RESEARCH NOTE

CORE DISCUSSION NETWORKS OF AMERICANS*

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Aspects of interpersonal networks in which Americans discuss "important matters" are examined using data from the 1985 General Social Survey. These are the first survey network data representative of the American population. The networks are small, kin-centered, relatively dense, and homogeneous in comparison with the sample of respondents. Bivariate examination of subgroup differences by age, education, race/ethnicity, sex, and size of place indicates that network range is greatest among the young, the highly educated, and metropolitan residents. Sex differences consist primarily of differences in kin/nonkin composition of networks.

This paper provides a descriptive overview of features of core social networks of Americans. It presents results on the size, kin/nonkin composition, density, and heterogeneity of discussion networks for the entire population and for subgroups defined by age, education, race/ethnicity, sex, and size of place. With the increasing use of network concepts to explain individual behavior and responses, benchmark descriptions of major aspects of networks for a nationally representative sample of Americans are useful as a reference point. The survey network data collected as part of the 1985 General Social Survey (GSS) will be an important resource to researchers because they enable both substantive research projects using network characteristics and methodological research on network measurement.

SURVEY NETWORK DATA AND THE 1985 GSS

Survey network data describe the social contexts or interpersonal environments (Rossi 1966) in which individuals live. Such data are especially well suited to measuring social differentiation and integration at the individual level. Those using survey network data share the concern of the standard survey design with explaining variation in individual responses but modify that design by measuring the social contexts in which respondents are embedded. Survey network data have been used recently in studies of such topics as socioeconomic attainment (Lin, Ensel, and Vaughn 1981), social integration, both generally and into subcultures (Fischer 1982a), psychological mood and well-being (Fischer 1982a; Kadushin 1982, 1983), availability of social support (Wellman 1979; Fischer 1982a), willingness to contribute to collective action (Oliver 1984), diffusion of innovations to individuals (Rogers 1979), and recruitment into social movements (Snow, Zurcher, and Ekland-Olson 1980). The breadth of these applications warrants careful attention to the instruments used to gather data and to the properties of the measurements themselves.

The use of survey network data has been limited, however, by the absence of standardized instruments for collecting them; there are no network instruments parallel to those used to obtain detailed occupation data (Reiss, Duncan, Hatt, and North 1961). This has complicated comparison and replication of findings and delayed the cumulation of knowledge. Deliberations leading to the inclusion of the network items in the 1985 GSS, described in Burt (1984), constitute a first step toward establishing such instruments. The availability of these measurements, the variety of possible response variables included in the GSS, and the national sampling frame of the survey should enhance the value of these network data for future research seeking to measure interpersonal environments.

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Setting Boundaries through Selection of a Name Generator

A central issue in the collection of survey network data is the choice of a specific relational content, or type of tie, to elicit names of alters from a respondent. The name-eliciting device sets operational boundaries on the interpersonal environment, and different contents may affect the form of relations that constitute the network (Fischer 1982a, pp. 132, 372–73, 385–87; 1982b; Burt 1983a).

The GSS network data concern those persons with whom a respondent "discusses important matters" whether these be family, finances, health, politics, recreation, or other things. The definition of what was considered "important" was left to respondents, and the interview protocol did not provide for prompts to respondents on this point (Burt 1985, p. 119). The GSS Board of Overseers proposed an item that would have asked respondents to indicate the topics discussed with each alter, but it was unfortunately deleted from the final interview schedule (Burt 1984, pp. 333, 337). It thus is not possible to investigate, with these data, the degree to which interpersonal environments vary with the matters discussed. Judging from Fischer's (1982a) prior work using the similar name generator of "discussing personal matters," however, the GSS criterion could be expected to elicit reasonably strong ties, with prominent representation of kin among those cited.

