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Repeated cross-sectional research: the general social surveys

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Introduction

🚺o National Data Program for the Social blonces (NDPSS) is a social indicators and data fusion program. Its basic purposes are (1) argather and disseminate data on contempo-Λmerican society in order to (a) monitor oxplain change and stability in attitudes, bylors, and attributes and (b) examine the icture and functioning of society in genwell as the role played by various sub-(2) to compare the United States to other clles in order to (a) place American socin comparative perspective and (b) develop multional models of human society; and make high-quality data easily accessible ars, students, policymakers, and others unimal cost and waiting.

purposes are accomplished by the collection and distribution of the Opinion Research Center (NORC) Genusial Survey (GSS) and its allied surii lio International Social Survey Program of the the GSS and the ISSP surveys have miniontly collected, widely distributed, **Intelligible** analyzed by social scientists

world.

Organization

The NDPSS is directed by James A. Davis, Tom W. Smith, and Peter V. Marsden. From 1972 to 1982 the GSS was advised by a Board of Advisors and starting in 1978 a Board of Methodological Advisors. In 1983 at the behest of the National Science Foundation (NSF) these groups were combined to form a new Board of Overseers. The Board provides guidance to the GSS, forms linkages to the various research communities, spearheads the development of topical modules, approves the content of each survey, and evaluates the work of the project.

Data collection: 1972–2004

Since 1972 the GSS has conducted 25 independent, cross-sectional surveys of the adult household population of the United States and in 1982 and 1987 carried out oversamples of Black Americans. As Table 3.1 details, there have been a total of 45,803 respondents interviewed from the cross-sections, plus 707 Black respondents from the two oversamples.

While the population sampled has remained constant, transitional sample designs have been employed three times: in 1975–76 to calibrate the shift from the original block-quota sample to the full-probability design utilized since 1977, in 1983 when the 1970 NORC sample frame was compared with the new NORC sample frame based on the 1980 census, and in 1993 when the 1980 NORC sample frame and the new 1990 NORC sample frame based on the 1990 census were used. The 1990 sample frame was utilized through 2002. A new sample frame based on the 2000 census was introduced in 2004 (Davis, Smith, and Marsden, 2005).

By using a strict, full-probability sample design, rigorous field efforts, and extensive quality control, the GSS produces a high-quality, representative sample of the adult population of the United States. The GSS response rate has generally been in the upper 70s, with a high in 1993 of 82.4%. However, the GSS response rate has declined in recent years to just over 70%. This rate is higher than that achieved by other major social science surveys and 35–45 percentage points higher than the industry average (Council for Marketing and Opinion Research, 1998; Krosnick, Holbrook, and Pfent, 2003).

In order to accommodate more questions, the GSS employs a questionnaire design under which most questions are asked of only a subset of respondents. From 1972 to 1987, that was accomplished with a rotation design under which questions appeared on two out of every three years. In 1988, the GSS switched from an across-survey rotation design to a split-ballot design. Under this design questions are asked every year, but only on two of three subsamples. Over a three-year period, questions that would have appeared on two surveys with a total of 3000 respondents (2 \times 1500) under the old rotation design, now appear on twothirds subsamples on all three surveys for a total of 3000 respondents (3 \times 1000). This shift eliminated the problem of periodic gaps in the annual time series and facilitated time-series analysis (Davis, Smith, and Marsden, 2005).

Starting in 1994, GSS switched to a biennification double-sample design. In effect the 1994 G was two surveys in one with an A sample 1500 representing the "regular" 1994 GSS and a B sample of 1500 representing the "missing 1995 GSS. The double-sample design literal combines two separate GSSs with distinct to ical and ISSP modules into one field operation and similarly for the subsequent pairs of years.

3.1 Components

The GSS is divided into five components (1) the replicating core, (2) topical modules, (3) cross-national modules, (4) experiments, and (5) reinterviews and follow-up studies. In recent years the replicating core has taken up half of the interviewing time and the topical, cross-national, and supplemental modules take up the other half. Experiments are done within either the core or the modules, and reinterviews and follow-up studies involve additional interviewing after the GSS has been completed.

Replicating core

The replicating core consists of questions that regularly appear in surveys either as full-coverage items or on subsamples. The content of the core is periodically reviewed by the PIs and Board of Overseers to insure that the content remains relevant and up-to-date. Currently, the replicating core makes up about half of the overall length of the GSS and consists of about one-third demographic questions and two-thirds attitudes and behaviors. The replicating core forms the basis for the trend analysis and pooling of cases for subgroup analysis.

The GSS is intentionally wide-ranging in its contents, with 4624 variables in the 1972–2004 cumulative file. One needs to peruse the GSS Cumulative Codebook (Davis, Smith, and Marsden, 2005) or the online version at http://www.icpsr.umich.edu/cgi-bin/bob/newark?study=4295 to fully appreciate the scope of the GSS.

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The GSS is different from most surveys in the wide variety of demographics included and the detail in which they are asked and coded. In addition to covering the extensive background variables on the respondent's current status, the GSS has extensive information on the respondent's family of origin and parental characteristics. Among the family of origin items are questions on the intactness of families (and reasons for "broken homes"), number of siblings, religion, region, and community type. Additionally, parental variables include mother's and father's education, church attendance, occupation, and industry. There are also many questions about spouses.

