Contributions of the General Social Survey to Egocentric Network Research

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OVERVIEW

The General Social Survey (GSS), conducted since 1972, is a widely-known and used multitopic survey of American adults. Since the 1980s, it has implemented most major survey-based strategies for measuring egocentric networks within one or more of its national samples, and disseminated the resulting data widely. It has thereby become an important platform for advancing both substantive and methodological research about personal networks. This chapter recounts the principal approaches to measuring networks used in the GSS, surveys some notable research findings based on them, and discusses relevant methodological research. We examine the GSS "name generator" instrument, first administered in 1985, in most depth, with attention to its background and usage. We conclude by highlighting accomplishments and challenges of GSS-based network research.

The GSS, now conducted every other year, follows a repeated cross-sectional design. A new sample representative of English- or (since 2006) Spanish-speaking adults living in U.S. households is drawn for each round, and subsequently interviewed—usually in person.[1] To assess trends, the GSS repeats an extended "core" set of background, attitude and behavior items in each round, maintaining their wording verbatim. Supplementing this are single-occasion "topical modules" that examine particular subjects in greater depth; some of these allow international comparisons, since they are also administered by participating countries in the International Social Survey Programme (ISSP). Most GSS-based research on egocentric networks rests on data obtained in topical modules.[2]

BACKGROUND

We begin with some general considerations that bear on the selection of a measuring instrument. Among these are the theoretical and substantive purposes for which data are sought, the

[1] From 2006 to 2010, newly-sampled respondents were followed up two and four years later, producing three-wave panel studies.

[2] See Marsden and Smith (2012) for additional information about GSS design and content.

definition of the network under study, and whether one seeks detailed information on the actors and relationships that make up an egocentric network or summary measures of one or more of its properties. Practical matters—including the availability of time/space within a survey/questionnaire, and respondent burden—are also involved. Instruments for measuring egocentric networks can be lengthy and complex, and choices about how to allocate limited study resources are inevitably difficult, perhaps especially in a survey like the GSS that seeks to meet the needs of numerous user constituencies.

Egocentric network analyses are undertaken within diverse theoretical frameworks resting on different assumptions about the intentionality and agency of the actors involved as well as the manner in which networks are implicated. Social capital perspectives (e.g. Burt 1992; Lin 2001) stress the more or less deliberate use and manipulation of networks by advantage-seeking individuals, often presuming that networks serve as "pipes" (Podolny 2001) through which resources like information, referrals, and other forms of support flow. Pescosolido's (1992) social organization perspective does not deny that individuals act purposively, but also allows for habitual behavior and suggests that network interactions may shape the recognition and definition of problems, the alternative solutions considered, and preferences across those alternatives; here, agency may reside in both the individual and her/his contacts. Cultural frameworks view networks as channels that shape social meanings and integrate people into (or exclude them from) status groups. As such, the relationships someone maintains may be read by other actors as signals of status, quality or acceptance; in that capacity, networks serve "prisms," in Podolny's (2001) terms.

What is "the Network" to be Measured?

In considering the measurement of egocentric networks, it is important to specify—on a conceptual level—the egocentric network that one aspires to measure. Different conceptualizations of the network may be more amenable to, or even require, particular data collection methods. While no

consensually agreed-upon typology of egocentric networks exists, several varieties—distinguished by size, function, typical relation strength, uniplexity/multiplexity, and other features—are often discussed.

The largest and most encompassing of these is what Bernard et al. (1990) term a "global" network consisting of all the persons one "knows," ordinarily including many weak, uniplex, or even latent acquaintance relationships. Roberts, Dunbar, Pollet and Kuppens (2009) use the same term to refer to the set of persons one recognizes and might greet if encountered, but does not necessarily maintain contact with.

Nested within a global network is a set of persons with whom one does stay in touch, termed an "active" network by Roberts et al. (2009). Distinct from this is what we term a network of "instrumentally useful contacts" who might provide information or offer assistance of some kind (Bernard *et al.* 1990 p. 181). Ordinarily, these networks also would be relatively large, presumably including numerous weak, single-stranded and role-dependent relationships.

Substantially smaller are "social support" networks within which ongoing exchanges of both minor and major instrumental and emotional support occur. Bernard et al. (1990) suggest that such support relationships are reciprocal but not necessarily intimate. Some may be multistranded, others specialized to a specific form of support (Wellman & Wortley 1990). Roberts et al. (2009) define a "sympathy group" as that set of people contacted at least monthly, typically including 12-15 others.

The smallest egocentric network is variously known as an "emotional support group" (Bernard *et al.* 1990), a "core network" (Marsden 1987), the inner circle of a "convoy" (Kahn & Antonucci 1980), or a "support clique" (Roberts *et al.* 2009). It consists of others who provide major assistance or emotional support, especially under stressful conditions. The composition of such networks is thought to be comparatively stable, including a substantial complement of ongoing, intimate and multiplex relationships that are not contingent on occupancy of particular roles.

Egocentric networks typically contain clusters of "alters" (network contacts) drawn from particular foci (Feld 1981; see also Feld this volume) or that specialize in one or more specific support or discussion domains. Studies may, on substantive grounds, seek to capture only particular segments of these networks that pertain to one or more such clusters. Examples include studies focused on health (Perry & Pescosolido 2010) or politics (Huckfeldt & Sprague 1995); these investigate what may best be conceived as portions of social support networks.

The relations among these distinct egocentric networks are important, but unfortunately relatively little-studied. Much conceptual writing suggests that the smaller forms are nested within the larger ones—explicitly so for Roberts et al.'s (2009) network "layers" distinguished by regularity of contact, or Kahn and Antonucci's (1980) support circles based on closeness. One small empirical study (Bernard *et al.* 1987), however, found—using particular operationalizations—that only some of those in an emotional support group also were enumerated as instrumentally useful contacts.

Related is the issue of the degree to which these different networks can serve as proxies for one another. Do those who have larger or wider-ranging emotional support networks have correspondingly large and wide-ranging global networks, for instance? Or does maintaining a comparably large network of emotional supporters make it difficult to sustain numerous weaker relationships? Are measures based on different conceptualizations of "network" substitutable for one another when used as explanatory or response variables? To the extent that properties of the different networks correspond, obtaining separate measures of them becomes less important; often, propositions involving network concepts are stated as if they pertain equally to all of these definitions of "network." One exception that offers grounds for measuring distinct networks separately is Lizardo's (2006) hypothesis (and finding) that popular and "highbrow" cultural consumption have differing associations with the size of inner (close friends and relatives) and outer (friends and relatives contacted yearly who are not close) network regions.

What Network Properties Are to be Measured?

Given sufficiently detailed data, an almost bewildering variety of indices that describe aspects of egocentric networks may be constructed; Perry, Pescosolido and Borgatti (2018: chapter 7) provide one recent survey. Broadly speaking, though, these lie within a few conceptual domains, including social integration, composition, and range; when multirelational network data are available, some others (including multiplexity) become pertinent. Some specific measures (notably network size) can fall into more than one of these groupings.

Integration measures reflect the extent or richness of an individual's connectedness and/or activity. Composition measures involve the types of persons or relationships situated within an egocentric network, and may refer to either its typical makeup or to the presence/absence of a type of person/relationship. Many composition measures may appear in a given study, depending on the substantive questions of interest. Range measures too are numerous; Burt (1983) defines range as an ego network's capacity to connect the person at its center (ego) to diverse others. Structural range measures focus on features such as the number of segments (clusters, components) in a network, the average intensity of connections among its alter elements, or the extent to which the ego provides the only link between pairs of other actors in it. Attribute-based range indices assess the variability rather than the central tendency of distributions of alter characteristics. Campbell, Marsden, and Hurlbert (1986) and Huang and Tausig (1990) demonstrate that different range indicators are often rather weakly associated with one another.