The theoretical case favoring "discussing important matters" as a name generator was the view that influence processes and normative pressures operate through intimate, comparatively strong ties (see Burt 1984, p. 317). Precedent was an additional consideration: most prior survey network data focused on "best friends" or similar ties based on intimacy and positive affect, and this sort of name generator is thus better understood than others. Also, an analysis of features underlying the overlap of different contents (Burt 1983a) suggested that "discussing important matters" is a moderately intense content that represents a middle ground between acquaintanceship and kinship, but is less ambiguous in its meaning than friendship (Fischer 1982b). Finally, prior work (Fischer 1982a) suggested that "discussing important matters" would generate a number of alters small enough to be tractable within the limited interview time available for network items in the GSS.

It would be desirable to know more than these data tell about how network structure and the types of issues discussed are related. At the same time, by not tying the elicitation of names to any specific content area, the generator identifies comparatively intense portions of the interpersonal environment for all respondents, and it thus has some general utility. Of course, the specific purposes of studies more focused than the GSS may dictate less intense name generators or ones that concentrate on particular content areas.

The GSS Network Instrument

Respondents were asked to name all those people with whom they discussed important matters within the past six months.[1] Remaining questions ("name interpreters") focused on the first five names mentioned, as a concession to time constraints. Respondents were asked to describe the relations between pairs of alters by saying whether or not the persons in each pair were "especially close" to one another and whether or not they were "total strangers." Items describing the respondent's tie to each alter in terms of closeness, frequency of contact, duration of acquaintance, and role relations were included, as were questions asking for the sex, race/ethnicity, education, age, and religious preference of each alter. Burt (1985) presents the complete text of the instrument.

MEASURES OF THE STRUCTURE OF INTERPERSONAL ENVIRONMENTS

Several reviews of the formal features of interpersonal environments (notably Mitchell [1969, pp. 10–29] and Jackson, Fischer, and Jones [1977]) have pointed to aspects including size, density, homogeneity, dispersion, span, reachability, and anchorage.[2] These can be brought together under the heading of network range (Burt 1983b): an actor's interpersonal environment has range to the extent that it connects the actor to a diverse set of other actors. As distinct from range and its emphasis on the diversity of alters, network composition refers to the types of alters in an individual's network. Research examining the intercorrelations of range measures in Fischer's (1982a) Northern California Communities Study (NCCS) suggests that range has several largely independent dimensions (Campbell, Marsden, and Hurlbert 1986). This report presents data on

[1] The wording of the question was (Burt 1985, p. 119): "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."

[2] This study reports properties of networks only, not features of individual ties (frequency, duration, intensity, multiplexity, and so forth).

three of them: network size, density, and heterogeneity.

Size is simply the number of alters in an interpersonal environment and provides a reasonably direct measure of social integration. In the GSS, size is measured as the number of alters elicited by the "discuss important matters" name generator.

Network density is an inverse measure of range; dense, "closed" interpersonal environments typically contain less-diverse others (Granovetter 1973; Laumann 1973, chap. 6; Campbell et al. 1986). Density is related to the availability of social support and to well-being, at least under some conditions (Fischer 1982a; Kadushin 1982, 1983; Burt 1986). It also measures the potential strength of normative pressures toward conformity by indicating the capacity of alters to collectively influence the respondent. Often operationalized using dichotomous data on tie strength as the proportion of possible ties among alters actually present, it can be defined more generally as the mean intensity or strength of ties joining alters. The intensity of the tie between a pair of alters in the GSS data is coded 0 if the respondent reports that they are total strangers, 1 if the respondent reports that they are especially close, and 0.5 otherwise.[3] The density measure then varies from zero, in networks in which alters are unaware of one another, to one, when all pairs are especially close.[4]

The heterogeneity of alters increases with network range; heterogeneity measures are the most direct indicators of the diversity of persons an individual can contact within his or her interpersonal environment. High diversity implies integration into several spheres of society, which is deemed advantageous for instrumental actions like gathering information (Granovetter 1973; Lin et al. 1981; Campbell et al. 1986). Of course, in a society with substantial intersection of different attributes at the individual level (Blau and Schwartz 1984), any given individual's network may be highly heterogeneous in some respects yet homogeneous in others.[5] This study examines heterogeneity of four types: age, education, race/ethnicity,[6] and sex. Age and educational heterogeneity are measured as the standard deviations of alter characteristics; education is measured in years of education completed by assigning midpoints of categories offered to respondents by interviewers. For the nominal characteristics of race and sex, diversity is measured using the index of qualitative variation (IQV) (Agresti and Agresti 1977, p. 208).[7]