In addition, measures are usually very dotailed. For example, occupation and industry uso both the census three-digit classification codes and the four-digit International Standard Classification of Occupations, two measures of occupational prestige, education codes both number of years in school and highest degree obtained, three community type measures are included, and up to three ethnic and racial adoutities are coded.

losides the demographics, the core items over a variety of behaviors, personal evaluations, and attitudes about central social and allitical issues from death (e.g., capital punishman, suicide, euthanasia) to taxes (as a redistribution measure, paying too much?). Among the my topics covered are abortion, civil liberties, pludence in institutions, crime and punishman, government-spending priorities, poverty anoquality, intergroup relations, religion, women's rights.

and modules

modules (special sections on a partictioms) first appeared in 1977 and have annual feature since 1984. The topical are designed to facilitate both innotion and greater depth. They introduce new at previously investigated by the GSS are existing topics in greater detail with more fully-specified models. The original concept for a module may come from the principal investigators, the Board of Overseers, or other interested scholars. The themes covered in major modules are listed in Table 3.1.

Cross-national modules

The GSS has spurred cross-national research by inspiring other nations to develop similar data-collection programs (e.g., the ALLBUS (Germany), British Social Attitudes, National Social Science Survey (Australia), Taiwan Social Change Study, Polish General Social Survey, Japanese General Social Survey, Korean General Social Survey, and Chinese General Social Survey (Smith, Koch, Park, and Kim, 2006b) and by organizing these and other programs into the ISSP. (See www.issp.org)

The fundamental goal of ISSP is to study important social and political processes in comparative perspective. In addition, by replicating earlier modules, ISSP not only has a crossnational perspective, but also an over-time perspective. With ISSP one can both compare nations and test whether similar social-science models operate across societies, and also see if there are similar international trends and whether parallel models of societal change operate across nations. Thus, by combining an across-time with a cross-national design, ISSP incorporates two powerful perspectives for studying societies.

ISSP evolved from a bilateral collaboration between the Allgemeinen Bevolkerungsumfragen der Sozialwissenschaften (ALLBUS) of the Zentrum fuer Umfragen, Methoden, und Analysen (ZUMA) in Mannheim, West Germany and the GSS of NORC, University of Chicago. In 1982 and 1984 ZUMA and NORC devoted a small segment of the ALLBUS and GSS to a common set of questions on job values, important areas of life, abortion, feminism, class differences, equality, and the welfare state.

Meanwhile, in late 1983 the National Centre for Social Research, then known as Social and

Table 3.1 Design features of the GSS 1972-2004

| | uun pu | | | Provention | | and the second of the second | , Nelson and Establish | al salesquoonal |
|-------|--------|--|-----------|------------|-----------------------------|------------------------------|--------------------------------|-----------------|
| 1972 | 1613 | BQ | . – | None | None | Two waves | None | None |
| 1973 | 1504 | BQ | - | AS | Two forms | Three waves | None | None |
| 1974 | 1484 | BQ | _ | AS | Two forms | Three waves | None | None |
| 1975 | 1490 | ^{1/2} BQ ^{1/2} FP | - 75.6 | AS | Split sample | None | None | None |
| 1976 | 1499 | ^{1/2} BQ ^{1/2} FP | - 75.1 | AS | Two forms + split sample | None | None | None |
| 1977 | 1530 | FP | 76.5 | AS | None | Nоде | Race, abortion, feminism | None |
| 1978 | 1532 | FP | 73.5 | AS | Two waves | None | None | None |
| 1980 | 1468 | FΡ | 75.9 | AS | Three forms | None | None | None |
| 1982 | 1506 | FP | 77.5 | AS | Two forms | None | Military | ZUMA |
| 1982B | 354 | FP | 71.7 | AS | Two forms | None | Military | ZUMA |
| 1983 | 1599 | 70FP 80FP | 79.4 | AS | Two forms + split sample | None | None | ZUMA |
| 1984 | 1473 | FP | 78.6 | AS | Three forms | None | None | ZUMA |
| 1985 | 1534 | FP | 78.7 | AS | Two forms | None | Social networks | ISSP |

| 1986 | 1470 | FP | 75.6 | AS | Two forms + vignettes | None | Welfare | ISSP |
|-------|--------------|----|------|------------------|--------------------------|---------------------------------|---|------|
| 1987 | 1466 | FP | 75.4 | AS | Three forms | Political tolerance | Political participation | ISSP |
| 1987B | 353 | FP | 79.9 | AS | Three forms | Political tolerance | Political participation | ISSP |
| 1988 | 1481 | FP | 77.3 | SB | Two forms | Cognitive | Religion | ISSP |
| 1989 | 153 <i>7</i> | FP | 77.6 | SB | Two forms ^a | Methods/ Health ^b | Occupational prestige | ISSP |
| 1990 | 1372 | FP | 73.6 | SB | Two forms | Health | Intergroup relations | ISSP |
| 1991 | 151 7 | FP | 77.8 | SB | Two forms 1992 | ISSP | Work organizations | ISSP |
| 1993 | 1606 | FP | 82.4 | SB | Two forms | None | Culture | ISSP |
| 1994 | 2992 | FP | 77.8 | DSB | Two forms | None | Family mobility Multiculturalism | ISSP |
| 1996 | 2904 | FP | 76.1 | DSB | Two forms + vignettes | Parents of Students | Mental health Emotions Gender Market exchange | ISSP |
| 1998 | 2832 | FР | 75.6 | DSB vignettes | Two forms + knowledge | Health use | Religion Job experiences Health and mental health Medical ethics Culture Inter-racial friendships | ISSP |

(Continued)

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|------|------|----|------|-----|----------------------|---------------------------|--|--------------|
| 2000 | 2817 | FP | 70.0 | DSB | Two forms | Internet use | Religion Computers Multi-ethnic Health status Freedom | ISSP |
| 2002 | 2765 | FP | 70.1 | DSB | Two forms | Worker health | Altruism Internet Intergroup relations Quality of work Worker pay Adulthood Doctors Mental health The arts | ISSP |
| 2004 | 2817 | FP | 70.4 | DSB | Two forms | Voluntary associations | Altruism Internet Negative events Genes/Environment Religious change Guns Social networks/ Voluntary groups Alcohol use Workplace stress/ Violence | ISSP |

 $^{^{\}rm a}$ For the OCCUPATIONAL PRESTIGE module 12 subsamples were used. $^{\rm b}$ The 1990 health reinterview used 1989 and 1990 GSS respondents.