In what follows, we present several distinct types of egocentric network instruments used in one or more GSS rounds. We begin with several comparatively short ones that ask respondents to report a network property directly, or that estimate a property by combining answers to a small number of

questions about network composition. We then turn to "name generator" instruments that obtain detailed data about individual alters and relationships within a respondent's network.

Studies of dyadic properties like homophily or support provision may require the relationship-level data obtained via name-generator instruments. If egocentric network-level measures are sought, however, the other instruments may be both more efficiently administered and more practical in some circumstances. Tradeoffs between efficiency, effectiveness, and data quality are of course important to consider; more studies of the comparative performance of different instruments in measuring a given network property (e.g. Smith 2002) would be valuable.

SHORTER GSS EGOCENTRIC DATA INSTRUMENTS

This section reviews several instruments that measure specific egocentric network features using as little as a single survey question. None obtains information on individual alters or relationships in a respondent's network. Several rely on reports of either the number or the presence/absence of alters having a given characteristic. All make comparatively limited demands on study resources.

Global Network Items

"Global" measures are single questions that request a summary assessment of some aspect of a respondent's egocentric network, often its size. In essence, such questions ask respondents to undertake the tasks of aggregation that network analysts perform on data obtained via instruments that obtain more granular information. Global items are attractive because administering them requires little survey time. They can, however, pose very extensive cognitive tasks for respondents, who must enumerate or estimate—and then synthesize—much information in order to provide the answer requested. Considerable error in measurement is therefore possible.

Table 1 displays several global items that have appeared in the GSS. Some ask for the number of alters of a specific type. The 1986 question about close friends outside the family yielded a median

network size of 5 (interquartile range [IQR] 3-8)[3]; the 1998 item about "good friends"[4] produced similar results (median 4, IQR 2-6). These measures would seem to refer to emotional support groups, as both involve a closeness criterion. Lizardo (2006) used the third item—about the number of friends/relatives with whom yearly contact is maintained—in measuring the number of weak ties; it yields a larger network size (median 15, IQR 6-30) across three GSSs between 2000 and 2004. It may understate the number of such relationships because it excludes workplace contacts.

Sets of global items about numbers of contacts within particular foci of activity (Feld 1981) represent another approach to assessing network size. McCarty et al. (2001) outline a "summation method" based on global items asking about a respondent's number of relationships within each of several settings that together cover the principal foci within which ties are situated, and then adds responses to them. The next three items in Table 1 illustrate this: respondents report separately about close friends at the workplace, in the neighborhood, or someplace else. Summing answers to them in 2002 GSS data yields a median number of close friends of 8 (IQR 4-16). Note that this is considerably larger than what the overall "good friends" item gave for 1998; separate prompts about the three settings may encourage respondents to recall friends that they do not report when responding to a single overall question.[5]

How well can people answer global size questions? Evidence is limited, but we mention some pertinent studies. Sudman (1985, 1988) compared responses to global items about the size of social groups, workplaces, neighborhoods and relative networks with estimates obtained by asking subjects to freely recall individual names or to recognize group members from a listing. In general, mean global and

[3] Descriptive statistics reported here are from our calculations based on GSS data, weighted for the number of adults in the household and (in some cases) subsampling of nonrespondents.
[4] This item was asked of respondents who stated that they had one or more "good friends that they feel close to"; those who did not were assigned values of 0.
[5] Similar calculations using 1986 data on a series of questions about numbers of various relatives (e.g. sisters, grandparents, in-laws) together with the first "good friends" item in Table 1 yield a median estimated size of 38 for a "family and close friends" network, IQR 25-58.

recognition-based size estimates were similar, and greater than recall-based estimates; global estimates exhibited much greater variability, however. There was some indication that all methods perform better when proximate or close contacts rather than more distant ones are studied. Killworth et al. (2003) studied reports of the number of contacts within subpopulations of known size, reasoning that on average, the number known in a subpopulation should be proportional to its size. They found, however, that subjects reported proportionately fewer ties to large subpopulations than to smaller ones; variability in reports too grew with subpopulation size.[6]

Several comparative studies based on ISSP data use global size items. Among these is a seven-country comparison based on the 1986 ISSP (Höllinger & Haller 1990) that found friendship networks to be larger in Australia and the United States than in Great Britain and four continental European countries, acknowledging that these differences may reflect societal variations in understandings of "friendship" relations. Letki and Mieriņa (2015) compared 21 countries using 2001-02 ISSP data, reporting that friendship networks tended to be larger among lower-income persons in the six nations that had undergone a post-Communist transition, while elsewhere the number of friendships rose with income. Requena (2010) used the same data base in a 13-country study demonstrating that happiness is greater among those having larger friendship networks.

The one-item racial composition measure in Table 1 asks if any opposite-race persons are among a respondent's good friends. For 1998 GSS data, Smith (2002) found that this yielded much higher reports of cross-race friendships than did data elicited by name generator-interpreter methods. He argues that by making a contact's race salient, the one-item approach prompts a more extensive memory search for such alters. As well, the social desirability of presenting oneself as having a racially diverse network might lead respondents to relax their definition of a "good friend" in order to include an opposite-race person.

[6] These studies also bear on the reports of contacts with subpopulations and occupations discussed below.

The global network density item in Table 1 asks respondents to assess the typical level of acquaintance among their "friends," a very considerable cognitive task. For 1985 GSS data, Burt (1987c) found only a weak correspondence between these global density reports and name-generator based density estimates. He argued that the more resource-intensive name generator approach produces more precise measures by individually enumerating alters and then posing separate questions about the relationship between each pair of them.

The last item displayed in Table 1 is an indicator of network activity or sociability with friends that has appeared in the GSS regularly since 1974. Response categories range from "never" to "almost every day"; respondents answer the same question about relatives and neighbors. Drawing on the GSS panel studies conducted between 2006 and 2014, Hout and Hastings (2016) estimate that these items have moderate (between 0.5 and 0.6) reliability.

Numerous trend and cross-sectional studies use these sociability measures. Trend analyses (e.g. Fischer 2011; Marsden & Srivastava 2012; Schwadel & Stout 2012) find an over-time decline in socializing with neighbors, but either stability or slight upturns in network activity involving relatives or friends. Guest and Wierzbicki (1999) suggest, additionally, that specialization in either nearby or extra-neighborhood socializing may be rising. Activity of all types falls notably with age. Sarkisian and Gerstel (2016) demonstrate that single people socialize with others more often than currently- or formerly-married ones do. A panel analysis by Glanville, Andersson and Paxton (2013) shows that increases in interpersonal trust follow rises in socializing.

Counts of Contacts with Subpopulations

"Aggregated relational data" (McCormick *et al.* 2013) are based on respondent reports of the number of persons in some subset of a population with whom they have a specific type of contact; they are, in essence, subset-specific versions of global questions about network size. Colloquially, they are known as "How Many Xs?" questions, where X refers to the subset of interest. Except for requesting a

count of contacts with Xs rather than whether the respondent has none/one or more, they resemble the single-question network composition item in Table 1. Asked with reference to a broad form of contact such as acquaintance or "knowing," and analyzed via "scale up" methods (McCormick *et al.* 2010), aggregated relational data yield estimates of global network size. "How many Xs?" questions can also be used to estimate the size of an unknown population.