Network composition can be studied for many characteristics of alters, but the only one examined in this report is the extent to which discussion partners are kin rather than nonkin. Fischer (1982a) has shown this aspect of composition to be salient in characterizing the interpersonal environments described by survey network data. Kin/nonkin composition is measured both absolutely, by the numbers of kin and nonkin alters cited, and relatively, by the proportion of alters bearing any kinship relation to the respondent. For the proportional measure, if a respondent describes a relationship as having both kin and nonkin components ("friend," "advisor," etc.), priority is given to the kinship tie.

THE AVERAGE AMERICAN DISCUSSION NETWORK

Table 1 presents basic data on the distributions of the network characteristics. Perhaps the most

[3] This coding is justified in Marsden (1986a). A well-worn proposition states that pairs of alters should tend to be more similar to one another with increasing tie strength (e.g., Granovetter 1973). Loglinear analyses using association models (Goodman 1981; Clogg 1982) of three-way tabulations of characteristics (race, religion, education, age) of pairs of alters by tie strength reveal that interactions involving pairs of alters said to know one another, but not to be especially close, are intermediate between those for pairs said to be total strangers and those for pairs said to be especially close; hence the coding indicated in the text.

[4] The density measure cannot be defined for networks smaller than size 2, for which there are no ties joining alters.

[5] Substantial intersection of attributes means that networks homogeneous in all respects are very difficult to construct, because an individual must be selective in many ways simultaneously; with great consolidation of attributes, selectivity in one respect carries selectivity in others with it. It is less difficult under conditions of intersection, and more difficult in the presence of consolidation, to construct networks that are heterogeneous in many ways.

[6] Categories of race/ethnicity are white, black, Hispanic, and other. "Others" are largely, but not exclusively, Asians.

[7] This choice of diversity measures is sensitive to the diversity of alters, not to the differences between respondent and alters. For instance, a respondent might have a network composed of very similar alters, all of whom are quite different from her or him. The general tendency toward homophily in networks (e.g., Verbrugge 1977; Blau and Schwartz 1984, p. 35; Marsden 1986b) makes the latter situation unlikely; moreover, basing heterogeneity measures only on alter characteristics eliminates any definitional dependencies in the study of relationships between respondent characteristics and heterogeneity measures.

The heterogeneity measures obviously cannot be defined for networks of size 0. For networks of size 1, heterogeneity is trivially zero. In results presented here, all networks of size 0 and 1 have been excluded.

Table 1. Univariate Distributions of Measures of Network Form and Composition

Variable	Value	%	Mean	Standard Deviation	(*N*)
Overall network size	0	8.9	3.01	1.77	1531
	1	14.9			
	2	15.3			
	3	21.0			
	4	15.2			
	5	19.2			
	6+	5.5			
Kin network size[a]	0	26.4	1.53	1.34	1531
	1	29.6			
	2	21.8			
	3	12.6			
	4	6.3			
	5	3.3			
Nonkin network size[a]	0	36.4	1.40	1.41	1531
	1	22.2			
	2	18.9			
	3	13.0			
	4	6.3			
	5	3.1			
Proportion kin	0.00	19.2	0.55	0.37	1395
	0.01–0.33	15.4			
	0.34–0.66	20.7			
	0.67–0.99	14.5			
	1.00	30.2			
Density	<.25	8.1	0.61	0.28	1161
	0.25–0.49	18.0			
	0.50–0.74	39.5			
	>0.74	34.4			
Age heterogeneity	<5	25.0	10.54	6.39	1153
(std. deviation)	5–<10	23.2			
	10–<15	25.7			
	15+	26.1			
Population heterogeneity			17.91		
Education	0–1	29.8	1.78	1.37	1132
heterogeneity	>1–2.5	43.3			
(std. deviation)	>2.5	26.9			
Population heterogeneity			3.17		
Race heterogeneity	0	91.8	0.05	0.18	1167
(IQV)	>0	8.2			
Population heterogeneity			0.38		
Sex heterogeneity	0	22.4	0.68	0.38	1167
(IQV)	0.01–0.90	40.7			
	>0.90	36.9			
Population heterogeneity			0.99		