B = Black oversample
BQ = Block quota sampling
FP = Full probability sampling
AS = Across-survey rotation
SB = Split-ballot rotation
DSB = Double sample, split-ballot rotation

Community Planning Research (SCPR), which was starting the British Social Attitudes Survey, secured funds for meetings for international collaboration. Representatives from ZUMA, NORC, SCPR, and the Research School of Social Sciences, Australian National University, organized ISSP in 1984 and agreed to (1) jointly develop topical modules covering important social science topics, (2) field the modules as supplements to the regular national surveys for a special survey if necessary), (3) include an extensive common core of background variables, and (4) make the data available to the module-science community as soon as possible.

Each research organization funds all of its own costs. There are no central funds. Coordination is supplied by one nation serving as the secretariat. The United States served as the secretariat from 1997 to 2003.

Since 1984, ISSP has grown to 40 nations, III founding four—Germany, the United States, firmi Britain, and Australia—plus Austria, ที่ทัพไไ, Bulgaria, Canada, Chile, Croatia, Cyprus, 10 Czoch Republic, Denmark, the Dominican uppublic, Finland, Flanders, France, Hungary, mand, Israel, Japan, Korea, Latvia, Mexico, Notherlands, New Zealand, Norway, Phllippines, Poland, Portugal, Russia, Tiyakla, Slovenia, South Africa, Spain, **Tilon, S**witzerland, Taiwan, Uruguay, and niukuela. In addition, East Germany was to the German sample upon reunificamembers not currently active include indush and Italy. In addition, a number members have replicated one or more uledulos. This includes Argentina (Buenos ilelro area only), Lithuania, and Singa-

melntains high standards of survey in the nation uses full-probability samilable monitors all phases of the data and cleans and validates the data. Contral Archive further checks all the data by the member nations. Countries in membership answer a series of

standard questions about methodology and survey procedures. Only once the secretariat has received satisfactory responses to all questions is a country's membership application considered by ISSP. Each country reports to ISSP its methods and various technical details such as its response rate. To check on the representativeness of the sample, each country compares distributions on key demographics from ISSP surveys to the best data sources in their respective countries.

ISSP modules have covered the following topics: (1) Role of Government—1985, 1990, 1996, 2006, 1(2)Social Support and Networks (1986 and 2001), (3) Social Inequality (1987, 1992, 1999), (4) Gender, Family, and Work (1988, 1994, 2002), (5) Work Orientation (1989, 1997, 2005), (6) Religion (1991, 1998, 2008), (7) Environment (1993, 2000), (8) National Identity (1995, 2003), (9) Citizenship (2004), and (10) Leisure Time (2007).

Experiments

Experimental forms have always been a regular part of the GSS. The GSS has used split samples in 1973, 1974, 1976, 1978, 1980 and 1982–2004. They have been an integral part of the GSS's program of methodological research. Dozens of experiments have examined differences in question wording, response categories, and context (Davis, Smith, and Marsden, 2005).

Experiments are carried out as part of the replicating core, topical modules, and supplements. In some years the experiments consist of additional questions not regularly appearing on the GSS, such as the interracial friendships experiments in 1998 and the wording and response-order experiments on genetic screening items in 1991 and 1996. Most of the time, however, the experiments compare a variant wording or order with the standard GSS wording and/or order being the control. Examples

¹ISSP replication modules repeat two-thirds of their content from earlier rounds.

are the experiments on measuring race and ethnicity in 1996 and 2000.

In addition, there have often been experiments within topical modules. For example, experiments were conducted as part of the 1986 factorial-vignette study of welfare, the occupational-prestige study in 1989, the 1989 intergroup-relations module with wording experiments to test the impact of class versus racial references, the 1994 multiculturalism module with various formulations of affirmative action policies, the 1996 mentalhealth module with 18 different versions of five basic vignettes (90 versions in all) to examine stigmatization of troubled individuals, the 1996 gender module, the 1998 factorial vignettes on terminal-care decisions, the 2000 healthstatus and computer-use modules, and the 2002 vignette studies of the mental health of children and physician-patient communications.

Reinterviews and follow-ups

GSS respondents have been reinterviewed both as part of methodological and substantive studies. The methodological uses have included studies of reliability, cognition, and wording and context. In 1972, 1973, 1974, and 1978, test/retest studies of item stability and reliability were conducted (Smith and Stephenson, 1979; Alwin and Krosnick, 1989). In 1988, cognitive scientists at the University of Chicago expanded the normal GSS validation effort and added recall questions about the timing and content of the initial interview. Reinterview reports were then validated against the known information on date and content and models of memory were developed to explain the discrepancies. Telescoping or forward biasing in the reporting of past events was documented and this was related to the placing of upper limits on time estimates and a tendency to round to the next lower or complete time period, e.g., two weeks, one month (Huttenlocher, Hedges, and Bradburn, 1990).

In 1990, NORC and the University of Chicago supported a seminar on survey research methods to study wording and context effects. About a third of the 1989 GSS cases were recontacted by phone. Comparisons were made between standard and variant questions across subsamples on the reinterview, between standard questions on the GSS and the reinterview, and between standard questions on the GSS and variant questions on the reinterviews. As in the earlier GSS reinterview studies, a notable degree of instability in responses was found (Junn and Nie, 1990; Ramirez, 1990). As expected, attitudinal items showed more variation than demographics. The less educated, those with no earned income, and older respondents showed the greatest differences in their responses.