Table 2 presents examples of such questions from two GSS topical modules. Questions about knowing homicide and AIDS victims asked between 1988 and 1993 were used to investigate potential biases in the official reporting system for AIDS cases (Laumann *et al.* 1993). Respondents who knew one or more victims were asked for the race, age, and other characteristics of the victim they knew best, yielding a probability-proportional-to-size sample of victims known by the sampled respondents. Distributions of those characteristics in the GSS and official statistics were then compared; they matched closely for homicide victims. The comparisons suggested, however, that AIDS cases among whites and in the Midwest were disproportionately underreported.

Data collected in 2006 about contacts with people having different first names and with those in different occupations and population subgroups were used both to obtain estimates of network size and assessments of segregation of contacts across social dimensions (DiPrete *et al.* 2011). Questions about acquaintances yielded an estimated median network size of 550 (IQR 400-800), while those about "people that you trust" implied a median size of 17 (IQR 10-26). Inferences about segregation rest on variation in rates of knowing persons with a given name or attribute; this proves to be much greater than would be expected if contacts with others were to form at random. Respondents are, for example, much more apt than anticipated by chance to know no (or many) Brendas, unemployed persons, or conservatives. DiPrete et al. regard the levels of segmentation—observed for both acquaintance and trust contacts—to be especially notable for race/ethnicity, church attendance, and political ideology.

<u>Contacts with Occupations</u>

"Position generator" instruments (Lin *et al.* 2001) seek to capture the range and level of the accessible social resources within a respondent's network, and hence aspire to measure "resource" or "instrumental" networks. Conceived within a social capital framework, they proceed by asking whether a respondent has a given form of contact with each location—ordinarily an occupation— within a set of selected social positions. In eliciting such contacts, position generators typically use a relatively modest threshold of relation strength, such as "know on a first-name basis" or "relatives, friends, or acquaintances." Again resembling the global racial composition indicator, they usually assess only the presence or absence of any contact, although a few position generators (e.g. Enns *et al.* 2008) ask about the number of contacts with each location.

Like aggregate relational data, position-generator items can be viewed as subset-specific—usually dichotomous—versions of global network items. Once obtained, responses to position-generator items are used to construct aggregate indicators of the range and composition of someone's contacts with the social positions involved.

The 2018 GSS included a set of position generator items as part of an ISSP module. Table 4 displays them. Respondents were asked to indicate whether they know anyone (by name and well enough to contact) who holds each of ten occupations ranging from home/office cleaners and hairdressers/barbers to executives of large companies and lawyers. Those who knew someone in an occupation were asked whether their closest contact holding it is a relative, close friend, or other acquaintance. Because these data have only recently become available, we cannot yet cite examples of published research that uses them.

NAME GENERATOR DATA ON NETWORK ALTERS AND RELATIONSHIPS

The best-known and most widely-investigated GSS egocentric network data involve name generators (Table 4) together with follow-up "name interpreter" items (Table 5). Name generator

instruments first enumerate a set of other persons (alters) deemed to lie within a subject's personal network, and then pose separate questions about each of those persons, the links between pairs of them, and their relationships to the subject. They offer great flexibility, enabling construction of an almost limitless number of integration/sociability, range, and composition indices. Depending on the number of alters elicited and the number of follow-up questions, such instruments can also make very extensive demands on study resources, and may involve long and repetitive series of questioning.

Origins and Development

Burt (1984) proposed the topical module on social networks centered on the "important matters" name generator that first appeared in the 1985 GSS. His article is, to our knowledge, also the source of the "name generator/interpreter" terminology for referring to network items in surveys. The proposal drew on what had been learned in prior local or regional studies of egocentric networks, notably Laumann (1973) and Fischer (1982a). Burt argued for intimacy as the criterion for eliciting alters on the grounds of its extensive use in prior research, generality and relevance to the wide variety of GSS content, and practicality in terms of demands on study resources. It was a central quality in his analysis of the overlapping occurrence of features of relationships in Fischer's (1982a) multiple name-generator study of social support networks.

The proposal suggested that these data might inform understanding of peer socialization processes that shape attitudes, something especially pertinent to other subjects covered by the GSS, as well as instrumental achievement, well-being, and variations in the capacity to manage social environments. The relatively brief instrument Burt advocated (compare, e.g., Fischer 1982a) could not, of course, aspire to capture all relationships involved in such processes, but rather to obtain indicators of the range and other constructs describing each respondent's immediate interpersonal context.

Drawing on two of Fischer's (1982a p. 331) items, Burt (1984 p. 331) proposed to operationalize intimacy by asking about a respondent's partners in discussions of "important personal matters." This

criterion focuses on exchanges as a basis for eliciting relationships, as distinct from the role relation standard ("best friends") employed by Laumann (1973) or the affective one (closeness) used in Wellman (1979); see McCallister and Fischer (1978) and Campbell and Lee (1991). McCallister and Fischer argue that participants in rewarding exchanges are especially apt to shape a subject's attitudes and behaviors, and that questions about exchanges involve less ambiguity and variety in interpretation than those relying on terms like "friend" (Fischer 1982b).

Following pretesting and deliberations within the GSS Board of Overseers, the word "personal" was removed from the proposed name generator. By broadening the item's range of content, this modification likely increased the size of the egocentric networks elicited. The content also became less specific: the item asks for persons involved in discussing respondent-deemed significant topics; these may, of course, vary among respondents. A proposed name interpreter item about what was discussed with each alter was unfortunately removed during final questionnaire development.

The name generator that resulted is shown in Table 4. It elicits those with whom the respondent has recently (within a six-month reference period) discussed matters important to her or him. The number of names that may be given is not explicitly limited as in some prior studies (e.g. Laumann 1973), so a numerical limit does not serve as a cue to what the question is seeking. Respondents who initially give fewer than five names are probed once for more, but they can and do name more than five (Marsden 1987 pp. 125–126n); it stands to reason that—on average—somewhat larger networks would result if all subjects were to be probed.[7] Name interpreter data are collected only for the first five names given, however, so in practice most network measures constructed are based on networks of size five or less. This question reappeared in subsequent GSSs in 1987 (with a probing threshold of 3), 2004, and 2010.

[7] Marin (2004) showed that probing can elicit appreciably larger networks. Repeated and extensive probing, however, can have demand characteristics—signaling that the interviewer expects more names to be provided, leading respondents to comply by lowering the standard of "importance."

Numerous other surveys have adopted the important matters name generator, either as a stand-alone measure of core/emotional support networks, or as part of a longer instrument eliciting broader social support networks. Examples of stand-alone uses include the Multi-City Study of Urban Inequality (e.g. Tigges *et al.* 1998), a 1996 study of political discussion during a presidential election process (Huckfeldt 2001)[8] and surveys in urban China (Ruan *et al.* 1997). Among studies employing it together with other name-eliciting questions are the National Social Life, Health, and Aging Project (Cornwell *et al.* 2009), and the Survey of the Social Networks of the Dutch (SSND; Mollenhorst *et al.* 2008).

Other GSS Name Generators

A second name generator instrument appears in topical modules focused on religion in the 1988 and 1998 GSSs. Mixing role relation and affective criteria, it elicits first names of persons that respondents deem "good friends that they feel close to" (Table 4). One probe for more friends is made after the initial response. Name interpreter data were obtained about as many as three friends in 1988 and up to five in 1998.

We briefly call attention to a study based on a 1994 GSS topical module on family mobility that—together with a follow-up study of siblings—elicited as many as 20 members of a respondent's extended family (Goldstein & Warren 2000), including spouses, siblings, children, and in-laws. Using proxy reports of the educational and occupational attainments of these family members, Goldstein and Warren demonstrated that the range and reach of family networks rose with socioeconomic standing, concluding that fewer familial support resources are available to the most economically vulnerable persons.