[a] Information about kinship was collected on only the first five alters cited. For this reason the sum of the distributions for kin network size and nonkin network size is not identical to the distribution of overall network size.

striking thing about the data is the distribution of network size: comparatively large percentages of persons report that they recently discussed important matters with no one, or with only one person. Nearly a quarter of the respondents have networks of size 0 or 1, and thus have "inadequate" or "marginal" counseling support according to Fischer's (1982a, pp. 125–26) criteria. Few respondents indicated that they had more than 6 discussion contacts; the mean and mode are 3.[8]

[8] In the GSS data all responses of 6 or more are grouped together; Dr. Tom Smith of the National Opinion Research Center, in private communication,

The networks draw heavily on kinship as a source of relationships (Feld 1981). Respondents cited a mean of 1.5 kin, slightly more than the 1.4 nonkin cited. There is substantial variability in the extent to which these interpersonal environments consist of kin rather than nonkin: 30 percent consist only of persons having some family relation to the respondent, while nearly 20 percent contain no family members.[9] The average network has a proportion kin of 0.55. This appears comparable to the level of kin composition found in previous surveys of large populations including network items based on intense name generators.[10]

The alters tend to be fairly densely linked; the mean network density is 0.61. Since few similar data exist, it is difficult to judge whether this is a high or low figure, but it can be compared with the 0.44 reported by Fischer (1982a, p. 145) for a regional sample and the 0.33 reported by Wellman (1979, p. 1215) for an urban sample.[11] Twenty-two percent of the networks consist of alters who are all "especially close" to one another (network density of 1.0), while 5 percent consist of alters who are mutual strangers (network density of 0.0).

The alters are homogeneous by comparison with population distributions, especially in terms of race/ethnicity. There is, however, substantial variation across the networks of respondents in levels of heterogeneity. In 25 percent of them the standard deviation of the ages of alters is lower than 5 years; in 26 percent it is greater than 15 years. The mean age diversity is 10.54; comparing this to the standard deviation of the ages of respondents in the GSS (17.91), we see that the mean age heterogeneity of these networks is roughly 60 percent of the heterogeneity in the American population. Similarly, 30 percent of the networks are highly homogeneous in terms of education, with standard deviations of the education levels of alters lower than 1 year. The mean educational heterogeneity of networks, 1.78, is slightly over half the standard deviation of years of education across all respondents, 3.17.

The race/ethnic homogeneity of the networks is most pronounced; only 96 respondents (8 percent of those with networks of size 2 or greater) cite alters with any racial/ethnic diversity. Mean race/ethnic heterogeneity is 0.05; this is a mere 13 percent of the index of qualitative variation computed for the race/ethnic distribution of respondents. By contrast, there is substantial sex diversity. While 22 percent of the respondents have networks with alters of only one sex, in 37 percent the index of qualitative variation is 0.90 or greater. Mean sex heterogeneity in these networks is 0.68, which is nearly 70 percent of the sex heterogeneity among respondents.

If anything, these estimates understate the extent of homogeneity in interpersonal environments. This is because of the high kin composition of the networks, with many ties that bridge generations, and many cross-sex links to spouses, siblings, parents, and children. A high proportion kin is associated with greater age, educational, and sex heterogeneity (Table 2).[12] If these networks were composed only of nonkin, they would be substantially less heterogeneous in these respects than is indicated in Table 1, roughly half as diverse as the sample of respondents. Kin composition does, however, tend to decrease race/ethnic heterogeneity.