The GSS has also served as a list sample for several substantive studies. GSS respondents are a representative sample of adults living in households and can be used as a list or sample frame for a follow-up study. While one must naturally adjust for any bias from panel mortality, the GSS offers an excellent frame for a follow-up study. First of all, since respondent names, addresses, and telephone numbers are known, GSS respondents are relatively easy to recontact. Second, a rich amount of information is known about respondents. This information can be used in several ways. For unchanging attributes like year of birth, income during the past year, or nationality, one can link the data obtained on the GSS to the follow-up study and thereby free up time on the follow-up study. Third, one can use any GSS variables to study panel mortality and, if necessary, adjust for panel mortality bias.

There have been seven substantive reinterviews of GSS respondents. The first in 1987 contained questions on political tolerance and Cloninger's Tridimensional Personality Scale. The second reinterview study was the 1990 National Survey of Functional Health Status.

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Respondents from the 1989/1990 GSS, plus an additional sample of people 65+ from these households, were contacted in late 1990 and early 1991. In 1994-95, respondents were reinterviewed again. In the third reinterview study in 1992 respondents to the 1991 GSS were reinterviewed in order to collect information for the ISSP social inequality module and study changes in negative life events over time. The fourth reinterview in 1997 contacted parents of students in grades 1-8 from the 1996 GSS. The fifth on the 1998 GSS did reinterviews on knowledge about and attitudes towards the role of behavioral interventions and socialacience treatments in health care. The sixth minterview in 2001 was an extension of the 2000 topical module on computers and the Internet. The latest reinterview is of employed people on the 2002 GSS. In 2002-2003 they Were reinterviewed about work-related, health Millios.

Tho GSS has also served as the source for K special follow-up studies, most involvny hypernetwork sampling. First, in 1991 a ingord of the employer of respondents and pouros was collected. These employers were Macted as part of a study of work organizang, the National Organizations Study (NOS). Information can be analyzed in its own in well as linked back to the attitudes of riginal GSS respondents. Second, in 1994 nitom sibling was selected for an interview to study social mobility within sibsets. in 1998 and 2000 a sample of responcongregations was created. In 1998 a survey of these congregations was to for 2000 there were follow-up surveys nongregations and of people attend-10 1008 of these congregations. Fifth, as 100 1001 NOS, on the 2002 GSS informaa pollected on respondents' employers pinployers were not covered in 2002). 1 2006 the National Voluntary Assoin **lidy** contacted groups that 2004 GSS with helonged to.

4 Publications by the user community

As of 2005, the GSS was aware of over 12,000 research uses of the GSS in articles, books, dissertations, etc. Most users (82%) have been academics with college affiliations. Other users include scholars at research centers, foundations, and related organizations (12%); government researchers (1%); and others and unknown (5%). Among the academics sociologists predominate (56%), followed by political scientists (15%), law and criminal justice researchers (6%), psychologists (5%), economists (4%), physicians and other health professionals (5%), statisticians (3%), business management professors (2%), other social scientists (e.g. anthropologists and geographers) (2%), and non-social scientists and miscellaneous (2%).

Moreover, with the exception of the census and its Current Population Survey, the GSS is the most frequently used dataset in the top sociology journals. As Table 3.2 shows, in the top sociology journals the GSS has been used in 145

Table 3.2 Most frequently used datasets in leading sociology journals, 1991–2003

| Census/CPS | 180 |
|--|-----|
| GSS | 145 |
| National Longitudinal Survey of Youth | 43 |
| Panel Survey of Income Dynamics | 36 |
| National Survey of Families and Households | 28 |
| National Educational Longitudinal Survey | 18 |
| Adolescent Health | 14 |
| High School and Beyond | 13 |
| National Election Studies | 13 |
| Occupational Change in a Generation II | 10 |

²we used the *American Sociological Review*, the *American Journal of Sociology*, and *Social Forces*. They are the consensus choice as the top general sociological journals (Allen, 1990; Kamo, 1996; Prosser, 1984).

articles—more often than the total of the next five most frequently used datasets combined.

5 Teaching and other uses

The GSS is widely used in teaching at the undergraduate and graduate levels. About 250,000 students annually take courses that utilize the GSS and nearly 400 college textbooks use GSS data.

The GSS has also been used outside the academic community by the government, media, non-profits, and business community. Taking the federal government as an example, the GSS is regularly used by (1) the Congressional Reference Service of the Library of Congress, (2) the Science and Engineering Indicators series of NSF, (3) the Sourcebook of Criminal Justice Statistics of the Bureau of Justice Statistics, and (4) Statistical Abstract of the United States of the Bureau of the Census. GSS data have been cited in 20 briefs to the US Supreme Court.

6 Contributions to knowledge

Because of the wide-ranging content and extensive level of usage of the GSS, it is effectively impossible to describe all of the results from the thousands of publications covering dozens of fields. Instead GSS's contributions to basic knowledge will be considered regarding (1) how key design features of the GSS have promoted social-science research, (2) the study of societal change, (3) cross-national research, and (4) methodological research.

6.1 Design features of the GSS and research

Several key aspects of the GSS study design greatly facilitate research opportunities. These include: (1) replication, (2) breadth of substantive content, (3) extensive and detailed demographics, (4) providing a standard of comparison for other surveys, and (5) depth and innovation in the topical modules.

Replication is the most important designature of the GSS. Replication is necessary for two crucial research goals of the GSS: (1) the study of societal change and (2) the study of subgroups. A sample of GSS research publications since 1995 shows that 60% of all GSS usages make use of the replication feature by utilizing two or more years of the GSS.