Name Interpreters

[8] In this study, a randomly selected half-sample answered the important matters name generator; the other half answered a question about discussions of political matters.

The content of egocentric network measures derives primarily from questions about characteristics of network elements administered after the name generator. These are of three types, illustrated in Table 5. First (panel A) are respondent reports about alter characteristics. The religion and race/ethnicity questions were recommended as features of general interest by Burt's (1984) proposal. The questions on political party affiliation and congregational membership reflect the content of the topical modules on political participation and religion in which name generator instruments were embedded.

Qualities of respondent-alter relationships capture aspects of tie strength and content. The exemplars in panel B of Table 5 refer to frequency of contact and duration of acquaintance. Respondents are less apt to be able to describe relationships between alters to one another in depth; the items in panel C ask only whether each pair of a respondent's contacts is entirely unacquainted, or (if not) extremely close, yielding a three-valued indicator of tie strength. Such reports are crucial for constructing structural measures of range such as egocentric network density.

SUBSTANTIVE FINDINGS BASED ON GSS NAME GENERATOR DATA

Marsden (1987) described the networks elicited by the 1985 GSS name generator instrument. Unweighted data showed that respondents discussed important matters with a mean and median number of 3 others; subsequent replication with weights (McPherson *et al.* 2006) yielded a slightly lower mean, 2.9.[9] More than half of the alters cited were among the respondents' relatives. The networks were relatively closely-knit; in 22% all alters were said to have especially close relationships with each other; only 5% consisted of mutual strangers. They were homogenous in terms of most attributes, especially race/ethnicity; fewer than 10% exhibited any diversity in this respect.

[9] For the 1998 "good friends" name generator instrument (which uses a probe limit of 5), Marsden (2003) reports a mean network size of 3.3, median 3.

Further examination of network homogeneity (Marsden 1988), focused on homophily—i.e., respondent-alter similarity—as distinct from diversity among alters. Very strong tendencies toward homophily by race/ethnicity, religious affiliation, and age, and weaker ones for education and gender, were evident. Gender homophily was notably greater in nonfamilial relationships, while cross-generational family ties tended to lower both age and educational homophily. Reagans (1998) showed that cross-race relationships with alters tended to have originated more recently than race-homophilous ones. Louch (2000) demonstrated that respondents are more apt to report that homophilous pairs of alters are connected to one another.

Two studies examined implications of Feld's (1981) focus theory. When alters share a focus of activity like a family or workplace, they tend to be linked with each other (Louch 2000). Subjects whose networks are situated within different foci are exposed to different opportunity structures for forming and maintaining relationships, which in turn is reflected in the diversity of their networks (Marsden 1990); workplace-centered networks, for instance, exhibit less diversity by age and more by race/ethnicity.

Trends

Using the 2004 GSS social network module, McPherson et al. (2006) repeated Marsden's (1987) analyses after a two-decade interval. While many findings replicated, some important ones did not. In particular, the mean number of alters cited fell from nearly 3 to just over 2, and the percentage of respondents naming no discussion contacts rose from about 10% to nearly 25%. Reporting of both kin and nonkin discussants fell, but more rapidly so among nonkin, so that the fraction of kin in a typical discussion network rose. Additionally, there were indications that the racial heterogeneity of contacts rose, while educational heterogeneity declined. Both of these mirror over-time trends in population diversity, but the latter could also reflect increases in socioeconomic segregation seen in other domains, notably intermarriage (Schwartz & Mare 2005).

These findings, especially that about reduced network size, occasioned a great deal of discussion and debate in and beyond academia (Fischer 2009; McPherson *et al.* 2009; Paik & Sanchagrin 2013), resonating with arguments about declines in community and social capital (Putnam 2000). Fischer (2009) argued that the finding was due to some yet-unidentified methodological artifact, and later (Fischer 2011) marshalled a wide variety of data from the GSS and other sources to support a conclusion that—on balance—the relationships of Americans to their family and friends underwent little change in the late 20th century (see also Marsden & Srivastava 2012). Paik and Sanchagrin (2013) pointed to interviewer differences as the source of the observed changes, arguing that reports that important matters were discussed with no one were clustered within the caseloads of particular interviewers in the 2004 data. Marsden (2013) reported on a 2010 experiment that varied the questionnaire context and position within the GSS in which the network items appeared, finding that a small fraction (about 5%) of respondents reported no confidant in a 1985-like context (that placed the network module midway through the questionnaire), while many more (over 20%) did so in a 2004-like setting (when the module appeared near the interview's end). Mean network sizes for the two settings were 2.5 and 2.1, respectively, suggesting that core network size might have declined somewhat, but not because more people have no discussants at all. An internet-mode study also conducted in 2010 (Brashears 2011) yielded estimates for mean size and the proportion citing no one resembling those for the 1985-like context in Marsden's study.

Further study of 1985-2004 differences focused on trends in homophily (Smith *et al.* 2014). They reported that some forms of intergroup contact, e.g. across race/ethnic lines, rose by virtue of increasing population diversity. Net of this, underlying tendencies to select contacts similar to oneself from among those available remained largely similar to those found by Marsden (1988) for 1985. Gender was something of an exception, as the tendency of spouses to confide in one another rose, and there were hints that religious- and educationally-based selection of associates also might have grown.

Group Differences in Network Properties

Marsden's (1987) overview of the 1985 data reported bivariate-level group differences between several sets of sociodemographic groups, finding network range (size, sparsity of connections, heterogeneity among alters, nonkin contacts) to be generally greater among the young, the better educated, and urban residents. Gender differences lay primarily in kin composition, while racial/ethnic minorities had smaller networks that were more heterogeneous by race/ethnicity—but less so by gender—than those of whites. Subsequent studies examined such group differences in greater depth.

Socioeconomic Standing (SES). Several studies consider differences by SES. Huang and Tausig (1990) reported that several measures of range (size, sparsity, diversity) rise with SES indicators including education and family income. Andersson (2018) extended this back a generation, showing that parental education is associated with network size and other indicators of range and composition, especially among those who are not themselves college-educated. Carroll and Teo's (1996) study of differences between managers and non-managers found managerial networks to be larger, more workplace-centered, and sparser. Cornwell and Cornwell (2008) showed that upper-SES persons are more apt to cite expert confidants (professional advisors or consultants), not only because they more often consult experts in an exclusively professional capacity, but also because their friends and family members are more likely to possess expertise. These robust associations resonate with the notion that access to network connections is among the flexibly-deployed resources that make socioeconomic standing a "fundamental cause" of valued outcomes in many domains, notably health (Link & Phelan 1995).

Age. Morgan (1988) examined age differences. He reported that networks of the elderly were smaller, more centered on relatives, and less diverse in role composition than those of younger people. Older subjects tended to have lower-frequency and longer-duration relationships, but their networks exhibited greater variety in age. Burt (1991) used similarities in network features between differently-

aged persons to induce eight distinct age/life-course statuses: people aged 19-24, for example, have larger, age-homophilous nonkin networks while maintaining frequent contact with parents; those between 37 and 46 have age-diverse networks of lower-frequency relationships, in which children and coworkers are prominent; and those over 66 have networks like those Morgan described.

Marital Status. Hurlbert and Acock (1990) asked how networks differ by marital status. Currently-married and widowed people had more densely-knit, longer-duration, kin-centered sets of confidants than did the never married or separated/divorced. Widowed people were most likely to associate with others different from them in age, while the currently married were least apt to do so.