Overall, these descriptive figures suggest that interpersonal environments in which Americans discuss important matters are "core" networks, as the choice of a relatively intense name generator implies. They are small, centered on kin, comparatively dense, and homogeneous by

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provided the following itemization of the numbers of respondents citing more than 6 alters in response to the "discuss important matters" name generator: six respondents had networks of size 7, three size 8, four size 9, three size 10, and one size 15. The "6+" category for network size has been recoded to its mean (6.5) in the analyses reported below.

[9] These percentages are less than the percentages of respondents citing no nonkin (36.4 percent) and no kin (26.4 percent) since persons having zero overall network size are excluded from computations for proportion kin.

[10] The proportion of all ties involving kinship in the GSS is 0.523, which compares to Wellman's (1979, p. 1210) figure of 0.500 for the six closest associates and the 0.483 among those "discussing personal problems" in the NCCS, reported by Burt (1984, p. 319). Since the first alter cited is somewhat more likely to be a family member than others (the proportion kin among first alters is 0.598, and ranges from 0.494 for the second alter to 0.476 for the fifth; see also Wellman [1979, p. 1210]), and since the data contain a large number of small networks, the mean proportion kin in a network exceeds the proportion of all *ties* involving kin.

[11] The measures used by Fischer and Wellman differ from the one used here in that they are based on different criteria for coding tie strength among alters and on dichotomous rather than trichotomous measures of tie strength. Fischer also excluded persons with networks of size 2 from his computations. Networks of size 2 do have higher density (0.69) than larger ones in these data; if they are excluded, mean density falls to 0.59. The substantial association between proportion kin and network density shown in Table 2 arguably could account for the seemingly high network density here; but these networks do not contain a notably higher proportion kin than those studied by Fischer or Wellman (see note 10).

[12] The result for educational heterogeneity is interpretable in terms of period and cohort effects on educational attainment.

Table 2. Network Density, Heterogeneity, and Proportion Kin

Dependent Variable	Unstandardized Regression Coefficient[a]	Predicted Value at Proportion Kin of 0	1
Density	0.342** (0.419)	0.436	0.777
Age heterogeneity (std. deviation)	6.238** (0.336)	7.303	13.541
Education heterogeneity (std. deviation)	0.421** (0.106)	1.557	1.977
Race heterogeneity (IQV)	−0.086** (−0.168)	0.096	0.010
Sex heterogeneity (IQV)	0.308** (0.277)	0.525	0.832

[a] Standardized coefficients in parentheses.
** $p<.01$.

comparison to the respondent population as an opportunity structure.

SUBGROUP DIFFERENCES IN NETWORK FORM

Features of network structure differ substantially across the networks of respondent subgroups defined by age, education, race/ethnicity, sex, and size of place. Table 3 presents regression analyses for network size and kin/nonkin composition; Table 4 presents similar statistics for density and heterogeneity. Because of the clear relationships between proportion kin and heterogeneity shown in Table 2, and the subgroup differences in proportion kin demonstrated in Table 3, subgroup differences in Table 4 have also been examined with proportion kin controlled.

In general, differences are greatest for subgroups defined by age and education, and appreciable for race and size of place. Differences between men and women pertain only to kin/nonkin composition.

Table 3. Subgroup Differences in Network Size and Kin/Nonkin Composition (Unstandardized Regression Coefficients)

