. In research on civic engagement, small areas may be carved out along a number of dimensions—geographic (e.g., a congressional district), political affiliation (e.g., Republican, Democrat, or Independent), demographic (e.g., Latino voters, young nonvoters), or some intersection of these.

One example of the use of hierarchical models is that which allows CPS data to be augmented with census administrative records to indirectly estimate numbers of school-age children living under the poverty threshold at the school district level; allocation of more than 15 billion dollars of federal funds is based on such model-based indirect estimators.[3] Similarly, using ACS data, Malec (2005) applied multivariate modeling methods incorporating data from outside the small area of interest and

[3]Gershunskaya (quoted in National Research Council, 2013a) differentiated between direct and indirect estimates:

> Direct estimates use the values on the variable of interest from only the sample units for the domain and time period of interest. They are usually unbiased or nearly so but, due to limited sample size, can be unreliable. Indirect estimates "borrow strength" outside the domain or time period (or both) of interest and so are based on assumptions, either implicitly or explicitly. As a result of their use of external information, indirect estimates can have smaller variances than direct estimates, but they can be biased if the assumptions on which they are based are not valid. The objective therefore is to try to find an estimator with substantially reduced variance but with only slightly increased bias. Indirect methods rely on sets of assumptions regarding how information from outside the domain (small area) of interest relates to that within it.

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"without making restrictive assumptions about within small area variance" to produce more efficient estimates of poverty and housing unit characteristics than could be could be made directly.[4]

The value added from data linking thus stems from two factors. First, national surveys, such as the CPS supplements, include a limited number of variables for studying specific topics. Linking datasets allows for a broadening of covariates that may be correlated with measures of outcomes. Combining individual-level survey information with data from other sources can provide contextual information about counties, districts, and states that may be useful explanatory variables. Second, and very relevant to the CPS Civic Engagement Supplement, is that sample sizes associated with national level population surveys are not typically adequate to support local area analyses.

CONCLUSION 8: The Current Population Survey (CPS) cannot provide all the variables and the level of geographic detail necessary for research on social capital, social cohesion, and civic engagement. It is therefore essential that design strategies for the CPS be conceptualized with the presumption that this data source will need to be linked (even if only at the group level) to other data from the federal government and beyond. The national-level data collected on a regular basis should complement other sources, both government and nongovernment, for use by researchers. Research data centers operated by the federal statistical agencies can create opportunities for these kinds of coordinated efforts, which must comply with respondent confidentiality and privacy requirements.

Going forward, much of the value of the federal statistical apparatus will depend on whether it can expand its capacity to link data sources—survey and nonsurvey, national and local. The Census Bureau, for one, already has a significant capacity to link data sources; of course, the resulting research data products are stripped of individual identifiers and can typically only be accessed through secure means. Much of this work is being done by researchers using datasets available on a restricted-access basis in the Census Bureau's Research Data Centers.

Some of the most innovative programs have taken place on the busi-

[4]Alexander (1998) recommended that, for the ACS, direct (nonmodel-based) annual estimates should be limited to areas with populations of at least 65,000; estimates for areas with smaller size populations can be made by pooling data across years—as small as 15,000 when data from 5 years are used. Because of the need for these smaller area estimates, the Census Bureau has actively supported research on indirect modeling methods.

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ness side rather than the demographic side. The Longitudinal Employer–Household Dynamics (LEHD) Program, which could serve as something of a model for data coordination and research on social capital, combines data from state and federal sources to create a longitudinal linked employer-employee dataset. LEHD data have been used to analyze commuting patterns, in transportation planning, and in studies of worker turnover, pensions, low-wage work, and worker productivity. One could envision similar linking to advance research in the area of social capital, although such work would be both technically difficult and resource intensive. Nevertheless, the panel strongly encourages continued work by federal agencies in this area.

In addition to the technical difficulties and resources needed, institutional and legal issues present significant challenges to data linking. The capacity of the federal statistical system to make greater and more intensive use of its flagship surveys will depend in part on the extent to which a decentralized system can collaborate. While progress has been made, much remains to be done.[5] Respondents' willingness to allow linkages is also a constraint. In the U.S. system, social security numbers (SSNs) are the most widely used individual identifiers, and declining SSN item response is a growing challenge for linking data sources.[6]

5.2. SURVEY AND NONSURVEY DATA COLLECTION

Public reticence, declining response rates, costs of traditional survey methods, and the emergence of massive data generation by new information and communication technologies are shifting the landscape of public

[5]For example, the 2002 Confidential Information Protection and Statistical Efficiency Act allowed greater data sharing among statistical agencies, but strong restrictions continue to apply to statistical uses of tax information.

[6]McNabb et al. (2009) described how the problem has affected two SSN linkage programs:

> Respondents refusing to provide SSNs to SIPP [Survey of Income and Program Participation] interviewers increased from 12 percent to 35 percent between the 1996 and 2004 panels. Those refusing to provide SSNs in CPS increased from approximately 10 percent in 1994 to almost 23 percent by 2003 . . . missing SSNs meant smaller and smaller proportions of the sample could be matched to administrative records. Additionally, differing rates of SSN nonresponse could instill potential bias into subsequent analyses.

The Census Bureau has responded to this growing item nonresponse problem by reducing the need to rely on direct SSN survey field entries. Under a new methodology, a respondent is informed that the survey data will be matched with other federal data for research purposes. Unless the respondent opts out, application information from SSA's Numident file may be combined with address records from the IRS, SSA, and other sources to determine the respondent's correct SSN. Using this methodology, match rates have increased from about 60 percent in 2001 to 79 percent in 2004 (for details, see http://www.ssa.gov/policy/docs/ssb/v69n1/v69n1p75.html [February 2014].

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opinion and behavioral research. It is, however, premature to transition away from the traditional survey-based empirical approaches. Although online surveys are increasingly common in academic scholarship, major methodological issues about their quality are unresolved, not least of which is the representativeness of the sample of people who respond. Web scraping to exploit unstructured data for social science research is also promising, but much remains to be understood about its accuracy and reliability. A recent Pew Research Center study (Mitchel and Hitlin, 2013) found, for example, that Twitter reaction to political events was often at odds with public opinion as measured by traditional surveys. Policy making that relies on commercial big data sources—assuming they can be made available and their methods made transparent—can still be systematically underrepresenting large segments of the population. To date, there has not been sufficient high-quality survey research on differential access among populations to make the necessary corrections. As big data sources become increasingly relied on, it will be difficult to understand how our knowledge may (or may not) be skewed.

Stiglitz et al. (2009, pp. 184-185) weighed in on the modern-day role of surveys in producing statistics on one dimension of social capital:

> [R]eliable indicators can only be constructed through survey data. Only personal reports allow measuring the many and evolving forms of social connectedness. In recent years a number of statistical offices (in the United Kingdom, Australia, Canada, Ireland, the Netherlands, and most recently, the United States) have begun to gather and report survey-based measures of various forms of social connections. As an example of these endeavors, Appendix 2.2 presents the list of the questions included (since early 2008) in an annual Supplement to the November US Current Population Survey, which has traditionally probed respondents about voting in national elections. These questions have been selected after extensive vetting by the Census Bureau and the Bureau of Labor Statistics for reliability, intelligibility, and inoffensiveness; they cover several manifestations of civic and political engagement, as well as other forms of social connections (such as number of friends, or frequency of contacts and favors done for neighbors).

For the short run, this panel agrees. During the next several years (we will not attempt to predict how many), the current survey-centric approach—which provides a known inferential framework and for which problems of data accuracy, quality, representativeness, and confidentiality have largely been solved or limited—will continue to produce the most reliable and scientifically valid estimates.

But the improving ability to link data and the increasing spread of social media and other technologies that produce unstructured digital data are leading to significant changes in the way research is conducted.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

A study of the long-term effects of 9/11 on political behavior is suggestive of the methodological transition that is under way: using only nonsurvey data sources—specifically, lists of all registered voters in the state of New York and digital obituaries to match 9/11 victims—Hersch (2013) determined that "family members and residential neighbors of victims have become, and have stayed, significantly more active in politics in the last 12 years, and they have become more Republican." The author noted that the methods of analysis used in this research would not have been possible without the recent improvements in computational capacity and the quality of public records.

The Kasinitz et al. (2008) study of immigrants in New York City and the Project on Human Development in Chicago Neighborhoods (Sampson and Graif, 2002, 2009) used detailed, multimode datasets, for which surveys were only one component, to capture the complexities of social capital, much of which takes place most intensively as community-level social processes. These studies were designed to generate insights about the links among neighborhood characteristics, social organizations, community-level phenomena, social functioning, and quality of life. They utilize a wide range of methodologies, ranging from experimental designs, capable of taking into account spatial and temporal dynamics, to systematic observational approaches that benchmark data on neighborhood social processes. They also required the empirical study of communities for the better parts of a decade. Only then could a comprehensive picture emerge of the processes whereby "neighborhoods influence a remarkably wide variety of social phenomena, including crime, health, civic engagement, home foreclosures, teen births, altruism, leadership networks, and immigration" (Sampson, 2012a, Foreword). Sampson (2013) described the "science of how cities and neighborhoods work":

> . . . using Chicago as an urban laboratory . . . My research team and I followed more than 6000 families wherever they moved, as well as studying the city's neighbourhoods themselves. We surveyed more than 10,000 residents, watched video footage we took of thousands of city streets, assessed the social networks of community leaders and gathered data on collective civic events such as fundraising for schools and blood donation. . . . [lost letter and other experimental data were] combined with records on crime, violence, health, community organisations and population characteristics over 40 years. . . . Our research is part of a larger effort to develop tools to measure and evaluate the social-ecological infrastructure of cities, known as 'ecometrics.'