Gender. Moore (1990) studied gender variations in egocentric networks using a structural perspective asserting that differences between men and women in network size and composition are attributable to the distinct social positions they occupy. She found that most male-female differences vanished after adjustments for family, employment, and age differences; the tendency for women to have more kin-centered networks persisted, however, suggesting that women tend to be "kin-keepers." Straits (1996) examined variations in gender composition among coworker confidants, finding that women were more apt than men to cite opposite-sex colleagues. Brashears (2008) considered gender differences in homophily: men and women displayed similar tendencies to associate with nonkin of the same age, education, and religious preference; they distinguished among dissimilar others in different ways, however.

The idea that the life course is gendered (Moen 2001) suggests that the consequences of different structural positions for networks vary between women and men. Moore (1990), Hurlbert and Acock (1990), and Marsden (2018) all examined this prospect, finding limited evidence to support it; employment was more strongly linked to citing coworkers among women than among men. Liao and Stevens (1994) showed that married women name their spouses as confidants more often than married men do, and that some factors associated with citing one's spouse differ by gender. Marsden's (2018)

analysis of panel data reported that transitions into marriage affect men's socializing patterns more than they do women's, while women's socializing levels appear somewhat more sensitive to the presence of children.

Residential Setting. Among studies of rural-urban differences is that by Beggs, Haines and Hurlbert (1996). They found that rural residents have longer-duration and more religiously homogenous relationships than do urban dwellers. Deng and Bonacich (1991) focused on such differences among blacks, finding that racial/ethnic variety in contacts is greater among urban than rural residents, as Marsden (1987) found for all adults. Merging contextual data on the religious makeup of geographic areas with GSS interview data, Olson and Perl (2011) demonstrated that the religious composition of friendship networks reflects available opportunities for contact: those living among many Catholics, for example, tend to have more Catholic friends.

Personality. Andersson (2012) considered differences in network heterogeneity by a personality factor, dispositional optimism. Reasoning that those who anticipate good things to happen tend to be more sociable and trusting, he found that optimists have larger and more educationally, racially, and age-diverse sets of network contacts.

Outcomes Linked to Egocentric Networks

Several studies use properties of egocentric networks as explanatory variables to predict individual responses. We enter the disclaimer that these studies—all based on cross-sectional GSS data—can only suggest that the relationships posited are causal; it is possible that subjects select alters into their networks by virtue of their values on the outcomes, rather than being influenced by network features.

Well-Being. Social support and health research posits that structural features of networks can improve well-being via pathways such as heightening social integration and confirming identities (e.g. Perry & Pescosolido 2010). Several studies of the 1985 data examine such ideas for different measures

of well-being. Burt (1987b) reported that expressed happiness rose with both the size and density of networks. Notably, disconnectedness within an egocentric network—reports that pairs of alters are strangers to one another—was associated with reduced happiness. Acock and Hurlbert (1993) replicated Burt's finding about density using a multiple-indicator measure of life satisfaction; as well, kin composition heightened the satisfaction of never-married people, made little difference among the currently-married, and reduced it among separated or divorced respondents. Life satisfaction rose with a network's educational composition, while an anomia measure fell. Brashears (2010) focused on differences in well-being by religious homophily, finding that—among those who frequently attend religious services—happiness tended to be higher and expressions of anomia lower when the subject's network includes many co-religionists. No parallel result emerged for either racial or educational homophily. Hurlbert (1991) found that job satisfaction was higher among those with more kin- and coworker-centered networks.

Political Interest and Activity. A 1987 topical module on political participation included the important matters name generator, name interpreters stressing political content, and a probe limit of 3 alters. Knoke (1990) employed these data in studying associations between network properties and political outcomes. His findings highlight the homogeneity of political environments as an important factor: those perceiving their associates to be either entirely Republican or entirely Democratic were more apt than others to discuss politics frequently and to be politically active. Moreover, activity within voluntary associations (especially those with problem-solving orientations) was greater among respondents whose networks included other association members. Straits (1991) found political discussion frequency to be greater among people with larger networks, and (on a dyadic level) in relationships involving spouses, coworkers, and closer alters. These findings contribute to what has since become a substantial political science literature on networks and political discussions (e.g. Huckfeldt 2001; Huckfeldt & Sprague 1995).

Sociopolitical Attitudes. One's interpersonal network environment might plausibly shape many attitudinal orientations. Some such influences might reflect variations in network composition; for example, Berg (2009a, 2009b) found that whites having more educated and nonwhite contacts tend to have more positive assessments of immigration and less restrictive views about undocumented immigration. Those with predominantly older alters, by contrast, tend to hold more restrictive positions.

Features of a network may also amplify or dampen associations between other characteristics and attitudes. Bienenstock, Bonacich and Oliver (1990), for example, reported that differences in views about morality by individual religiosity grew among those whose networks were religiously homogenous, and similarly that network density tended to accentuate differences in attitudes based on individual characteristics like gender and education. Berg's (2009a) study found that network composition sometimes moderated associations between a contextual feature—the percentage of foreign-born persons living in an area—and immigration stances held by whites.

METHODOLOGICAL RESEARCH ON GSS NAME GENERATORS

Numerous studies examine the properties and quality of the network data obtained via GSS name generator instruments; many of these use data bases other than the GSS itself. This section surveys their findings about both name generators and name interpreters. Several demonstrate the sensitivity of the important matters name generator to elements of a survey setting, calling for care in its administration.

Studies of Name Generators

The wide scope of what a respondent might deem to be "important" has prompted examination of the thought processes respondents use in formulating responses to the important matters name generator, of topics to be discussed with the alters they name, and of the relationship between that

topical content and the types of persons elicited. Given a concept of the network that the question seeks to capture, these can be seen as validity studies; without one, they can be viewed as inductive investigations of the meanings subjects attribute to it.

How Do Respondents Develop Answers? The important matters name generator requests names of people, inviting respondents to think of those involved in recent discussion events when citing alters. It does not require that they proceed this way, however. Bailey and Marsden (1999) debriefed a convenience sample of respondents about their thought processes immediately after answering the question. Less than half reported that they referred to particular episodes or events. Many others took a more direct route to naming alters, with only a general sense of "important matters" in mind, or inferred that the question was asking for the types of persons—close family or friends, or frequently-seen contacts—with whom they usually speak about salient things. Brashears (2014) too distinguishes between strategies that search for people and those that search for events, noting that the former are better aligned with what is known about how memories for persons are organized.

What Do People Talk about with Alters? Removal of the word "personal" from Burt's (1984) originally-proposed "important personal matters" questions meant that respondents determine the substance of any discussions leading to the alters cited. At least four studies (Bailey & Marsden 1999; Bearman & Parigi 2004; Brashears 2011; Small 2013) have inquired into that content via open-ended questioning. Their findings are not readily compared because of varying target populations, coding schemes, survey modes, and methods of eliciting content. Bailey and Marsden (1999) coded responses to a debriefing probe made shortly after the name generator; Bearman and Parigi (2004) and Small (2013) elicited the most recent important discussion event and coded its content; and Brashears (2014) coded the subject of the most recent important discussion held with an alter randomly chosen from those given in reply to the name generator.

Each study reports some topics that—out of context, at least—appear rather exotic and may not appear *prima facie* "important," including "zoo issues" (Bailey and Marsden), "cloning headless frogs" (Bearman and Parigi), "zombie movies" (Small), and changes in the color of Kentucky Fried Chicken baskets (Brashears). Notwithstanding these rare responses, the studies code the vast bulk of discussion topic descriptions into a set of relatively similar, reasonable categories, though with differing relative frequencies. Many of these—e.g. personal relationships, finances, health, emotions, children, housing—might well have been given in reply to Burt's original "important personal matters" request. Others like work, and especially the economy or politics, perhaps might not be regarded as "personal".