The GSS core is based on the simple princtiples that (1) the way to measure change is not to change the measure (Smith, 2005b), and (2) the optimal design for aggregating cases is a replicating cross-section. Besides replication within the core to study societal change and subgroups, the GSS employs replication in several other ways.

First, many of the variables used on the GSS were adopted from baseline surveys with observations going back as far as the 1930s and 1940s. As a result, hundreds of GSS trends extend back before the inception of the GSS in 1972 (Smith, 1990).

Second, several topical modules have been designed to replicate seminal studies. For example, the 1987 module on sociopolitical participation replicated key segments of the 1967 Verba-Nie study of political participation (Verba and Nie, 1972); the 1989 occupational prestige module updated the NORC prestige studies of 1963-1965 (Nakao and Treas, 1994): and the 1996 Mental Health module drew on Starr's seminal study from the early 1950s (Phelan, et al., 2000). Even when not primarily a replication, other modules, such as the modules in 1990 on intergroup relations, in 1991 on work organizations, in 1994 on multiculturalism, in 2000 on health functioning, and in 2002 and 2004 on empathy and altruism, have adopted key scales from earlier studies.

Third, there is a social trends component in ISSP. Cross-national modules are periodically repeated to measure societal change in a comparative perspective.

Finally, experiments have been replicated over time.

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Replication is first and foremost used to study societal change. An analysis of recent publications (from 1995 on) shows that 39% of all research examines trends. Examples of this body of research are presented in the section on research findings below.

Replication is also essential for the pooling of cases to study cultural subgroups and understand the great complexity and diversity of American society. For example, the 1972-2004 GSSs have 973 Jews, 2850 holders of graduate-level degrees (and 850 with 20+ years of schooling), 498 French Canadians, 732 registored nurses, and 72 economists. The GSS has been used not only to study all of the major social groups (e.g., men and women, Illacks and Whites, the employed, etc.), but also to examine much smaller groups and combinations of groups. The GSS has been uned to focus on and examine an incredihly wide range of groups, including: Amerigun Indians (Hoffman, 1995), art museum Mendees (DiMaggio, 1996), engineers and sci-Intlats (Smith, 2000; Weaver and Trankina, 900), farmers (Drury and Tweeten, 1997), part-100 workers (Kalleberg, 1995), schoolteachers Andsey, 1997), the self-employed and busiowners (Kingston and Fries, 1994), and organs (Feigelman, 1994; Lawrence and Kane, (I). And among the combination of groups wallgated are Black Catholics (Feigelman, man, and Varacalli, 1991), the divorced ाक्री**ў** (Hammond, 1991), older rural resi-(Peterson and Maiden, 1993), and selfwowen (Greene, 1993; McCrary, Moreover, in a number of instances subwere pooled into several time periods ting both trend and subgroup analysis was [1] For example, among Hispanics (Hunt, We (Greeley and Hout, 1999; Smith, and schoolteachers (Walker, 1997).

in ind key design feature of the GSS is in inging content. The cumulative 1972— it dataset has 4624 variables and typi-1000 variables appear on each recent

GSS. As a result, the GSS covers a wide range of topics and as the Office of Inspector General of NSF has noted, attracts use from "scientists in almost every subfield of sociology and in numerous other social science disciplines (Office of Inspector General, 1994)."

This allows investigators to test hypotheses across a large number of variables rather than being restricted to a handful of items. For example, Davis (2000) looked at trends on 81 items, Freese, Powell, and Steelman (1999) examined birth order differences with 106 variables, Smith (2005a) considered ethnic and religious differences across 150 variables, and Greeley (1995) utilized 230 variables to study religion.

A third key design feature is the GSS's rich and detailed set of demographics. As discussed above, the GSS has backround variables on respondents, spouses, household, and parents, and many multiple measures on such variables as race/ethnicity, occupation, income, and community type.

Finally, the GSS serves as a standard for many other surveys. It is widely used as a national norm for comparison with student, local, state, international, and special samples.

6.2 Societal change

The GSS is the single best source of trends in social attitudes available. The 1972–2004 GSSs have time trends of over 1400 variables with hundreds spanning 30+ years. As Nie, Junn, and Stehlik (1996) have noted, the GSS "is the only continuous monitoring of a comprehensive set of non-economic attitudes, orientations, and behaviors in the United States today." Or as Morin (1998) characterized it, the GSS is "the nation's single most important barometer of social trends."

Many general studies of societal change have been carried out. DiMaggio, Evans, and Bryson found little support for the simple, attitude polarization hypothesis. Most scales and items did not become more polarized under several definitions, but some important, but isolated, examples did emerge (DiMaggio, Evans, and Byson, 1996; DiMaggio and Bryson, forthcoming). Likewise, Hochschild (1995) found convergence regarding the "American Dream" across race and class lines. Smith (1994; 1997) and Davis (1995; 2000) found that most societal change in attitudes is (1) slow, steady, and cumulative, and (2) that most societal change is explained (in decreasing order of importance) by (a) cohort-education turnover models, (b) episodic shocks (e.g., wars and political scandals), and (c) structural changes in background variables.

Many studies of change within particular topics have also been conducted. One of the top areas is social capital. Putnam and others (2000; Crawford and Levitt, 1998) have argued that social capital is eroding and this is seriously undermining the smooth operation of the political system and society in general. Ladd (1996; 1999) counters that the change is both exaggerated and is not so much a decline, but a reconfiguration of civil society. Similarly, Paxton (1999) finds a mixed pattern of change with a decline in individual trust, no general decline in trust in institutions, and no decline in voluntary associations.