The progress made with these in-depth studies helps in the development of questions for broader population surveys (as it has for the Neighborhood Capital Module of the American Housing Survey, discussed in Chapter 4). As we note throughout, however, without costly sample

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

sizes neighborhood-level and subgroup-specific phenomena cannot be measured with data from a national survey.

Some dimensions of social science measurement (including some elements of social capital, which have both individual- and community-level components) are especially amenable to methods other than those developed by a statistical system built on 20th century data and methods. Indeed, as pointed out by Hampton et al. (2012, p. 19) as part of the Pew Research Center's Internet & American Life Project:[7]

> Some information on the use of social networking sites is extremely difficult or impossible to collect as part of a phone survey. For example, information on the structure of people's online friendship networks, such as the number of friends of friends, or how densely connected are a person's friends (i.e., if a person's friends have all friended each other). Such measures, while difficult to collect in a survey, are important in understanding how use of Facebook is related to different social outcomes. For example, measures such as social cohesion (density) in people's personal network of relations is a strong predictor of things like trust and social support—the ability of people to get support when they are in need or seeking help making decisions.

Social media and Web search technologies seem particularly promising in generating data capable of underpinning social science research on people's networking and communications behaviors.

How to exploit data generated from social media and other digital sources to intuit people's opinions, attitudes, and actions is an emerging topic in this still nascent area of research—much of which is being done in computer science departments. Ungar and Schwartz (2013) used what they called differential language analysis of social media data sources to measure what word use reveals about people's psychological and emotional states, and subjective well-being. DiGrazia et al. (2013) demonstrated a social media-based alternative to polls and surveys for gauging public attitudes and monitoring political races. Google's data correlation mining tool has been used to estimate unemployment claims filed (Wolfers, 2011) and corruption (Saiz and Simonsohn, 2007). Twitter data have been used to study word use associated with different circumstances such as job search and to anticipate trends in unemployment claims.[8]

[7]The Project fielded a nationally representative phone survey about the social and civic lives of social network site users. For the detailed findings, see Hampton et al. (2011).

[8]Organically generated digital data have also been used for tagging crime hotspots in communities; Facebook data have been word mined to generate well-being measures; a "Mappiness" real-time phone app has been used for well-being monitoring in the United Kingdom, and on and on. Using experimental studies and field research, Cook et al. (2009) examined the relationship between trust in anonymous online exchanges ("eTrust") and

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

Using longitudinal data from a representative sample of Internet users in Norway, Brandtzaeg (2012, p. 467) found a significantly higher score among social network site users relative to nonusers for three of four social capital dimensions: "face-to-face interactions, number of acquaintances, and bridging capital. . . However, SNS [social network site]-users, and in particular males, reported more loneliness than nonusers."[9] Facebook data have also been used to demonstrate the political diversity of friend groups and the collective influence of weak ties to the media (Bakshy, 2012); and "web scrapes" have been used to show that Internet political groups and online news consumption is less polarized than many face-to-face interactions (Gentzkow and Shapiro, 2011) and perhaps less segregated than initially thought (e.g., Sunstein, 2001).

Beyond social media, private-sector data generated by individuals' shopping and other online activities and by automated payroll systems has created private-sector alternatives (or, in some cases, complements) to key economic indicators. These include the Consumer Price Index (CPI), the Web-based MIT Billion Prices Index,[10] and employment statistics (e.g., the ADP National Employment Report).[11] Premise, a new company, has begun constructing real-time price indexes based on Web searches of online retailers and images captured from individuals' mobile phone cameras of items on store shelves. The index reportedly picked up the price spike on onions in India 3 weeks before it sparked rioting.[12]

It is important to note that official statistics do use a variety of private-sector data sources.[13] This use of private-sector data is not limited to economic indicators. For example, Google's flu trends estimates the prevalence of the illness from flu-related Internet search queries.[14] Such alternatives provide both more timely data and for smaller areas. Whether, in this case, it meets the quality standards of traditional data from the Centers for Disease Control and Prevention is not yet established. The

cooperation between people. Einav and Levin (2013) explored more generally how "big data" will transform business, government, and other aspects of the economy.

[9]This article also provided an overview of studies on the effects of Internet use, social media use, and various dimensions of social capital; the author's basic conceptualization of social capital is formulated from Coleman (1988), Ellison et al. (2007), and Putnam (2000), much of it organized in terms of bridging and bonding social capital.

[10]For information, see http://bpp.mit.edu/usa/ [February 2014].

[11]For information, see http://www.adpemploymentreport.com/ [February 2014].

[12]For information, see http://money.cnn.com/2013/10/16/news/economy/real-time-inflation/ [February 2014].

[13]Horrigan (2013) identified current and potential uses by the Bureau of Labor Statistics of a number of nonsurvey and administrative (public and private) data sources in their price index and other programs (http://magazine.amstat.org/blog/2013/01/01/sci-policy-jan2013/) [February 2014].

[14]For information, see https://www.google.org/flutrends/us/#US [February 2014].

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

2012-2013 flu season, when Google data drastically overestimated the peak flu levels, provided a cautionary example (Butler, 2013).[15] Similarly, for gaining insights into aspects of social cohesion and connectedness, online and cell phone networking patterns and other unobtrusive measures such as credit card use may yield new attitudinal and behavioral information through the digital footprints left by people as they search, swipe and click their way through the day.

As alternative data sources are exploited, it is critical to understand the benefits and limitations of the corresponding estimates and the relationship between them. For example, users may choose traditional or nontraditional estimates of consumer prices based on their fitness for use in a given situation. However, such comparisons and choices can only be done if the properties of each estimator are well known. In the social sciences where important policy and research findings have been produced largely from survey data foundations, an abrupt migration to nonsurvey data could be quite damaging if the basic work needed to understand the new data is not done in a way that approaches the rigor earned through decades of survey methodology research.

Exploiting alternative data sources will affect the practices of federal statistical agencies. The breadth of data that statistical agencies will attempt to collect themselves may narrow, while the content of what they process and analyze from sources beyond their own surveys and administrative records expands. Even for the subset of data collections for which the federal statistical agencies are charged with overseeing, traditional survey methods will not always be the most cost-effective option; and the CPS and other population surveys will not always be the right vehicles for measuring public opinion, sentiment, or behavior. These changes will involve new relationships between the federal statistical system and the private sector, and the terms and conditions of these relationships are still unknown and will evolve over time.

While clearly promising, enough questions remain to warrant extreme caution as new methods are adopted and new resources tapped: To what extent does the utility of alternative data collection and analysis techniques vary by domain or topic? Are populations of interest well-enough represented by those accounting for most Internet communications and transactions (e.g., social connections of elderly people)? How can and

[15]This episode highlights the important point that techniques based on mining of Web data and on social media are, at this point, complements not substitute for traditional epidemiological surveillance. Butler (2013), making this point, noted that the problems with the algorithm may have been linked to widespread media coverage of the severe flu season and to social media which spread the news of the flu more quickly than the virus itself; apparently, the context of the word searches was not adequately taken into account in the analysis for the 2013-2014 season.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

should the ease and comprehensiveness of digital data collection be balanced with privacy concerns? Where the algorithms are constantly being tweaked, what is the comparability of data over time? And, can "official statistics" be legitimately generated from private-sector data?

Active mechanisms are needed to keep the work necessary to understand and exploit emerging data sources in the forefront of agencies' thinking and planning. As data increasingly derive from private-sector entities, the public will have less control over content and less influence over how data are used. Furthermore, if the statistical agencies are marginalized in the changing landscape, the leading institutional mechanism for ensuring quality control will be lost. The survey edifice rests on representativeness, coverage, privacy, and other fundamental attributes that are still needed to guide social science data collection and analysis methods. The federal statistical agencies can play an instrumental role in figuring out how to embrace and implement new data and new data strategies without abandoning scientific principles. This will require developing new approaches for linking data from a variety of sources and carrying out experiments to calibrate how answers differ under survey versus alternative data scenarios.