Bearman and Parigi (2004) reported that 20% of their respondents ("the silent") could not point to an important discussion event within the six-month reference period specified. This is of great concern if the name generator's purpose is to provide participants in specific discussion episodes, but perhaps less so if it is a prompt for identifying those in an emotional support group or convoy. When probed, only half of the silent group (10% of all respondents) said that they had no one to speak with about significant things, though; the other half said that no important discussions had taken place. The former subjects might be unable to provide names in reply to the name generator's request for people; most studies that use it find, though, that smaller fractions than this name no one. The latter group raises an issue pertinent to any name generator involving actual rather than hypothetical behavior, of whether respondents have experience in conducting the exchange used as a criterion for obtaining names.

Role-Topic Association. Since respondents select the domains they deem important, the important matters name generator allows variation in the topics that are discussed with alters. This raises the question of whether topic differences imply corresponding differences in the networks based on the question.

This has been examined most thoroughly for the association between topics and alter roles. Prior research (e.g. Wellman & Wortley 1990) anticipates role-topic association, and studies of dyads elicited via the important matters name generator detect it. Bearman and Parigi (2004) showed, for instance, that children, health, finances, and housing are most apt to be discussed with spouses, while community issues, politics, religion/ideology and work conversations tend to involve friends. Small (2013) too reported such associations, e.g. between coworkers and career discussions and between health professionals and health issues. Two studies (Bearman & Parigi 2004; Brashears 2014) pointed to modest differences in how men and women link topics with roles.

Role-topic association is a substantive phenomenon that is not undesirable in and of itself. Variation in a network's role composition that is attributable to between-respondent topic differences may best be conceived as a form of measurement error; if (e.g.) networks in general tend to involve strong ties for one topic and weaker ones for a second, then what appear to be differences in the intensity of the interpersonal contexts surrounding individual respondents may instead reflect the disparate topics of discussion. The bias due to such measurement errors would depend in turn on how widely topics vary across respondents and on how strongly—not just whether—roles and topics vary together. It is our impression that the associations reported by studies to date are of modest strength. Moreover, because most respondents likely discuss a mix of topics with several alters, aggregation of dyadic-level data into network-level measures will tend to dampen measurement variations that result from role-topic association.

We remark that topic variations have a temporal dimension. Some topic differences between respondents are likely persistent, e.g. between a workaholic concerned with office affairs and a socialite preoccupied with status and relationships. Others are more fleeting, owing to situational circumstances, e.g. an acute episode of illness or a one-time major financial transaction that may add a professional

advisor to an important matters network for a short time. The latter variations, especially, are apt to be sources of unreliability in the networks elicited by the question.

One tactic for taking account of role-topic association would be to include name interpreters that measure the topics discussed with each alter, and then enter statistical controls for topics during data analyses. Reducing topic-induced variations in network data themselves might be accomplished by using an exchange name generator that permits less topic variation than the important matters item does, or a name-eliciting strategy that is not anchored on discussions.

Survey Context Effects. When a survey question contains a vague or ambiguous term, respondents often refer to the survey context—that is, the other questions presented before it—when deciding what it means (Tourangeau *et al.* 2000). Respondents appear to do so when interpreting the term "important matters." Bearman and Parigi (2004) reported that when (in pretests) their request for the most recent important discussion event came after other items about education, most respondents reported that they had discussed education. Bailey and Marsden (1999) systematically varied question context, alternately presenting question series involving family and about politics before the important matters name generator; substantially more respondents reported politics to be important after being primed with political items. To avoid such effects, both Bearman and Parigi (2004) and Cornwell et al. (2009) opened surveys with their respective important matters items.[10] This, in essence, means that respondents answer it based on whatever they were thinking about prior to the interview.

How Strong are the Relationships Elicited? Burt's (1984 p. 319) proposal showed that relationships involving discussion of personal matters in Fischer's (1982a) regional study tended to be stronger—in terms of affective closeness, role relations (immediate family, friendship) and cooccurrence of other contents (e.g. capacity to borrow, socializing) than the typical respondent-alter dyad found

[10] Given that topics are so readily manipulated, Brashears's (2014) finding that topic does not predict the availability of social support is perhaps comforting.

there. It was hence anticipated that ties elicited by the important matters name generator would also tend to be closer ones.[11] Based mainly on distributions of name interpreter data (e.g. kinship composition) and alter homogeneity, Marsden (1987) concluded that important matters networks consisted predominantly of closer relationships, while noting that network range measures varied considerably across respondents. Other studies in different settings (e.g. Perry & Pescosolido 2010) too find that the important matters prompt tends to yield stronger ties, though not exclusively so.

Ruan (1998) studied the cooccurrence of the important matters name generator with ten others in a multiple-generator instrument used in an urban Chinese survey; the GSS item was the first to be administered. She found that dyads in which important matters are discussed were most apt to also involve socializing, and least likely to include access to major instrumental aid (borrowing a substantial sum). Important matters ties exhibited multiplexity: on average, the alters involved were also named for nearly 3 of the other contents.

Small (2013) focused on whether discussions of important matters necessarily involve important people. He administered the important matters name generator in an online survey, reporting that less than half the alters named[12] were also given in response to later questions asking for persons considered "important to you." Perhaps more crucially, Small's (2013, 2017) qualitative work points to substantive reasons that the GSS item should not yield exclusively important others: the subject of an important discussion may require a partner who possesses specific expertise (e.g. a professional advisor) or experience that allows her or him to understand a topic/circumstance, and/or someone who is available when the subject needs to discuss it. Maintenance of privacy, e.g. about a stigmatizing identity or condition, is another pertinent consideration (see also Shelley *et al.* 1995); disclosing such information to a gossip within a densely interconnected network can be problematic. Or one may be

[11] This could not be confirmed within the GSS, however, because it does not include any broader set of ties that could serve as a comparison group.
[12] A typical respondent reported about 1.7 names; 17% gave none.

seeking a sounding board rather than trusted advice and counsel, so that any available empathic ear may suffice.

Small concludes that it is misleading to claim that networks based on the important matters question consist of strong relationships only; they may, nonetheless, include more such ties than many other name generators might yield. Of course, if one's conceptual framework requires networks that consist of close ties only, they could be obtained directly using an affective name generator.

Stability. Few studies administer the important matters name generator repeatedly over time to the same respondents, but two that do so suggest that turnover in the alters named can be considerable. Small, Pamphile and McMahan (2015) measured important matters networks for members of three cohorts of graduate students at three points (separated by six-month intervals) during the first year of study. They found that well more than half of the alters cited changed, though a few were mentioned on all occasions. While the extent of turnover here may reflect the changing setting that all graduate student subjects were experiencing during a life course stage when networks often undergo transformation (Bidart & Lavenu 2005), the findings suggest that changing contexts can both alter the matters deemed important and provide new opportunities for network formation, in turn leading to change in those with whom discussions occur. For adults surveyed in the SSND, Mollenhorst, Volker and Flap (2014) reported that about 30% of the alters named in a composite network based on important matters discussions and provision of practical help were re-named after a seven-year interval; separate figures for the two name generators are not given.[13]

Interviewer Differences in Names Elicited. As open-ended survey items that ask respondents to list entities within a given set, name generators are a type of question known to be vulnerable to

[13] Exchange name generators may be more subject to transience in alters elicited than other methods, especially if they refer to specific events. A small study (Broese van Groenou *et al.* 1990) over a one-month interval found higher stability for a role-relation name generator than for an affective one or a 20-item exchange one; stability in the inner circle of the affective generator was notably higher than in the outer one.

between-interviewer variation in the number of entities reported (Groves & Magilavy 1986). Marsden (2003) found substantial interviewer differences in the size of networks elicited by the good friends name generator in 1998. Since area probability personal interview studies like the GSS do not randomly assign interviewers to respondents—most interviewers work within a geographic area—not all such differences are necessarily attributable to interviewers; some could reflect genuine variation in network size across sampled areas. Interviewer-related differences in name-generator network size were, however, appreciably greater than those for the global network size measure administered by the same interviewers in that GSS round.