Intergroup relations is another major area of analyzing trends. Research indicates that intergroup relations are multidimensional and multiple indicators are needed to track attitudes towards many different aspects (e.g., target groups, principles, policies, role of government, etc.). Schuman and colleagues (Schuman and Krysan, 1999; Schuman, Steeh, Bobo, and Krysan, 1997) have demonstrated that trends have proceeded at very different rates, with quick and large-scale shifts towards the principle of racial equality at one extreme to little or no gain in support for concrete measures to ensure equal treatment at the other end.

Societal changes in family values have also been frequently examined and show a mas-

sive shift from traditional to modern attitudes and practices. Smith (1999) showed that many family values have become less traditional and that the changes in family values were both assisted by changes in family structure and in turn facilitated the shift in the composition of households. Popenoe and Whitehead (1999) focused on the declining centrality of marriage over the last generation. Alwin (1996) showed how the coresidence preferences of families changed both across time and across cohorts. Straus and Mathur (1996) found that support for both spanking and obedience in children declined. Brewster and Padavic (1998), Misra and Panigrahi (1995), and Rindfuss, Brewster, and Kavee (1996) isolated gender interaction and cohort effects as the top causes of shifts in gender role attitudes.

Of course the GSS also covers trends in scores of other areas. For example, Davis and Robinson (1998) showed a notable shift in the class identities of married couples with both husbands and wives increasingly using the wives' characteristics in assessing their own class identity. Hunt (1999) indicated that the Hispanics have become less Catholic both across time and across immigrant generations. Since Occupational Change in a Generation II in 1973, the GSS has been the main source of data on changes in intergenerational mobility. As Mare (1992) noted, "Except for the NORC General Social Survey (GSS), we have no standard vehicle for monitoring the process of social stratification..." Recent examinations of the trends in mobility include Davis (1994), Hauser (1998) and Hout (1997).

6.3 Cross-national

With 19 completed and released modules and 2335 usages, ISSP has produced a body of research that has been almost as wide-ranging and difficult to summarize as the GSS in general. (For the latest ISSP bibliography see www.issp.org)

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As a single example of the cross-national uses, consider the 1995-96 and 2003-2004 national identity modules. They have been used to examine the shifting role of the nation state as its position has been changed both from above by regional and international organizations (e.g., EU, NAFTA, UN, WTO) and from below by movements for autonomy and local self-government, and to determine the cultural identity and distinctiveness of individual countries (e.g., Hjerm, 1998; 2004; Jones, 2001; McCrone and Surridge, 1998; Peters, 2002). For oxample, Smith and Jarkko (1998) and Smith and Kim (2006) showed that national pride in ten domains was determined by a combination of objective conditions and a people's understanding of their history. They also showed that national pride was uniformly lower among ethnic, racial, religious, linguistic, and regional minorities and that national pride hus declined across birth cohorts in almost all acuntries.

0,4 Methodological research

10 GSS gives the highest priority to maintaining (lata quality and minimizing measurement for. In part this has been carried out by the inption of rigorous design and execution stanlifes (e.g., full-probability sampling, pretesting areful item development, maintaining a ugli rusponse rate, data validation, data cleanolc.). In addition, this has been achieved Tirying out one of the most extensive proof methodological research in survey ron. The project has 105 GSS Method-Reports that use both experimental on-experimental designs to study virtuaspects of total survey error (Davis, and Marsden, 2005). Among the topics are: (1) the reliability and validity of (3) test/retest reliability; orleirame comparability; (4) sensitive top-Ind-person effects; (6) education/ageinteractions; (7) nonresponse bias, (8) the measurement of race and ethnicity; (9) context effects; (10) question wording; (11) scale construction; (12) item nonresponse, and (12) cross-national comparisons.

7 Summary

The GSS has aptly been described as a "national resource" (Firebaugh, 1997; Working Group on Large-Scale Data Needs in Luce, Smelser, and Gerstein, 1989), as a "core database" in both sociology and political science (Campbell, 2001; Kasse, 2001), as a "public utility for the community at large" (Office of Inspector General, 1994), as having "revolutionized the study of social change" (ICPSR, 1997), and as "a major source of data on social and political issues and their changes over time" (AAPOR Innovators Award, 2000).

order to serve the social-science community, the GSS draws heavily upon that community of scholars in the selection and development of modules and items. Between the Board and developmental committees hundreds of researchers have participated in the design of GSS components. Then the GSS provides quick, equal, and easy access to the data which in turn leads to widespread utilization of the data by thousands of social scientists and hundreds of thousands of their students. It is not only widely used in the United States, but especially through ISSP it is used by scholars around the world. The known GSS research usages number over 12,000. Usage has been especially strong in the top sociology journals where only data collected by the Bureau of the Census are used more frequently than the GSS.

In sum, the GSS produces top-quality, representative data for the United States and, through ISSP, in many other countries on topics of fundamental importance to the social sciences, is extremely widely used in both teaching and research, and has considerably expanded the knowledge base in the social sciences in a very cost-effective manner.

References

Allen, M. P. (1990). The "quality" of journal in sociology reconsidered: Objective measurers of journal influence. ASA Footnotes, (Nov.), 4-5.

Alwin, Duane F. (1996). Coresidence beliefs in American society: 1973 to 1991. Journal of Mar-

riage and the Family, 58: 393-403.

Alwin, Duane F. and Krosnick, Jon A. (1989). The reliability of attitudinal survey data: The impact of questions and respondent characteristics. GSS Methodological Report No. 61, Chicago: NORC.

Brewster, Karin L. and Padavic, Irene (1998). Change in gender ideology, 1977-1996: The contributions of intracohort change and population turnover. Paper presented to the American Sociological Association, San Francisco (August).

Campbell, Richard T. (2001), Databases, core; Sociology. In Neil J. Smelser and Paul B. Bates (eds), International Encyclopedia of the Social and Behavioral Sciences. New York: Elsevier.