As described above (in the discussion about data linking), confidentiality, privacy, and transparency will also be major issues affecting the use of big data. The statistical agencies have extensive experience managing the protection of data at geographic levels smaller than cities (such as census tracts and block groups) so that those data can be accessed by the public and by researchers. Researchers of social capital need this kind of data detail, but there are legal, institutional, and administrative hurdles to obtaining it, as is the case for many surveys with geographic identifiers. The federal statistical agencies play a pivotal role in developing solutions to confidentiality issues that arise. They have long been concerned with respecting the privacy of citizens, ensuring the confidentiality of data collected about them, and developing a sound conceptual basis for these activities. In a study undertaken at the request of a group of federal statistical agencies, the National Research Council (1993, p. 3) developed what it called an ethos of information, which consisted of three principles: democratic accountability, constitutional empowerment, and individual autonomy:[16]

> Functionally, democratic accountability recognizes the responsibilities of those who serve on behalf of others. It requires that the public have access to comprehensive information on the effectiveness of government policies. Government statistical agencies play a pivotal role in

[16]The title of the report, *Private Lives and Public Policies, Confidentiality and Accessibility of Government Statistics,* is indicative of its content.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

> ensuring democratic accountability by obtaining, protecting, and disseminating the data that allow the accurate assessment of the influence of government policies on the public's well-being. Furthermore, they themselves are accountable to the public for two key functions in this process: (1) protecting the interests of data subjects through procedures that ensure appropriate standards of privacy and confidentiality and (2) facilitating the responsible dissemination of data to users.
>
> *Constitutional empowerment* refers to the capability of citizens to make informed decisions about political, economic, and social questions. In the United States, constitutional theory emphasizes that ultimate power should reside in the people. . . . Constitutional practice emphasizes restraints on executive excess and broad access to the political process through the direct election of representatives as well as through separation and balance of power.
>
> *Individual autonomy* refers to the capacity of members of society to function as individuals, uncoerced and with privacy. Protection of individual autonomy is a fundamental attribute of a democracy. If excessive surveillance is used to build data bases, if data are unwittingly dispersed, or if those who capture data for administrative purposes make that information available in personally identifiable form, individual autonomy is compromised.

These principles have stood the test of time. Federal statistical agencies' practices are still based on the belief of individual autonomy—that sociodemographic information is the property of the individual.[17] Because the information is owned by the individual, the government enters into a contract with the respondent promising to safeguard it (that is, to keep it confidential). Prior to 2002, the legislative authority for maintaining the confidentiality of identifiable information collected for statistical purposes was not uniform across statistical agencies. In 2002, the Confidential Information Protection and Statistical Efficiency Act (CIPSEA)[18] was enacted to remedy this problem.

CIPSEA, which contains two key parts, provides a uniform standard of privacy and confidentiality for statistical agencies. The purposes of the first part are to:

1. ensure that information supplied by individuals or organizations to an agency for statistical purposes under a pledge of confidentiality is used exclusively for statistical purposes;

[17]This principle is applicable even when a survey or census is declared to be mandatory, that is, when the public good for supplying the information is deemed to be sufficiently important to require participation.

[18]Confidential Information Protection and Statistical Efficiency Act of 2002, Title V of the E-Government Act of 2002 (Pub. L. 107-347).

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

2. ensure that individuals or organizations who supply information under a pledge of confidentiality will not have that information disclosed in identifiable form to anyone not authorized in the legislation; and
3. safeguard the confidentiality of individually identifiable information acquired under a pledge of confidentiality for statistical purposes by controlling access to, and uses made of, such information.

The second part of the act promotes statistical efficiency through limited sharing of business data among three designated statistical agencies, the Census Bureau (Census), the Bureau of Economic Analysis, and the Bureau of Labor Statistics.[19]

The uniform standards of privacy and confidentiality provided under CIPSEA were a major step forward; the federal government, particularly the Office of Management and Budget, deserves a great deal of credit for setting these rules for privacy and confidentiality. Until recently, the act's reach covered much of the necessary ground in that federal, state, and local governments collected most of the identifiable data about individuals and controlled the rules about privacy and confidentiality. However, with the emergence of big data—for example, social media giants such as Facebook, Twitter, and Instagram—the situation has changed dramatically.[20] Now, far more data about individuals (and far more detailed data, including digital photos and videos) is collected and controlled by corporations than by governments. Legislation such as CIPSEA does not apply to these corporate institutions which make their own rules about privacy and confidentiality. Privately controlled digital data sources are further differentiated from traditional statistical operations, such as the Current Population Survey, by the velocity, volume, and variety of information generated. One can expect these trends to continue, thereby complicating the ability to develop privacy and confidentiality standards—both within the private sector and between private and public entities—that would allow integration of traditional and emerging big data based statistical sources. A recent report by the White House Office of Science and Tech-

[19]See National Research Council (2007) for a detailed description of how CIPSEA legislation has contributed to data sharing among statistical agencies in the production of business statistics.

[20]In the United States alone, Facebook, Twitter, and Instagram have about 200 million, 50 million, and 35 million users, respectively (estimates vary depending on user-activity level specified, estimates of duplicate or bogus accounts, etc.), and the United States represents only a fraction of worldwide users of social media sites.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

nology Policy (OSTP) on the issues surrounding big data described the problems and the potential solutions in the following way:[21]

> Big data technologies are driving enormous innovation while raising novel privacy implications that extend far beyond the present focus on online advertising. These implications make urgent a broader national examination of the future of privacy protections, including the Administration's Consumer Privacy Bill of Rights, released in 2012. It will be especially important to re-examine the traditional notice and consent framework that focuses on obtaining user permission prior to collecting data. While notice and consent remains fundamental in many contexts, it is now necessary to examine whether a greater focus on how data is used and reused would be a more productive basis for managing privacy rights in a big data environment. It may be that creating mechanisms for individuals to participate in the use and distribution of his or her information after it is collected is actually a better and more empowering way to allow people to access the benefits that derive from their information. Privacy protections must also evolve in a way that accommodates the social good that can come of big data use.

To deal with these issues, the OSTP report recommends, *inter alia*, advancing a consumer privacy bill of rights. Such a bill of rights would impose reasonable time periods for notification, minimize interference with law enforcement investigations, and potentially prioritize notification about large, damaging incidents over less significant incidents. The report asserted (p. 62):

> Consumers deserve more transparency about how their data is shared beyond the entities with which they do business directly, including "third-party" data collectors. This means ensuring that consumers are meaningfully aware of the spectrum of information collection and reuse as the number of firms that are involved in mediating their consumer experience or collection information from them multiplies.

The statistical agencies are of course aware of data developments beyond the government sphere and have been working to incorporate changes into their programs. Nonetheless, the magnitude of upcoming changes warrants that the federal statistical system be involved more closely in these new data developments. And, as indicated above, OSTP has recognized the opportunities created by emerging data sources and technologies; noting that the federal government is underinvesting in these opportunities, a "big data" research and development initiative has

[21] *Big Data: Seizing Opportunities, Preserving Values*, Executive Office of the President, The White House, May 1, 2014.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

been announced.[22] The initiative is designed to (p. 1): "advance state-of-the-art core technologies needed to collect, store, preserve, manage, analyze, and share huge quantities of data; harness these technologies to accelerate the pace of discovery in science and engineering, strengthen our national security, and transform teaching and learning; and expand the workforce needed to develop and use Big Data technologies."

A number of cities are also investing in "urban informatics." New York City, for example, recently created an Office of Policy and Strategic Planning to house the city's data-centered innovations, "conducting wide-ranging data mining and analysis to improve City services, enhance transparency and more effectively solve complex municipal issues."[23] Similarly, an initiative from the National Science Foundation is focused on new research efforts to extract knowledge and insights from large and complex collections of digital data which, among other things, calls for "Encouraging research universities to develop interdisciplinary graduate programs to prepare the next generation of data scientists and engineers."[24]

While big data studies are often housed in university information technology departments, the statistical agencies, as the producers of official statistics, have a complementary role to play alongside the computer scientists—for example, managing data quality and focusing on such problems as population representativeness.[25] Developing methods for exploiting and integrating nontraditional data for use in official and other statistics is part of the role, and one for which mechanisms will be needed to allow statistical agencies to provide guidance. Being given the capacity to hire staff with appropriate expertise is a necessary first step.

The preceding discussion emphasizes the burgeoning interest in using private-sector data as well as social media and other Internet-originating sources. There is only a very limited time period with which to make scientific decisions on how best to transition from a data collection system dominated by the survey-based model to one in which this

[22]For details, see http://www.whitehouse.gov/sites/default/files/microsites/ostp/big_data_press_release_final_2.pdf [February 2014].

[23]For details, see http://www.nyc.gov/portal/site/nycgov/menuitem.c0935b9a57bb4ef3daf2f1c701c789a0/index.jsp?pageID=mayor_press_release&catID=1194&doc_name=http://www.nyc.gov/html/om/html/2012b/pr337-12.html&cc=unused1978&rc=1194&ndi=1 [February 2014].

[24]This was announced at the same time as the OSTP initiative; see footnote 18.

[25]The statistical agencies, and survey statisticians more generally, are well positioned to help solve problems associated with unstructured web data. For example, to learn more about representativeness, questions (such as, Do you use Twitter or Facebook? How often?) could be added to population surveys—designed solely for the purpose of better understanding the properties of other nondesigned data sources. This kind of work will allow modeling for integrating the data sources and making them more useful.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

model must coexist with alternatives. Taking advantage of this moment requires action.