	Overall Network Size	Kin Network Size	Nonkin Network Size	Proportion Kin
A. Age differences				
Age	0.0177	−0.00642**	0.0302**	−0.00914**
Age^2	−0.000414**	[a]	−0.000467**	0.000119**
Constant	3.205**	1.827**	1.151**	0.686**
R	0.245**	0.086**	0.227**	0.151**
B. Education differences				
Education (years)	0.194**	0.036**	0.142**	−0.023**
Constant	0.604**	1.081**	−0.362**	0.840**
R	0.347**	0.085**	0.320**	0.190**
C. Sex differences				
Sex (female)	0.019	0.299**	−0.255**	0.066**
Constant	3.000**	1.362**	1.541**	0.514**
R	0.005	0.111**	0.090**	0.089**
D. Race/ethnic differences[b]				
Black	−0.874**	−0.601**	−0.247**	−0.078*
Hispanic	−0.362	−0.132	−0.214	0.027
Other	−0.446	−0.524*	0.106	−0.092
Constant	3.119**	1.601**	1.433**	0.558**
R	0.152**	0.141**	0.060	0.068
E. Size of place differences				
Size of place—1000s (natural log)	0.027	−0.033*	0.061**	−0.014**
Constant	2.926**	1.632**	1.208**	0.596**
R	0.034	0.055*	0.097**	0.084**

[a] Quadratic term removed from equation if insignificant.
[b] Dummy-coded variables, with "white" as reference category.
* $p<.05$.
** $p<.01$.

Table 4. Subgroup Differences in Network Density and Heterogeneity (Unstandardized Regression Coefficients)

	Network Density	Age Heterogeneity (Std. Deviation)	Race/Ethnic Heterogeneity (IQV)	Sex Heterogeneity (IQV)
A. Age differences[a]				
1. 0-order				
Age	0.00236**	0.00094	−0.00111**	−0.00359**
Constant	0.510**	10.491**	0.100**	0.841**
R	0.145**	0.003	0.108**	0.161**
2. Partial[b]				
Age	0.00177**	−0.0104	−0.00097**	−0.00415**
B. Education differences				
1. 0-order				
Education (years)	−0.020**	0.072	0.001	0.019**
Constant	0.874**	9.605**	0.040*	0.439**
R	0.218**	0.034	0.016	0.150**
2. Partial[b]				
Education (years)	−0.014**	0.204**	−0.001	0.026**
C. Race/ethnic differences[c]				
1. 0-order				
Black	0.021	−0.912	0.101**	−0.185**
Hispanic	0.028	−0.397	0.199**	−0.157**
Other	0.001	−1.445	0.208**	−0.169
Constant	0.610**	10.645**	0.032**	0.707**
R	0.028	0.047	0.296**	0.156**
2. Partial[b]				
Black	0.054	−0.248	0.094**	−0.157**
Hispanic	0.029	−0.368	0.199**	−0.156**
Other	0.057	−0.422	0.195**	−0.121
D. Size of place differences				
1. 0-order				
Size of place—1000s (natural log)	−0.014**	−0.091	0.009**	0.002
Constant	0.656**	10.827**	0.022*	0.679**
R	0.107**	0.031	0.116**	0.010
2. Partial[b]				
Size of place—1000s (natural log)	−0.009*	0.015	0.008**	0.007

Note: No significant subgroup differences in educational heterogeneity were found. Similarly, no sex differences in density or heterogeneity were found. To conserve space, these results are not reported; they are available from the author upon request.

[a] All age differences were tested for curvilinearity through inclusion of a quadratic term in age, but no significant curvilinearities were found.

[b] Partial regression coefficients with proportion kin controlled.

[c] Dummy-coded variables, with "white" as reference category.

* $p<.05$.

** $p<.01$.

Age Differences

Network range is greatest among the young and middle-aged. Overall network size drops with age at an increasing rate; persons over 65 have a mean network size of just over 2 (see Fischer and Oliker 1983). The citation of kin falls with age, and the number of nonkin cited is largest for persons in their early thirties. As a result of the intersection of these patterns, the proportion of alters who are kin is relatively large for both younger and older respondents, and smallest for the middle-aged.[13]

Network density rises with age, while heterogeneity in race/ethnicity and sex fall: younger age groups have more diverse sets of alters. These differences remain significant when controlled for differential kin/nonkin composition; in fact, the partial regression coefficient for sex heterogeneity is of larger magnitude than the zero-order one. The differences may be attributable to life-course variability in opportunities to

[13] The foci of the estimated parabolas for overall network size, nonkin network size, and proportion kin are 21.38, 32.33, and 38.40 years, respectively (see Stimson, Carmines, and Zeller 1978). These give the ages at which predicted values of the dependent variable are maximal (overall network size, nonkin network size) or minimal (proportion kin).

form cross-sex or cross-race contacts (Feld 1981, 1982); they may also reflect period-related changes in exposure to sex- and race-segregated contexts or in the social approval of such contacts.