Council for Marketing and Opinion Research (1998). Respondent cooperation. Opinion, 1: 2.

Crawford, Susan and Levitt, Peggy (1998). American societal change and civic engagement: The case of the PTO. Harvard University Report.

Davis, James A. (1995), Patterns of attitude change in the USA: 1972-1994. Paper presented to the Conference on "A Decade of Change In Social Attitudes," London.

Davis, James A. (2000) Testing the demographic explanation of attitude trends: Secular trends in attitudes among US householders, 1972-1996. Social Science Research, 30: 363-385,

Davis, James A., Smith, Tom W. and Marsden, Peter V. (2005). General Social Surveys, 1972–2004: Cumulative Codebook. Chicago: NORC.

Davis, Nancy J. and Robinson, Robert V. (1998). Do wives matter? Class identities of wives and husbands in the United States, 1974-1994. Social Forces, 76: 1063-1086.

DiMaggio, Paul (1996). Are art-museum visitors different from other people? *Poetics*, 24: 161–180.

DiMaggio, Paul and Bryson, Bethany (forthcoming). Americans' attitudes towards cultural authority and cultural diversity: Culture wars, social closure, or multiple dimensions. In Contemporary US Democracy. Washington, DC: Smithsonian Institution Press.

DiMaggio, Paul, Evans, John, and Bryson, Bethany (1996). Have Americans' social attitudes become more polarized? American Journal of Sociology, 102: 690-755.

Drury, Rence and Tweeten, Luther (1991) Have family ers lost their uniqueness? Review of Agricultural Economics, 19: 58-90.

Feigelman, William (1994) Cigarette smoking amon former military service personnel; A neglected social issue. Preventive Medicine, 23: 235-241.

Feigelman, William, Gorman, Bernard S. and Varacalli, Joseph (1991). The social characteristic of Black catholics. Sociology and Social Research 75: 133-143.

Firebaugh, Glenn (1997). Analyzing Repeated Sur

vevs. Thousand Oaks, CA: Sage.

Freese, Jeremy, Powell, Brian and Steelman, Lalo Carr (1999). Rebel without a cause or effects: Birth order and social attitudes. American Sociological Review, 64: 207--231.

Greeley, Andrew M. (1995). Religion as Poetry: And Empirical Model. New Brunswick: Transaction.

Greeley, Andrew M. and Hout, Michael (1999). increasing belief in life after Americans' death: Religious competition and acculturation. American Sociological Review, (Dec.): 813-835.

Greene, Patricia G. (1991). A theoretical and empirical study of self-employed women. Unpublished

Ph.D. dissertation, University of Texas.

Hammond, Ronald (1998). A model of life satisfaction for the elderly divorced and separated. Unpublished Ph.D. dissertation, Brigham Young University.

Hauser, Robert M. (1998). Intergenerational economic mobility in the United States: Measures, differentials, and trends. Paper presented to the American Sociological Association, San Francisco (August).

Hierm, Mikael (1998). National identities, national pride, and xenophobia: A comparison of four western countries. Acta Sociologica, 41: 335-347.

Hjerm, Mikael (2004). Defending liberal nationalism: At what cost? Journal of Ethnic and Migration Studies, 30: 1-17.

Hochschild, Jennifer (1995). Facing Up to the American Dream: Race, Class, and the Soul of the Nation. Princeton: Princeton University Press.

Hoffman, Thomas J. (1995). American Indians and the general social survey: 1973-1993, Paper presented to the Western Social Science Association, Oakland (April).

Hout, Michael (1997). Opportunity, change, and restructuring: Women's and men's occupational mobility. Paper presented to the American Sociological Association, Toronto (August).

Hunt, Larry L. (1999). Hispanic protestantism in the United States: Trends by decade and generation. Social Forces, 77: 1601-1623.

Milmlacher. igdhurn, No Mounding ar mirnal of Ex [4][[1097].] nutribution. m_{in}, Frank L. and sociotal Inciological tim, Jano and Minterview Proponted to Millidiorg, Arn grs in the luy Issues. I 771 -798. Kamo, Yoshin

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ICPSR (1997). ICPSR present awards for outstanding contributions. ICPSR Bulletin, 18 (Dec.).

Jones, Frank L. and Smith, Philip (2001). Individual and societal bases of national identity. European Sociological Review, 17: 103-118.

Junn, Jane and Nie, Norman (1990). The GSS phone reinterview assessment of response effect. Paper presented to the NORC Seminar series, Chicago.

Kalleberg, Arne L. (1995). Part-time work and workers in the United States: Correlates and polmy issues. Washington and Lee Law Review, 52: 771**–798**.

Namo, Yoshinori (1996). Ranking sociology department: A different perspective. ASA Footnotes, 24:

Kumu, Max (2001). Databases, core: Political science. In Noil J. Smelser and Paul B. Bates (eds), Interna-Honal Encyclopedia of the Social and Behavioral Sciences. New York: Elsevier.

Ingaton, Paul W. and Fries, John C. (1994). Having a stoke in the system: The sociopolitical ramifiuntions of business and home ownership. Social Belanco Quarterly, 75: 679-686.

լայլութ, Jon, Holbrook, Allyson and Pfent, Alison (18(1)(3)). Response rates in surveys by the news ពីស្រៀក ពេរ៨ government contractor survey research IMM. Paper presented to the American Associaan for Public Opinion Research, Nashville.

្សៀ Everett C. (1996). The data just don't show on of America's "social capital". The Public **Daalivo, 7: 1, 5–21.**

Verell C. (1999). The Ladd Report. New York: nation Press.