RECOMMENDATION 5: Under the leadership of the U.S. Office of Management and Budget, the federal statistical system should accelerate (1) research designed to understand the quality of statistics derived from alternative data—including those from social media, other Web-based and digital sources, and administrative records; (2) monitoring of data from a range of private and public sources that have potential to complement or supplement existing measures and surveys; and (3) investigation of methods to integrate public and private data into official statistical products.

An improved understanding of the potential of alternative means of data gathering is important and worthwhile, independent of its relevance to the study of social capital.

The question of whether the research in Recommendation 5 can be accomplished is not trivial. The federal statistical system is decentralized, comprising more than 50 entities that produce statistics, of which about 15 are generally considered the principal statistical agencies. One of the drawbacks of such a system is the lack of a critical mass for the purpose of major research undertakings. The Census Bureau and perhaps the Bureau of Labor Statistics are the only agencies with significant numbers of in-house research staff, although there is exceptional research capability throughout the statistical system. However, many research topics, such as the ones recommended above, transcend the needs of any one agency and require a more centralized approach if they are to be successfully pursued.

Research in statistical agencies is also inhibited because of the recruitment and retention policies of the government. With rare exceptions, one must be a U.S. citizen to be employed by the federal government, but the research community is becoming more, not less, diverse with respect to citizenship. The ability to attract and retain first-class talent is also challenged by substantial pay differentials between the private and public sectors. For other activities, the federal government has developed entities called Federally Funded Research and Development Centers (e.g., Rand and Mitre corporations). The same could be done here.

RECOMMENDATION 6: In mapping the way forward for the integration and exploitation of new data sources, the U.S. Office of Management and Budget should coordinate the exploration of alternatives for developing the necessary research capability across the federal statistical system. Among the alternatives

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

are extensions of the current partnership between the Census Bureau and the National Science Foundation and the creation of a federally funded research and development center for this work.

Such a center for statistics would also allow for focusing research on topics that are of vital and common to the entire statistical system and not unique to one agency. The federal statistical system has recognized the importance of alternative approaches to research with the partnership to create research nodes between the Census Bureau and NSF.

The measurement areas described in this report—covering dimensions of civic engagement, social cohesion, and social capital—represent only a portion of those that factor into social science, urban planning, public health and other research areas. But the nature of the activities, attitudes, and behaviors encompassed, along with the multiple geographic levels of interest and the role of group and individual interactions, make it an illuminating case study of the growing need for multimode data collection to underpin modern research and policy. The characteristics of social capital highlight the opportunities now emerging in the rapidly evolving data landscape. And, because it is a relatively new strand of social science inquiry, where methods are not as entrenched as elsewhere, it is a good testing ground for development of experimental measurement approaches that explore and exploit these circumstances. Because data users have fewer preconceived notions of what the underlying statistical framework (and official statistics in the area) should look like, measurement of social cohesion, civic engagement, and other dimensions of social capital is a good place for statistical agencies to begin developing cutting edge techniques for blending traditional survey data with new, nonsurvey data into integrated measurement programs.

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Appendix A

Alternative Taxonomies of Social Capital

Researchers, working in a range of contexts from economic development to immigration, have proposed sets of social capital indicators with varying content structures. This variation reflects how the importance of a given indicator will vary by place and time and by the questions being asked. In this appendix, we provide four examples of indicator sets:

1. Grootaert, who works from the perspective of World Bank projects.
2. Putnam who seeks to identify key dimensions of community and organizational life, engagement in public affairs, community volunteerism, informal sociability, and social trust in the United States.
3. Social Capital Community Benchmark Survey (SCCBS), developed by the Saguaro Seminar (see Chapter 1), which is included primarily to show its similarity to the Putnam indicators.
4. Longitudinal Survey of Immigrants to Canada (2005), which is designed to inform research on factors that affect immigrants.

GROOTAERT

Grootaert (1998, p. iii) identified four categories of indicators—horizontal associations, civil and political society, social integration, and legal and governance aspects—as having all been used in empirical studies in the social capital literature to "operationalize the concept of

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social capital and to demonstrate how and how much it affects development outcomes."

Horizontal Associations

- number and type of associations or local institutions
- extent of membership in local associations
- extent of participatory decision making
- extent of kin homogeneity within the association
- extent of income and occupation homogeneity within the association
- extent of trust in village members and households
- extent of trust in government
- extent of trust in trade unions
- perception of extent of community organization
- reliance on networks of support
- percentage of household income from remittances
- percentage of household expenditure for gifts and transfers

Civil and Political Society

- index of civil liberties
- percentage of population facing political discrimination
- index of intensity of political discrimination
- percentage of population facing economic discrimination
- index of intensity of economic discrimination
- percentage of population involved in separatist movement
- Gastil's index of political rights
- Freedom House index of political freedoms
- index of democracy
- index of corruption
- index of government inefficiency
- strength of democratic institutions
- measure of "human liberty"
- measure of political stability
- degree of decentralization of government
- voter turnout
- political assassinations
- constitutional government changes
- coups

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Social Integration

- indicator of social mobility
- measure of strength of "social tensions"
- ethnolinguistic fragmentation
- riots and protest demonstrations
- strikes
- homicide rates
- suicide rates
- other crime rates
- prisoners per 100,000 people
- illegitimacy rates
- percentage of single-parent homes
- divorce rate
- youth unemployment rate

Legal and Governance Aspects

- quality of bureaucracy
- independence of court system
- expropriation and nationalization risk
- repudiation of contracts by government
- contract enforceability
- contract-intensive money

PUTNAM

Putnam's work is from the perspective of developing indicators of social capital in the United States. The list below is reproduced from Productivity Commission (2003). The numbers in parentheses indicate the item's coefficient of correlation with the final constructed measure across the individual states of the United States.

Measures of Community or Organizational Life

- percentage of individuals who served on a committee of a local organization in the last year (0.88)
- percentage of individuals who served as an officer of some club or organization in the last year (0.83)
- civic and social organizations per 1,000 population (0.78)
- mean number of club meetings attended in the last year (0.78)
- mean number of group memberships (0.74)

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Measures of Engagement in Public Affairs

- turnout in presidential elections, 1988 and 1992 (0.84)
- percentage of individuals who attended public meeting on town or school affairs in last year (0.77)

Measures of Community Volunteerism

- number of nonprofit organizations per 1,000 population (0.82)
- mean number of times worked on a community project in last year (0.65)
- mean number of times did volunteer work last year (0.66)

Measures of Informal Sociability

- percentage of individuals who agree that "I spend a lot of time visiting friends" (0.73)
- mean number of times entertained at home last year (0.67)

Measures of Social Trust

- percentage of individuals who agree that "most people can be trusted" (0.92)
- percentage of individuals who agree that "most people are honest" (0.84)

SOCIAL CAPITAL COMMUNITY BENCHMARK SURVEY

Putnam's categories and indicators are similar to the domains and dimensions developed by the Saguaro Seminar for the Social Capital Community Benchmark Survey, which was the first major comprehensive survey related to social capital in the United States.

Trust

- social trust ("thick" versus "thin" trust, radius of trust)
- interracial/ethnic trust (a form of bridging)

Informal Networks

- diversity of friendship networks (a form of bridging)
- informal socializing with family, friends, colleagues

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Formal Networks

- civic leadership
- associational involvement
- giving and volunteering
- faith-based engagement

Political Involvement

- conventional politics (voting)
- protest politics (marches, boycotts, rallies, etc.)

Equality of Civic Engagement Across the Community

This is a constructed measure across race, income, and education levels.

LONGITUDINAL SURVEY OF IMMIGRANTS TO CANADA

Family and Relatives

- having relatives in Canada upon landing: 1 if longitudinal respondent (LR) had relatives in Canada upon landing, 0 otherwise
- number of relatives in Canada: number of types of relatives (spouse, children, parents, grandparents, brothers or sisters, etc.) in Canada, ranging from 0 to 11
- frequency of contact with family sponsors: frequency of contact with family sponsor (0~1) :
  - 0: no sponsor or having not seen or talked to sponsors since arriving;
  - between 0 and 1: seeing or talking to sponsors in varied frequencies; the higher the index is, the more frequently LR contacts with sponsors
  - 1: seeing or talking to sponsor every day

Friends

- having friends in Canada upon landing: 1 if LR had friends in Canada upon landing, 0 otherwise
- having made new friends: 1 if LR had made new friends, 0 otherwise
- number of sources for meeting friends: number of sources for meeting new friends other than workplace, ranging from 0 to 14

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- ethnic diversity of friends: ethnic diversity of friend network (0~1):
  - 0: no friends or all friends belong to the same ethnic or cultural groups as LR
  - between 0 and 1: some friends belong to the same ethnic or cultural groups as LR; the higher the index is, the more ethnically diversified is the friend network
  - 1: none of the friends belong to the same ethnic or cultural groups as LR
- frequency of contact with friends: frequency of contact with friends (0~1):
  - 0: no friends or having not seen or talked to friends since arriving
  - between 0 and 1: seeing or talking to friends in varied frequencies; the higher the index is, the more frequently LR contacts with friends
  - 1: seeing or talking to friends every day

Group and Organizational Network

- number of organizations participated in: number of organizations or groups LR participated in, ranging from 0 to 13
- ethnic diversity of organizational network: ethnic diversity of organizational network (0~1):
  - 0: not participated in any organization or all the members of all organizations belong to the same ethnic or cultural groups as LR
  - between 0 and 1: some members of organizations belong to the same ethnic or cultural groups as LR; the higher the index is, the more ethnically diversified is the organizational network
  - 1: none of the members of organizations belong to the same ethnic or cultural groups as LR
- frequency of activities with organizations: frequency of activities with organizations (0~1):
  - 0: not participated in any organization
  - between 0 and 1: having taken part in organizational activities in varied frequencies; the higher the index is, the more frequently LR takes part in activities
  - 1: having taken part in activities every day
- numbers of organizations for which LR volunteered time: number of organizations or groups that LR volunteered time for organizations or groups, 0 otherwise

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Appendix B

Schedule of CPS Supplements

This appendix lists the recent CPS monthly supplements conducted by the U.S. Census Bureau. Some of the data collections, such as the Volunteer Supplement (September, annually) and the Voting and Registration Supplement (November, even numbered years), have been consistently fielded while others, such as the Civic Engagement Supplement (March), have been more sporadic.