Paik and Sanchagrin (2013) found differences in the numbers of alters obtained by different interviewers using the important matters name generator in 2004, pointing to them to account for the decline in average network size (vs. 1985). Straits (2000) also reported differences in network size across the student interviewers who administered the important matters name generator and a "significant people" variant.

The structure of a name generator question allows for much more unscripted variation in administration than does a typical closed-ended survey item. Unobserved interviewer behaviors are hence one possible source of cross-interviewer differences in the number of responses obtained. Qualitative analyses of respondent-interviewer interactions could offer insight into understanding them.

Summary. Findings covered here reveal that the important matters name generator is a relatively "labile" item; numerous elements of a survey interview setting can alter the answers it elicits. Other name generators may be affected by at least some of these conditions, too. This calls for close attention to standardizing survey conditions, including question context, interviewer training, potential survey mode effects, and more. Attention to such considerations is of special importance in longitudinal studies that aspire to measure network change.

Studies of Name Interpreters

Name interpreters yield most of the content of egocentric network measures. Methodological research about them is, therefore, well warranted. Here we discuss issues investigated for both name interpreter items about individual alters and network-level measurements obtained by aggregating them within respondents.

The mere provision of some answer to a question—rather than ignoring it or claiming not to know what it seeks—is one basic indicator of survey data quality. Burt (1987a) examined missing data rates for the name interpreters administered in 1985, finding all to be low.[14] The highest was for reports about relationships between pairs of alters (Table 5, panel C); around 4% of respondents gave no answer for—or claimed not to know—at least one of these. Burt's analyses suggested that these missing data could reasonably be imputed as weak ("total stranger") relationships.

Another study (Burt & Guilarte 1986) asked about how to code the strength of those alter-alter relationships described as neither "especially close" nor "total strangers." It concluded that the intensity of such relationships is little stronger than that of stranger ties. Turning to respondent-alter links, Burt (1986) argues that citation order can serve as an indicator of tie strength[15] based on its associations with frequency of contact, kinship relations, and other role-relation labels. He concludes that the first three alters named tend to be notably closer to a respondent than the fourth or fifth. Aligned with this is Ruan's (1998) finding that relationships with first-named important matters alters are higher in multiplexity than those with later-cited ones. Marin (2004) found that alters named sooner tend to be closer to a respondent and connected to many other alters within an egocentric network.

[14] Less than 1% (3 of 1534) of respondents did not answer the name generator item itself in 1985, though many more said that they had no alters to report. Item nonresponse for the name generator was somewhat higher (between 1 and 2%) in 1987 and 2004.

[15] The emotional intensity or closeness of respondent-alter ties is not assessed directly by the 1985 important matters instrument; instead it asks respondents whether they feel equally close to all alters named and—if not—to which ones they feel especially close. It does not ask <u>how</u> close the respondent is to the "equally close" alters. These questions did not reappear in 2004.

The reliability of an instrument refers to the repeatability of the measures it yields upon re-administration. Assessing reliability ordinarily requires either multiple indicators or repeated measures. Marsden (1993) observed that composition measures derived by averaging characteristics of a respondent's alters could vary across occasions of measurement due to variation in the alters elicited by a name generator. He presented reliability estimates for several composition and density measures for 1985, 1987, and 1988 GSS network data. Many of these—notably of ethnoreligious and perceived political composition—proved to be adequately reliable for the numbers of alters elicited in those rounds.

Comparisons of Measures Based on Different Name Generators

The above sections demonstrate that many sources potentially affect responses to the name generator and interpreter items used within the GSS. Notwithstanding this, studies that compare networks measured via the important matters name generator to others based on different delineation methods do not, for the most part, report dramatic variations in network-level measures.

Straits (2000) conducted a between-subjects experiment in which a student sample answered either the important matters name generator or one eliciting people "especially significant in your life." A few differences in network composition and topics discussed were detectable, but none was deemed substantively important, suggesting that the two name generators elicited comparable egocentric networks.

A similarly-designed experimental study conducted in a metropolitan area compared networks obtained via the important matters name generator and one asking for persons with whom one discusses "political matters." Klofstad, McClurg and Rolfe (2009 p. 427) conclude that the general and domain-specific name generators "do not lead to wildly different results." Composition measures about alters' typical political expertise and respondent-alter disagreement were virtually identical for the two, as was network size. The prompt for political discussants yielded somewhat fewer close friends and

relatives, and somewhat more coworkers, than did the important matters question; perhaps unsurprisingly, the frequency of political discussion with the "political matters" alters was modestly higher.

At some variance with these studies is Perry and Pescosolido's (2010) within-subjects comparison of the alters and roles obtained using a variant of the important matters item and one asking for health discussants, both of which appeared within a multiple name-generator instrument. In a study of patients who had recently entered mental health treatment, the two generated similar sets of alters: about two thirds of important matters discussants were also mentioned as health discussants. Some attributes like age were similar for the two sets of alters, but others differed. For example, alters named in response to both questions were more often close kin than those given for one only; health professionals were more often cited as specialized health discussants. Outcomes like physician trust and treatment satisfaction were much better predicted by measures based on the health discussions than those based on important discussions, though the authors nonetheless mention that important matters networks may promote well-being by conveying a sense of belonging.

CONCLUSION AND DISCUSSION

Some time ago, Coleman (1958) observed that survey methods often omit consideration of the social setting in which social phenomena develop, thereby decontextualizing them. Instruments for measuring egocentric networks like those discussed in this chapter represent one approach to incorporating social context within surveys. Inclusion of egocentric network items in the GSS—among the very most-widely-used social survey databases—is also, arguably, among the factors that have contributed to the mainstreaming of network-oriented ideas and methods seen during recent decades.

The review in this chapter demonstrates that numerous significant research works resulted when network data—especially, but not only, involving the important matters name generator—

became available within the GSS. This material documents variation in sociability, composition, and network range for numerous sociodemographic groups of social science interest, and offers suggestive evidence about how such variations may translate into differences in well-being, attitudes, and other responses. The descriptions of networks for the U.S. adult population represented by the GSS also provide a meaningful point of comparison for other studies that cover more narrowly-defined groups, or that use less representative sampling methods.

Burt's (1984) proposal established a terminology and systematized a protocol for collecting detailed network data in surveys, since followed by numerous other studies. Additionally, investigations of these data illuminate methodological issues that bear on the GSS items themselves and also hold more general implications for egocentric network measurement.

Balancing the advantages offered by network items against the sometimes-considerable demands they make on study resources—especially limited interview time—is among the challenges involved in adding such data to a general-purpose survey vehicle like the GSS. Such tradeoffs more or less prohibit the use of multiple name-generator instruments that measure a broad range of social support exchanges within networks. They call for a single-generator instrument based on some broadly-relevant social relationship that can yield indicators—not precise descriptions—of the form and content of the interpersonal social contexts in which subjects are situated.