ւնը, Goorge H. and Kane, Thomas D. (1995/6). THIRLY service and racial attitudes of White vet-

Alaphon D. (1997). Racial and ethnic atti-Marican teacher and implications for indimentation of a culturally pluralistic phiin solvools. Unpublished EdD dissertation, (University.

midan, Smelser, Neil J. and Gerstein, Dean Lyden 🕅 🕽). Leading Edges in Social and Behav-New York: Russell Sage Foundation. \mathbf{D} , (1992). Trends in the process of udificution. Contemporary Sociology, 21:

(1994). Gendered labor markets our ces: Sex differences in access to Paper presented to the American Association, Los Angeles.

McCrone, David and Surridge, Paula (1998). National identity and national pride. In Roger Jowell, et al. (eds), British and European Social Attitudes. Aldershot: Ashgate.

Misra, Ranjita and Panigrahi, Bhogahan (1995). Change in attitudes toward working women: A cohort analysis. International Journal of Sociology and Social Policy, 15: 1-20.

Morin, Richard (1998). New facts and hot stats from the social sciences. Washington Post, June 14, C5.

Nakao, Keiko and Treas, Judith (1994). Updating occupational prestige and socioeconomic scores: How the new measures measure up. Sociological Methodology, 24: 1-72.

Nie, Norman H., Junn, Jane and Stehlik-Barry, Kenneth (1998). Education and Democratic Citizenship in America. Chicago: University of Chicago Press.

Office of the Inspector General (1994). National Opinion Research Center, Chicago, Illinois: Inspection Report. National Science Foundation.

Paxton, Pamela (1999). Is social capital declining in the United States? A multiple indicator assessment. American Journal of Sociology, 105: 88-127.

Peters, Bernhard (2002). A new look at "national identity". Archives of European Sociology, 43: 3-32.

Peterson, Steven A. and Maiden, Robert J. (1993). The Pubic Lives of Rural Older Americans. Lanham, MD: University Press of America.

Phelan, Jo A., Link, Bruce G., Stueve, Ann and Pescosolido, Bernice A. (2000). Public conceptions of mental illness in 1950 and 1999: What is mental illness and is it to be feared. Journal of Health and Social Behavior, 41: 188–207.

Popenoe, David and Whitehead, Barbara DeFoe (1999). The state of our unions. Report of the National Marriage Project, Rutgers University.

Presser, Stanley (1984). The use of survey data in basic research in the social sciences. In Charles F. Turner and Elizabeth Martin (eds), Surveying Subjective Phenomena, Vol. 2. New York: Russell Sage Foundation.

Putnam, Robert D. (2000). Bowling Alone: The Collapse and Revival of American Community. New York: Simon and Schuster.

Ramirez, Carl (1990). Response effects and mode of administration or: More reasons why the GSS should remain an in-person survey. Unpublished paper.

Rindfuss, Ronald R., Brewster, Karin L. and Kavee, Andrew L. (1996). Women, work, and children: Behavioral and attitudinal change in the United States. Population and Development Review, 22: 457-482.

- Schuman, Howard and Krysan, Maria (1997). A historical note on White beliefs about racial inequality. American Sociological Review, 64: 847–855.
- Schuman, Howard, Steeh, Charlotte, Bobo, Lawrence and Krysan, Maria (1997). Racial Attitudes in America: Trends and Interpretations, 2nd edn. Cambridge: Harvard University Press.
- Smith, Tom W. (1994). Is there real opinion change? International Journal of Public Opinion Research, 6: 187-203.
- Smith, Tom W. (1997). Liberal and conservative trends in the United States since World War II. Public Opinion Quarterly, 54: 479-507.
- Smith, Tom W. (1997). Societal change in America, 1972–1996: Time trends in the National Opinion Research Center's General Social Survey. SINET, 49: 1–3.
- Smith, Tom W. (1999). The emerging 21st century American family. GSS Social Change Report No. 42. Chicago: NORC.
- Smith, Tom W. (2000). Does knowledge of science breed confidence in science? In Jon D. Miller (ed.), Perceptions of Biotechnology: Public Understanding and Attitudes. New York: Hampton Press.
- Smith, Tom W. (2005a). Jewish Distinctiveness in America. New York: American Jewish Committee.
- Smith, Tom W. (2005b). The laws of studying societal change. Survey Research, 26: 1-5.

- Smith, Tom W. and Jarkko, Lars (1998). National pride: A cross-national analysis. GSS Cross National Report No. 19, Chicago: NORC.
- Smith, Tom W. and Kim, Seokho (2006). National pride in comparative perspective: 1993/95 and 2003/04. International Journal of Public Opinion Research, 18: 127–136.
- Smith, Tom W., Koch, Achim, Park, Alison and Kim, Jibum (2006). Social-science research and the general social surveys. *Comparative Sociology*, 4, forthcoming.
- Smith, Tom W. and Stephenson, C. Bruce (1979).

 An analysis of test/retest experiments on the 1972;
 1973, 1974, and 1978 general social surveys. GSS
 Methodological Report No. 8, Chicago: NORC.
- Straus, Murray A. and Mathur, Anita K. (1996). Social changes and trends in corporal punishment by parents from 1968 to 1994. In Deltlev Freshsee, et al. (eds), Family Violence Against Children: A Challenge to Society. New York: Walter de Gruyter.
- Verba, Sidney and Nie, Norman H. (1972). Participation in America: Political Democracy and Social Equality. New York: Harper and Row.
- Walker, Melissa E. (1997). A longitudinal analysis of teacher values from 1973 to 1994. Unpublished Ph.D. dissertation, Texas Λ&M University.
- Weaver, Charles N. and Trankina, Michele L. (1996). Should scientists and engineers be combined into one analysis sample? *Psychological Reports*, 79: 1151–1153.

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¹ The author Census Burd for valuable chapter.