Current Population Survey, 2014 Supplements

- December: Food Security
- November: Voting and Registration
- October: School Enrollment
- September: Volunteers
- August: Veterans
- July: Tobacco Use
- June: Fertility
- April: Child Support
- March: Annual Social and Economic (ASEC)
- February: Public Participation in the Arts
- January: Displaced Worker, Employee Tenure, and Occupational Mobility

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Current Population Survey, 2013 Supplements

- December: Food Security
- November: CPS Civic Engagement (half sample)
- October: School Enrollment
- September: Volunteers (half sample)
- August: Veterans
- July: Computer and Internet Use
- June: Unbanked/Underbanked
- March: ASEC
- February: Public Participation in the Arts

Current Population Survey, 2012 Supplements

- December: Food Security
- November: Voting and Registration
- October: School Enrollment and Internet Use
- September: Volunteers
- August: Veterans
- June: Fertility
- May: Disability
- April: Child Support
- March: ASEC
- January: Displaced Worker, Employee Tenure, and Occupational Mobility

Current Population Survey, 2011 Supplements

- December: Food Security
- November: CPS Civic Engagement
- October: School Enrollment
- September: Volunteers
- August: Veterans
- July: Computer and Internet Use
- June: Unbanked/Underbanked
- March: ASEC
- January: Tobacco Use

Current Population Survey, 2010 Supplements

- December: Food Security
- November: Civic Engagement
- November: Voting and Registration
- October: School Enrollment and Internet Use

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- September: Volunteers
- August: Tobacco Use
- July: Veterans
- June: Fertility
- May: Tobacco Use
- April: Child Support
- March: ASEC
- January: Displaced Worker, Employee Tenure, and Occupational Mobility

Current Population Survey, 2009 Supplements

- December: Food Security
- November: Civic Engagement
- October: School Enrollment and Internet Use
- September: Volunteers
- August: Veterans
- March: ASEC
- January: Unbanked/Underbanked

Current Population Survey, 2008 Supplements

- December: Food Security
- November: Civic Engagement
- November: Voting and Registration
- October: School Enrollment
- September: Volunteers
- August: Immigration/Emigration
- June: Fertility
- May: Public Participation in the Arts
- April: Child Support
- March: ASEC
- January: Displaced Worker, Employee Tenure, and Occupational Mobility

Current Population Survey, 2007 Supplements

- December: Food Security
- October: School Enrollment and Internet Use
- September: Volunteers
- August: Veterans
- March: ASEC
- January: Tobacco Use

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Current Population Survey, 2006 Supplements

- December: Food Security
- November: Voting and Registration
- October: School Enrollment
- September: Volunteers
- June: Fertility
- May/August: Tobacco Use
- April: Child Support
- March: ASEC
- January: Displaced Worker, Employee Tenure, and Occupational Mobility

Current Population Survey, 2005 Supplements

- December: Food Security
- October: School Enrollment
- September: Volunteers
- August: Veterans
- May: Unemployment Insurance (UI) Non-Filers
- March: ASEC
- February: Contingent Work

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Appendix C

Standard Error Estimates for the September 2011 CPS Volunteer Supplement

This appendix reproduces a spreadsheet supplied by the Corporation for National and Community Service indicating the standard errors and confidence intervals under two scenarios for the Current Population Survey (CPS) Volunteer Supplement. Under the first one, the statistics for the usual full sample are shown; under the second one, the statistics are shown for what they would be if the sample were reduced to one-half of the full size.

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Estimates of Standard Errors for CPS Volunteer Supplement for Full Sample Size and One-Half Sample Size

State[a]	Number of Responding Persons	Proportion of Persons Who Volunteer	Standard Error (of proportion) —full sample	Confidence Interval for Proportion (+/-) —full sample	Standard Error —half sample	Confidence Interval (+/-) —half sample
UT	1514	40.91%	2.66%	4.38%	3.77%	6.20%
ID	1540	38.99%	2.46%	4.04%	3.48%	5.72%
IA	2522	38.31%	1.76%	2.89%	2.48%	4.09%
MN	3150	38.08%	1.02%	1.68%	1.44%	2.37%
SD	2066	36.72%	1.56%	2.56%	2.20%	3.63%
NE	1863	36.70%	1.45%	2.39%	2.06%	3.38%
KS	1909	36.38%	1.78%	2.92%	2.51%	4.13%
OR	1950	36.21%	1.73%	2.84%	2.45%	4.02%
WA	2146	34.35%	1.63%	2.69%	2.31%	3.80%
WI	2645	33.99%	1.25%	2.05%	1.77%	2.90%
AK	1504	33.48%	2.19%	3.61%	3.10%	5.10%
ME	2353	32.92%	1.51%	2.48%	2.13%	3.51%
CO	2628	32.68%	1.45%	2.39%	2.05%	3.37%
MO	2004	31.99%	1.55%	2.55%	2.20%	3.61%
VT	1893	31.82%	1.50%	2.46%	2.12%	3.48%
ND	1553	30.73%	2.46%	4.04%	3.47%	5.71%
WY	1632	29.84%	1.57%	2.59%	2.22%	3.66%
MT	1127	29.67%	2.06%	3.38%	2.91%	4.79%

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NH	2698	29.62%	1.29%	2.12%	1.82%	3.00%
OK	1431	29.45%	1.75%	2.88%	2.47%	4.07%
CT	2630	28.71%	1.24%	2.03%	1.75%	2.88%
VA	2490	28.56%	1.43%	2.35%	2.02%	3.33%
MD	2713	27.59%	1.12%	1.85%	1.59%	2.61%
IL	3645	27.28%	1.00%	1.64%	1.41%	2.32%
DC	1617	27.24%	1.47%	2.42%	2.08%	3.42%
IN	1865	27.14%	1.65%	2.72%	2.34%	3.84%
OH	3164	26.70%	1.55%	2.56%	2.20%	3.62%
SC	1590	26.67%	1.45%	2.38%	2.05%	3.37%
NM	969	26.65%	2.23%	3.66%	3.15%	5.18%
DE	1801	26.55%	1.57%	2.58%	2.21%	3.64%
PA	3554	26.48%	1.01%	1.66%	1.43%	2.35%
MI	2757	26.29%	1.21%	2.00%	1.72%	2.83%
NC	2343	26.28%	1.73%	2.84%	2.45%	4.02%
GA	2310	26.26%	1.31%	2.15%	1.85%	3.05%
CA	9786	25.81%	0.73%	1.20%	1.03%	1.70%
MA	1873	25.76%	1.52%	2.50%	2.15%	3.54%
MS	1128	25.63%	2.46%	4.04%	3.48%	5.72%
AZ	1389	25.51%	1.95%	3.21%	2.76%	4.53%
RI	1944	25.28%	1.43%	2.36%	2.03%	3.34%
KY	1872	25.27%	1.65%	2.72%	2.34%	3.84%

continued

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Estimates of Standard Errors for CPS Volunteer Supplement for Full Sample Size and One-Half Sample Size

State[a]	Number of Responding Persons	Proportion of Persons Who Volunteer	Standard Error (of proportion) —full sample	Confidence Interval for Proportion (+/-) —full sample	Standard Error —half sample	Confidence Interval (+/-) —half sample
AL	1264	24.85%	1.97%	3.24%	2.79%	4.58%
TN	1538	24.73%	1.81%	2.98%	2.56%	4.21%
TX	5994	24.59%	0.87%	1.43%	1.23%	2.03%
AR	1198	23.15%	2.41%	3.97%	3.41%	5.61%
FL	4373	23.11%	0.88%	1.46%	1.25%	2.06%
WV	1346	22.70%	1.70%	2.80%	2.40%	3.95%
NJ	2247	22.57%	1.35%	2.22%	1.91%	3.14%
NV	1680	22.45%	1.60%	2.63%	2.26%	3.71%
HI	1791	20.80%	1.41%	2.32%	1.99%	3.28%
NY	4806	20.61%	0.81%	1.34%	1.15%	1.89%
LA	1105	19.20%	1.73%	2.85%	2.45%	4.03%

[a]States are listed in declining order in terms of the percentage of residents who reported volunteering.
SOURCE: Calculations provided directly to the panel by the Corporation for National and Community Service.