The important matters name generator was the GSS's best effort to craft such an instrument in the 1980s, and it does a serviceable job of eliciting a set of comparatively intimate relationships. Its wide emulation by other surveys resulted in informative comparative studies. Our view, though, is that it should not be regarded as a default instrument for measuring egocentric networks; we concur with Perry and Pescosolido (2010) that measurement strategies should be aligned with a study's research questions. Experimentation with domain-specific as well as other general criteria for delineating emotional support or core networks is well-warranted. This should include studies of variations on the

name generator used in 1985, and comparisons with elicitation methods founded on affect and/or role relations. Studies that document the connection between topic variations and network-level measures would be valuable, as would efforts to develop general-purpose name generators that reduce topic variations. In any event, it would be useful to include name interpreters that measure what is discussed with each individual alter. As well, using name interpreters about other exchanges (e.g. household aid, socializing) might be one way of distinguishing single- and multi-stranded ties within a single-generator instrument.

Resource considerations also commend methodological studies that compare substantive findings using name-generator-based measures to indices that tap similar constructs via shorter, more efficient instruments (e.g. van der Gaag *et al.* 2008). Global items, position generator instruments, and aggregated relational data offer less detail, but can take account of outer layers of a network that data collection methods relying on name generators neglect. Studies that employ two or more of these simultaneously could yield valuable insights into associations between properties of different network layers, and guidance for investigators who seek to obtain network information while conserving scarce interview time.

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Table 1. Examples of Global Network Items in the GSS

Network Size

> Thinking now of close friends - not your husband or wife or partner or family members - but people you feel fairly close to… How many close friends would you say you have? (1986 ISSP Module on Social Networks and Social Support)
>
> About how many good friends do you have? (1998)
>
> Not counting people at work or family at home, about how many other friends or relatives do you keep in contact with at least once a year? (2000-2004)

Multiple-Item Measurement of Network Size (2002 GSS, ISSP Module on Social Networks and Social Support)

> Now we would like to ask you about people you know, other than your family and relatives. The first question is about people at your work place. Thinking about people at your work place, how many of them are close friends of yours?
>
> Thinking now of people who live near you - in your neighborhood or district: How many of these people are close friends of yours?
>
> How many other close friends do you have – apart from those at work, in your neighborhood, or family members? Think, for instance, of friends at clubs, church, or the like.

Racial Composition

> INTERVIEWER: ASK IN TERMS OF THE OPPOSITE RACE-- BLACKS ABOUT WHITES AND NON-BLACKS ABOUT BLACKS:
>
> Are any of your good friends that you feel close to Black/White? (1998)

Network Density

> Some people have friends who mostly know one another. Other people have friends who don't know one another. Would you say that all of your friends know one another, most of your friends know one another, only a few of your friends know one another, or none of your friends know one another? (1985)

Frequency of Socializing

> Would you use this card and tell me which answer comes closest to how often you do the following things . . .
>
> Spend a social evening with friends who live outside the neighborhood?

Source: various GSS questionnaires; see http://gss.norc.org/Get-Documentation/questionnaires.

Table 2. Examples of "How Many Xs" questions in the GSS

(1988-1990)

> Within the past 12 months how many people have you known personally that were victims of homicide?
>
> Think about the person you know best who was a victim of homicide. Please tell me the letter of the category on the card which best describes your relationship to that person. (Answer categories included partner, child, friend, neighbor, acquaintance, etc.)
>
> We would like to know a few other things about that person.
>
> What (is/was) that person's race? (Is/Was) it black, white, hispanic or other?
>
> What state did this person live in?

(1988-1993)

> How many people have you known personally, either living or dead, who came down with the disease called AIDS?
>
> (Similar followup questions as for homicide victims)

Source: various GSS questionnaires; see http://gss.norc.org/Get-Documentation/questionnaires.

(2006)

I'm going to ask you some questions about all the people that you are acquainted with, meaning that you know their name and would stop and talk at least for a moment if you ran into the person on the street or in a shopping mall. Some of these questions may seem unusual but they are an important way to help us understand more about social networks in America. Please answer the questions as best you can.

> How many of the people you are acquainted with are named Kevin? (Answer categories are 0, 1, 2-5, 6-10, More than 10)
>
> How many are named Brenda?
>
> How many of the people that you are acquainted with are you pretty certain are currently unemployed?
>
> How many are Black or African-American?
>
> How many are you pretty certain are strongly conservative?

Source: http://gss.norc.org/documents/quex/2006_GSS_V4.pdf

Table 3. Position Generator Items Administered in the 2018 GSS

Here is a list of jobs that people you know may have. These people could be family or relatives, close friends or someone else you know. By "knowing" a person, we mean that you know him/her by name and well enough to contact him/her. If you know several people who have a job from those I'll mention, please answer for the person who you feel closest to. Each of these jobs could be held by a woman or a man. Do you know a woman or a man who is . . .

a. A bus driver?
b. A senior executive of a large company?
c. A home or office cleaner?
d. A hairdresser/barber?
e. A human resource manager/personnel manager?
f. A lawyer?
g. A car mechanic?
h. A nurse?
i. A police officer?
j. A school teacher?

(Answer categories are family or relative, close friend, someone else I know, or no one.)

Source: http://gss.norc.org/Documents/quex/GSS2018_Ballot_3-English.pdf

Table 4. GSS Name Generators

A. Important Matters (1985, 1987, 2004, 2010)

From time to time, most people discuss important matters with other people. Looking back over the last six months - who are the people with whom you discussed matters important to you? Just tell me their first names or initials.

[INTERVIEWER: IF LESS THAN 5 NAMES MENTIONED, PROBE] Anyone else?

[ONLY RECORD FIRST 5 NAMES]

Note: In 1987, probe administered only if less than 3 names mentioned.

Source: http://gss.norc.org/documents/quex/1985_GSS_Quex.pdf

B. Good Friends (1988, 1998)

Many people have some good friends they feel close to. Who are your good friends (other than your spouse)? Just tell me their first names.

[INTERVIEWER: LIST NAMES IN GRID BELOW].

Is there anyone else?

Note: Name interpreter data were recorded for no more than 3 friends in 1988, no more than 5 in 1998.

Source: http://gss.norc.org/documents/quex/1998_GSS_V1.pdf

Table 5. Examples of GSS Name Interpreters

A. Proxy reports about Alter Characteristics

(1985, 1988, 1998, 2004) Is (NAME) Asian, Black, Hispanic, White or something else?

(1985, 1988, 1998, 2004) What is (NAME'S) religious preference? Is it Protestant, Catholic, Jewish, some other religion or no religion?

(1987) Is (NAME) a Democrat, a Republican, an Independent or what?

(1988, 1998) Is (NAME) a member of your congregation?

B. Reports about Qualities of Respondent-Alter Relationship

(1985, 2004) Thinking about how often you usually talk to (NAME), on the average, do you talk to (him/her) almost every day, at least once a week, at least once a month, or less than once a month?

Have you known (NAME) for less than 3 years, 3 to 6 years, or more than 6 years?

C. Reports on relationships between Pairs of Alters

(1985, 2004) Please think about the relations between the people you just mentioned. Some of them may be total strangers in the sense that they wouldn't recognize each other if they bumped into each other on the street. Others may be especially close, as close or closer to each other as they are to you. First, think about NAME 1 and NAME 2.

Are (NAME 1) and (NAME 2) total strangers?

(IF NO, ASK)

Are they especially close? PROBE: As close or closer to each other as they are to you?

Source: various GSS questionnaires including name generators. See http://gss.norc.org/Get-Documentation/questionnaires.