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Appendix D

Social Capital, Civic Engagement, and Social Cohesion Content of U.S. Surveys

As discussed in Chapter 4, a number of government surveys include content related to social capital, civic engagement, and social cohesion. In that chapter, the panel recommends a systematic review of the content of, and overlap in, federal surveys in areas related to social capital measurement. The following table provides additional details to Table 4-1 in Chapter 4.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

Details of Social Capital, Civic Engagement, and Social Cohesion Content of Major U.S. Surveys

	Questionnaire Content			
Survey	Voting	Other Political Engagement	Volunteering	Charitable Giving
CPS				
CPS Civic Engagement Supplement	✓	✓	✓	✓
CPS Volunteer Supplement		✓	✓	✓
CPS Voting and Registration Supplement	✓			
NCVS				
NHES Civic Involvement				
ATUS			✓ generic	
AHS (NSCM)		✓ contact with local politicians	✓ generic	

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

	Organizational Membership and/or Participation	Contact with Friends, Family, Neighbors, and Networks	Neighborhood Characteristics/ Sense of Community	Trust/ Confidence (e.g., in neighbors, government, law enforcement, corporations, schools, media)	Fairness, Polarization, and Integration
	✓ union membership	✓ cohabitation			
	✓	✓	✓	✓	
	✓	✓			
			✓ perceived safety of neighborhood	✓ trust in law enforcement	
		✓ religious services, amount of time spent with other people, caring for children/ elderly			
	✓	✓	✓ opinion of neighborhood	✓ neighbors	✓ neighborhood cohesion

continued

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

Details of Social Capital, Civic Engagement, and Social Cohesion Content of Major U.S. Surveys (continued)

	Questionnaire Content			
Survey	Voting	Other Political Engagement	Volunteering	Charitable Giving
HRS			✓	
NLSY97	✓	✓ interest in government and public affairs/social activism activities, attendance at meeting or event for a political, environmental, or community group	✓ volunteer activities	✓
NLSY79		✓ political attitudes	✓ volunteerism/ philanthropy	✓ recently introduced
NLSY79 Child & Young Adult		✓ political attitudes and behaviors	✓ full range	
NLS Sample Adult Core			✓	

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	Organizational Membership and/or Participation	Contact with Friends, Family, Neighbors, and Networks	Neighborhood Characteristics/ Sense of Community	Trust/ Confidence (e.g., in neighbors, government, law enforcement, corporations, schools, media)	Fairness, Polarization, and Integration
		✓ frequency/ duration of contact with children, friends, neighbors, care of grandchildren	✓ safety, cleanliness	✓ friends, neighbors	✓ attitudinal
	✓	✓ frequency/ importance of family events and holidays; frequency of contact between parents, level of friendliness and hostility		✓ perception of criminal justice system	✓ opinions on government responsibility
	✓ religious affiliation, frequency of attendance	✓ attitudinal			
	✓ religious affiliation, frequency of attendance		✓ extent of neighborhood problems/ characteristics		
			✓	✓ neighbors	

continued

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

Details of Social Capital, Civic Engagement, and Social Cohesion Content of Major U.S. Surveys (continued)

	Questionnaire Content			
Survey	Voting	Other Political Engagement	Volunteering	Charitable Giving
PSID				✓
PSID Disability and Use of Time Supplement				
PSID Transition into Adulthood Supplement	✓	✓	✓	
GSS 2012	✓ basic	✓ extent of political engagement and knowledge, protest involvement	✓	✓ blood donation, money to homeless, charity, issue-based

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

	Organizational Membership and/or Participation	Contact with Friends, Family, Neighbors, and Networks	Neighborhood Characteristics/ Sense of Community	Trust/ Confidence (e.g., in neighbors, government, law enforcement, corporations, schools, media)	Fairness, Polarization, and Integration
	✓ religion				
	✓	✓			
	✓ clubs, groups and religion	✓ characteristics of social network		✓ perceptions/ experiences, belonging	✓ perceptions and experiences, belonging
	✓ religious affiliation/ attendance, union membership,	✓ neighbors, friends, racial tolerance, look after neighbor's house, lending, caring for or helping neighbors, job assistance, attendance at artistic events with friends/ family	✓ race, frequency of interactions with neighbors, safety	✓ trust in others, companies, religion, federal government/ agencies, labor unions, press, Supreme Court, congress; use of force by police; health system	✓ budgetary priorities, role of government in addressing income inequality/ living standards, tolerance/ intolerance of racial, religious, and political differences, affirmative action/fairness (race/gender), workplace fairness, helping strangers, importance of religious/ ethnic customs, educational and health opportunities

continued

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

Details of Social Capital, Civic Engagement, and Social Cohesion Content of Major U.S. Surveys (continued)

	Questionnaire Content			
Survey	Voting	Other Political Engagement	Volunteering	Charitable Giving
ANES pre-election	✓	✓ political engagement with news from TV/ Internet/ newspaper, social media, blogs	✓	

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

	Organizational Membership and/or Participation	Contact with Friends, Family, Neighbors, and Networks	Neighborhood Characteristics/ Sense of Community	Trust/ Confidence (e.g., in neighbors, government, law enforcement, corporations, schools, media)	Fairness, Polarization, and Integration
	✓ political party, religion			✓ trust in elected officials, parties, general role of government, other people	✓ attitudes about political parties/ government/ economy, polarization, income gap, fairness of political contributions

continued

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

Details of Social Capital, Civic Engagement, and Social Cohesion Content of Major U.S. Surveys (continued)

	Questionnaire Content			
Survey	Voting	Other Political Engagement	Volunteering	Charitable Giving
ANES post-election	✓	✓ engagement with campaign coverage/ candidates/ speeches; visit candidate's Website; meeting or rally participation, past protest involvement, signed petitions, social media, contact representatives		✓ candidates or parties, religious, school, or issue-based donations

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

	Organizational Membership and/or Participation	Contact with Friends, Family, Neighbors, and Networks	Neighborhood Characteristics/ Sense of Community	Trust/ Confidence (e.g., in neighbors, government, law enforcement, corporations, schools, media)	Fairness, Polarization, and Integration
	✓ numbers of and names of organizations	✓ discuss politics w/ friends/family, frequency; worked in community, candidate advocacy		✓ feelings about religious groups, federal government, specific socio-economic groups, role of security post-9/11, state nullification, role of Supreme Court, government corruption	✓ most important problem facing country, feelings of patriotism, taxing millionaires, affirmative action, role and size of government, life affected by specific racial/gender groups, views of traditional v. new lifestyles, fairness of voting and press, discrimination v. women, affirmative action, equality, satisfaction with democracy, feel threatened by federal government, bilingual capabilities, feelings/ sentiments toward ethnic groups, income inequality, discrimination

continued

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

Details of Social Capital, Civic Engagement, and Social Cohesion Content of Major U.S. Surveys (continued)

	Questionnaire Content			
Survey	Voting	Other Political Engagement	Volunteering	Charitable Giving
SCCBS 2000	✓	✓ interest in politics/ national affairs, attend rallies/ protests, reform movements, online chats/ forums, town meetings	✓	✓ donated blood, amount to religious/ nonreligious organizations

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Organizational Membership and/or Participation	Contact with Friends, Family, Neighbors, and Networks	Neighborhood Characteristics/ Sense of Community	Trust/ Confidence (e.g., in neighbors, government, law enforcement, corporations, schools, media)	Fairness, Polarization, and Integration
✓ religious affiliation, attendance, adult/youth sports w/ frequency, school service, vets groups, neighborhood associations, social welfare organizations, union, trade associations, fraternal/ ethnic organizations, PACS, hobby club, officer status, ethnic/ gender makeup	✓ sense of community/ belonging, number of close friends, frequency of group activities, visiting family/ friends, socialize with neighbors/ coworkers	✓ sense of community/ belonging, frequency of interaction w/neighbors, trustworthiness, satisfaction, civic power, obstacles to involvement, attend community events	✓ trust in neighbors, coworkers, media, local businesses/ police, various races, local/ national government	✓ racial tolerance in marriage/ friends

continued

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

Details of Social Capital, Civic Engagement, and Social Cohesion Content of Major U.S. Surveys (continued)

	Questionnaire Content			
Survey	Voting	Other Political Engagement	Volunteering	Charitable Giving
SCCS 2006	✓	✓ interest in politics/ national affairs, attend rallies/ protests	✓	✓ donated blood, amount to religious and nonreligious organizations

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

	Organizational Membership and/or Participation	Contact with Friends, Family, Neighbors, and Networks	Neighborhood Characteristics/ Sense of Community	Trust/ Confidence (e.g., in neighbors, government, law enforcement, corporations, schools, media)	Fairness, Polarization, and Integration
	✓ religious affiliations attendance; adult/youth sports w/ frequency; school service; veterans groups; neighborhood associations; social welfare organizations; union/trade associations; fraternal/ ethnic organizations; PACS; hobby club	✓ sense of self with regard to town, "Americanness", tenure in community/ likely to stay; racial makeup of social network; frequency of group activities; visiting family/friends; socialize with neighbors/ coworkers	✓ sense of self with regard to town, "Americanness", frequency of interaction with neighbors, trustworthiness, satisfaction, civic power, racial tolerance, attend at community events	✓ trust in neighbors/ strangers, coworkers, media, local businesses/ police, various races, local/ national government, will you be victim of a crime, "hot/cold" questions, ethnic groups/ economic status	✓ budget priorities, Hurricane Katrina-related questions about evacuees, racial tolerance in marriage/friends

continued

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

Details of Social Capital, Civic Engagement, and Social Cohesion Content of Major U.S. Surveys (continued)

	Questionnaire Content			
Survey	Voting	Other Political Engagement	Volunteering	Charitable Giving
Giving & Volunteering in the United States	✓		✓ type/ frequency/ name of organization; why volunteered?; Internet volunteer; attitudes	✓ religion, youth development, education, health, human services, animal welfare, environment, adult recreation, arts, social/ political organization, political campaign, private company foundations, international aid, friends

NOTES: A check in a cell indicates that a particular survey includes content in the identified topic area.
AHS, American Housing Survey, (NCSM, Neighborhood Social Capital Module); ANES, American National Election Studies; ATUS, American Time Use Survey; GSS, General Social Survey; NHES, National Household Education Surveys Program; NCVS, National Crime Victimization Survey; NLSY79, National Longitudinal Surveys [1979 wave]; PSID, Panel Study of Income Dynamics; SCBS, Social Capital Benchmark Survey; SCCS, Social Capital Community Survey.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

	Organizational Membership and/or Participation	Contact with Friends, Family, Neighbors, and Networks	Neighborhood Characteristics/ Sense of Community	Trust/ Confidence (e.g., in neighbors, government, law enforcement, corporations, schools, media)	Fairness, Polarization, and Integration
	✓ religious membership, service organizations	✓ unorganized volunteering, friends/family/ neighbors/ strangers; proxy questions for family members		✓ confidence in charitable organizations, political parties, congress, organization labor, corporations, media, Web, federal/ state/local government, religions; general trust	✓ government responsibility for citizens, government should give to faith-based groups

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Appendix E

November 2011 Civic Engagement Supplement to the Current Population Survey

The CPS Supplement questionnaire excerpt, reproduced below, along with full technical documentation for the survey can be found at: http://www.census.gov/prod/techdoc/cps/cpsnov11.pdf [August 2014].

Questionnaire (Attachment 8)

PRESUP 2 **The next set of questions are about people's involvement and communication within their communities.**

NXTPR **I (also) need to talk to (fill name/read list of needed persons). Is he/she at home now/Are either of them at home now/Are any of them at home now?**

S1 **The first question is about LOCAL elections, such as for mayor or a school board. (Do you/Does NAME) always vote in local elections, (do you/does he/does she) sometimes vote, (do you/does he/does she) rarely vote, or (do you/does he/does she) never vote?**

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(1) Always vote
(2) Sometimes vote
(3) Rarely vote
(4) Never vote

S2 **I am going to read a list of some things people have done to express their views. Please tell me whether or not (you have/NAME has) done any of the following in the last 12 months, that is since November 2010:**

(a) Contacted or visited a public official—at any level of government—to express (your/his/her) opinion?

(1) Yes
(2) No

(b) Bought or boycotted a certain product or service because of the social or political values of the company that provides it?

(1) Yes
(2) No

S3 **How often, if at all, (have you/has NAME) used the Internet to express (your/his/her) opinions about POLITICAL or COMMUNITY issues within the last 12 months—basically every day, a few times a week, a few times a month, once a month, less than once a month, or not at all?**

(1) Basically every day
(2) A few times a week
(3) A few times a month
(4) Once a month
(5) Less than once a month
(6) Not at all

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S5 **Next, I will give you a list of types of groups or organizations in which people sometimes participate. (Have you/Has NAME) participated in any of these groups during the last 12 months, that is since November 2010:**

(a) A school group, neighborhood, or community association, such as PTA or neighborhood watch group?

(1) Yes
(2) No

(b) A service or civic organization, such as American Legion or Lions Club?

(1) Yes
(2) No

(c) A sports or recreation organization, such as a soccer club or tennis club?

(1) Yes
(2) No

(d) A church, synagogue, mosque, or other religious institution or organization, NOT COUNTING (your/his/her) attendance at religious services?

(1) Yes
(2) No

(e) Any other type of organization that I have not mentioned?

(1) Yes
(2) No

S6s **What type of organization is that?**

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S7 **In the last 12 months, that is since November 2010, (have you/has NAME) served on a committee or as an officer of any group or organization?**

(1) Yes
(2) No

S11 **These next questions ask how often (you/NAME) did something during a TYPICAL MONTH in the last 12 months, that is since November 2010. How often did (you/NAME) discuss politics with family or friends—basically every day, a few times a week, a few times a month, once a month, less than once a month, or not at all?**

(1) Basically every day
(2) A few times a week
(3) A few times a month
(4) Once a month
(5) Less than once a month
(6) Not at all

DO NOT ASK OF 1-PERSON HOUSEHOLDS

S12 **How often did (you/NAME) eat dinner with any of the other members of (your/his/her) household—basically every day, a few times a week, a few times a month, once a month, less than once a month, or not at all?**

(1) Basically every day
(2) A few times a week
(3) A few times a month
(4) Once a month
(5) Less than once a month
(6) Not at all

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S13 **This next question is about friends and family (you do/ NAME does) not live with.**

During the last 12 months, how often did (you/NAME) see or hear from friends or family, whether in-person or not—basically every day, a few times a week, a few times a month, once a month, less than once a month, or not at all?

(1) Basically every day
(2) A few times a week
(3) A few times a month
(4) Once a month
(5) Less than once a month
(6) Not at all

S15 **How often did (you/NAME) talk with any or (your/his/ her) neighbors—basically every day, a few times a week, a few times a month, once a month, less than once a month, or not at all?**

(1) Basically every day
(2) A few times a week
(3) A few times a month
(4) Once a month
(5) Less than once a month
(6) Not at all

S16 **How often did (you/NAME) and (your/his/her) neighbors do favors for each other? By favors, we mean such things as watching each others children, helping with shopping, house sitting, lending garden or house tools and other small things to help each other—basically every day, a few times a week, a few times a month, less than once a month, or not at all?**

(1) Basically every day
(2) A few times a week
(3) A few times a month
(4) Once a month

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(5) Less than once a month
(6) Not at all

NOTE: Do not ask of proxy respondents.

S18 **We'd like to know how much you trust people in your neighborhood. Generally speaking, would you say that you can trust all the people, most of the people, some of the people, or none of the people in your neighborhood?**

(1) All the people
(2) Most of the people
(3) Some of the people
(4) None of the people

NOTE: Do not ask of proxy respondents.

S21 **I am going to name some institutions in this country. For each of these institutions, would you say you have a great deal of confidence, only some confidence, hardly any confidence, or no confidence at all in them to do what is right?**

(a) Corporations

(1) A great deal of confidence
(2) Some confidence
(3) Hardly any confidence
(4) No confidence at all

(b) The media

(1) A great deal of confidence
(2) Some confidence
(3) Hardly any confidence
(4) No confidence at all

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

(c) Public schools

(1) A great deal of confidence
(2) Some confidence
(3) Hardly and confidence
(4) No confidence at all

SCK5 ***DO NOT READ TO RESPONDENT***

Who reported for this person?

(a) Self
(b) Other

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Appendix F

Biographical Sketches of Panel Members

KENNETH PREWITT (*Chair*) is the vice president for Global Centers and the Carnegie professor at Columbia University. He previously held teaching positions at the University of Chicago, Stanford University, Washington University, and in Kenya and Uganda. His other previous positions include director of the U.S. Census Bureau, director of the National Opinion Research Center, and dean at the New School University. He is a fellow of the American Academy of Arts and Sciences, the American Academy of Political and Social Science, the American Association for the Advancement of Science, the Center for the Advanced Study in the Behavioral Sciences, and the Russell Sage Foundation. He has received honorary degrees from Carnegie Mellon University and Southern Methodist University and a lifetime career award from the American Political Science Association. He has authored and coauthored a dozen books and more than 100 articles and book chapters, most recently *What is Your Race? The Flawed Effort of the Census to Classify Americans* (Princeton Press). He has a B.A. from Southern Methodist University, an M.A. from Washington University, and a Ph.D. in political science from Stanford University.

MICHAEL X. DELLI CARPINI is professor of communication and Walter H. Annenberg dean of the Annenberg School for Communication at the University of Pennsylvania. Prior to this position, he was director of the public policy program of the Pew Charitable Trusts and a member of the Political Science Department at Barnard College and the graduate faculty of Columbia University. His research explores the role of the citizen in

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American politics, with particular emphasis on the impact of the mass media on public opinion, political knowledge, and political participation. His research also looks at political knowledge and democratic engagement, generational differences in civic and political participation, and the extent, sources, and impact of public deliberation in the United States. Among his many awards, he received the Fontaine award for exemplary teaching and the Murray Edelman career achievement award. He has a B.A. in political science and English literature and an M.A. in political science from the University of Pennsylvania and a Ph.D. in political science from the University of Minnesota.

ROBERT W. EDWARDS is an independent consultant in the field of official statistics, with clients that include national statistics offices and a number of international and supranational agencies. Previously, he served as director of the Statistics Department at the International Monetary Fund and deputy Australian statistician at the Australian Bureau of Statistics (ABS). In the latter position, he was responsible the full ABS program of economic censuses and surveys, national and international accounts, prices, public and private finance statistics, and statistics on international trade in goods and services. He has written and spoken extensively on statistical governance, monetary and fiscal statistics, and data quality and analysis. He received the Australian Public Service Medal for distinguished service in economic statistics in Australia and in the international statistical community. He has a bachelor's degree in economics (commerce) from Melbourne University.

MORRIS P. FIORINA, Jr., is the Wendt Family professor of political science at Stanford University and a senior fellow at the Hoover Institution. He previously held teaching positions at the California Institute of Technology and Harvard University. His current research focuses on elections and public opinion, with particular attention to the quality of representation—how well the positions of elected officials reflect the preferences of the public. He has written widely on American government and politics, with special emphasis on topics in the study of representation and elections. He has served on the editorial boards of several journals in the fields of political science, economics, law, and public policy, and has served as chair of the Board of Overseers of the American National Election Studies. He is a member of the National Academy of Sciences, the American Academy of Arts and Sciences, and the American Academy of Political and Social Sciences. He has a B.A. in political science from Allegheny College and an M.A. and Ph.D. in political science from the University of Rochester.

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Civic Engagement and Social Cohesion: Measuring Dimensions of Social Capital to Inform Policy

JEREMY FREESE is a professor and the department chair in the Department of Sociology at Northwestern University and a faculty fellow in the Institute for Policy Research. His current research seeks to connect biological, psychological, and social processes: he is especially interested in how such connections are altered by large-scale social or technological changes. His work evaluates different prospective contributions of evolutionary psychology and behavioral genetics to social science. With an interest in policy innovations that emphasize individual informed choice, such as the Medicare prescription drug benefit, he studies whether and how such innovations might lead to differences in how much people benefit from them. He is the recipient of several awards and honors, including a 2-year fellowship from the Robert Wood Johnson Scholars in Health Policy Program at Harvard University and the Clifford C. Clogg award (methodology section). He has a B.A. from the University of Iowa, and an M.A. and Ph.D. in sociology from Indiana University.

CHARLOTTE B. KAHN cofounded and directs the Boston Indicators Project at The Boston Foundation. In partnership with the city of Boston and the Metropolitan Area Planning Council, the Boston Indicators Project tracks change across a comprehensive framework of ten sectors through an award-winning Website and issues a "report card" tracking progress on a shared civic agenda. Prior to this position, she directed the Boston Persistent Poverty Project, part of a six-city Rockefeller Foundation initiative. She has also served as the executive director of a nongovernmental organization dedicated to improving the quality of urban life, particularly in low-income neighborhoods. She is a founding member of the National Neighborhood Indicators Partnership at the Urban Institute in Washington, D.C., and of the Community Indicators Consortium, a global community of practice for people and organizations interested in advancing the art and science of community indicators. She attended Cornell University, has an M.A. from Antioch University, and was awarded a Loeb fellowship in advanced environmental studies from the Harvard Graduate School of Design.

JAMES M. LEPKOWSKI is a research professor at the Institute for Social Research and a professor in the Department of Biostatistics, both at the University of Michigan. He also serves as a research professor at the Joint Program in Survey Methodology at the University of Maryland and directs the Program in Survey Methodology at the University of Michigan. As a survey methodologist, he specializes in sampling and survey analysis and developing new survey sampling methods and applying them to diverse problems. His current research focuses on telephone sampling methods, methods to compensate for missing survey data, and methods to analyze

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survey data that take account of the complexity of the survey sample design. He has served on a variety of national and international advisory committees on survey research methods for organizations, including the National Center for Health Statistics, the Food and Drug Administration, the Bureau of Labor Statistics, and the World Health Organization. He has a B.S. in mathematics from Illinois State University and an M.P.H. and a Ph.D. in biostatistics from the University of Michigan.

MARK HUGO LOPEZ is associate director of the Pew Hispanic Center in Washington, D.C., and research professor at the University of Maryland's School of Public Policy. His current research focuses on labor economics, civic engagement, voting behavior, and the economics of education. His work also covers such topics as the earnings differential between U.S.-born Hispanic faculty and other faculty, the impact of bilingual education programs on long-term student achievement, estimating the returns to individuals who speak a second language, and the neighborhood effects of immigrants on the educational achievement of natives. Prior to joining the Pew Hispanic Center, he served as research director at the Center for Information and Research on Civic Learning and Engagement (CIRCLE). Through his work at CIRCLE, he has studied young people's electoral participation, the civic engagement of immigrants, young people's views of the First Amendment, and the link between college attendance and civic engagement. He has a Ph.D. in economics from Princeton University.

NORMAN H. NIE is a research professor in the Department of Political Science at Stanford University and professor emeritus of political science at the University of Chicago. He also serves as chief executive officer and president of Revolution Analytics, a commercial software support company. Prior to his teaching positions at Stanford and Chicago, he cofounded SPSS and served as chair of its board (which was sold to IBM in 2009). He is a co-inventor of SPSS, the predictive analytics product, and was a product design innovator for the SPSS company. He is a two-time winner of the Woodrow Wilson award for the best book published in political science and a recipient of a lifetime achievement award by the American Association of Public Opinion Research for his contributions to survey analytics, as well as his works in political behavior. He is an appointed fellow of the American Academy of the Arts and Sciences. He has a Ph.D. in political science from Stanford University.

PAMELA M. PAXTON is professor of sociology and government and Christine and Stanley E. Adams, Jr., centennial professor in liberal arts at the University of Texas at Austin. Previously, she held professor positions

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in the Department of Sociology and the Department of Political Science and associate dean in the College of Social and Behavioral Sciences at Ohio State University. Her research interests are in pro-social behavior, politics, gender, and methodology; and she has published numerous books and articles on social capital, women in politics, and quantitative methodology. She has served on many advisory boards and committees including, including an advisory panel to the National Science Foundation and the executive council of the women and politics section of the American Political Science Association. She has a B.A. in economics and sociology from the University of Michigan and an M.A. and a Ph.D. in sociology from the University of North Carolina at Chapel Hill.

STANLEY PRESSER is a professor in the Sociology Department at the University of Maryland and professor in the Joint Program in Survey Methodology. Prior to these positions, he was director of the Survey Research Center at the University of Maryland and director of the Joint Program in Survey Methodology of the University of Maryland and University of Michigan. His current research focuses on social psychology and survey measurement, with an emphasis on questionnaire design and testing, the accuracy of survey responses, nonresponse, and ethical issues stemming from the use of human subjects. He is a member of the Board of Scientific Counselors of the National Center for Health Statistics and a member of the advisory Committee for Social, Behavioral, and Economic Sciences of the National Science Foundation. He is an elected fellow of the American Statistical Association, and he served as president of the American Association for Public Opinion Research. He has an A.B. degree in sociology from Brown University and a Ph.D. in sociology from the University of Michigan.

JOEL SOBEL is professor of economics at the University of California, San Diego, and he previously served as chair of the Department of Economics. Prior to his positions in San Diego, he held teaching and visiting positions at the University of Wisconsin–Madison, the University of California, Berkeley, the California Institute of Technology, Stanford University, Oxford University, and at universities in Barcelona and Paris. His current research focuses on microeconomic theory, with an emphasis on game theory and reciprocity and polarization in group decision making. He has published widely on communication, stability, and game theory. He is an elected fellow of the Econometrics Society. He has a B.S. in mathematics from the University of Michigan, an M.A. in economics, and a Ph.D. in applied mathematics from the University of California, Berkeley.

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SIDNEY VERBA is Carl H. Pforzheimer professor emeritus in the Department of Government at Harvard University and director emeritus of the Harvard University Library. Prior to joining the faculty at Harvard, he taught at the universities of Stanford, Princeton, and Chicago. His current research focuses on political equality and includes a large-scale study of the role of interest organizations in American politics. He is a member of the National Academy of Sciences and a fellow of the American Academy of Arts and Sciences and the American Philosophical Society. He serves as president emeritus of the American Political Science Association. He received numerous awards from the American Political Science Association, including its highest one, the James Madison prize, and the Johan Skytte prize, the major international prize in political science, from the Skytte Foundation at Uppsala University. Much of his writing has focused on the role of citizen engagement and activism in a democracy, with an emphasis on issues of equality in political, social, and economic life. He has a B.A. from Harvard University and a Ph.D. from Princeton University.

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