Education Differences

For four of the measures of network structure in Tables 3 and 4, education differences, as given by *R*, are largest. This is in accord with Fischer's (1982a, p. 251) observation that education was the personal characteristic most clearly influencing differences in network structure in the NCCS. The results clearly indicate that network range grows with education.[14] Mean network size among those holding a college degree is nearly 1.8 times larger than among those who did not finish high school. More educated people cite more nonkin and more kin as well; since kin network size increases less rapidly with education than does nonkin network size, the proportion kin in a network falls with education.

The alters in the networks of the educated are less likely to be closely connected to one another; density declines from a mean of 0.71 among those who did not finish high school to 0.54 among those with a college degree or more. The sex diversity of alters also increases with education, as does age diversity when controlled for proportion kin. Generally, then, education is associated with larger, more varied networks providing access to diverse others, and differentiated from the "traditional" (Fischer 1982a, p. 118) setting of kinship.

Race/Ethnic Differences

No clear generalization about race/ethnic differences in network range emerges from these data, since different subgroups have the highest range according to different indicators. Whites have the largest networks (mean size 3.1), blacks the smallest (mean size 2.25); Hispanics and others are intermediate. Notably, black respondents cited fewer kin and fewer nonkin than whites did, and their networks have a lower proportion kin than those of whites. Sex diversity is highest in the networks of whites, and this difference persists when controlled for kin/nonkin composition.

Race/ethnic differences in race/ethnic diversity are worthy of special comment, since they are consistent with Blau's (1977) proposition about group size and heterogeneity. The mean index of qualitative variation in the race/ethnicity of alters is 0.03 among whites, who constitute 83 percent of the GSS respondents. It rises to 0.13 for blacks (10 percent of the respondents), to 0.22 for Hispanics (5 percent of the respondents), and further to 0.24 among others (1.5 percent of the respondents). These differences remain, for the most part, when proportion kin is controlled. The structural constraints of group size identified by Blau are visible even in the highly limited levels of intergroup contact measured in the interpersonal environments of the GSS respondents.

Sex Differences

The measures of network structure do not differ greatly between men and women. The only significant zero-order sex differences indicate that women's networks contain more kin, and fewer nonkin, than do men's (Table 3); the proportion kin is 0.07 higher for women. No sex differences in density or heterogeneity were found, so sex does not appear in Table 4. Sex differences in the structure of interpersonal environments emerge when they are examined in interaction with life-course variables such as age, marital status, and the presence and number of children;[15] other studies of sex differences in networks (Fischer and Oliker 1983; Campbell 1985) also have found these to be important conditioning variables.

Size of Place Differences

The way in which social transformations such as urbanization and industrialization alter personal relations and networks is the subject of a substantial literature (Fischer 1982a; Wellman 1979). Such issues can be examined in cross-section by comparing the network structures of people living in places of different sizes.

The results shown in Tables 3 and 4 generally confirm those of prior research, which indicate that network range is greater in more urbanized places, though size-of-place differences in overall network size are not statistically significant. Persons in larger places do, however, cite more nonkin and fewer kin, in both absolute and relative terms. Network density falls with size of place, while race/ethnic heterogeneity rises (Table 4); these differences persist when controlled for proportion kin. Moreover, the coefficients for age and sex heterogeneity,

[14] This replicates the findings of Campbell et al. (1986) based on the NCCS.

[15] In analyses of variance involving sex, marital status, and age, significant two- and three-way interactions involving sex are found for several of the measures of network structure (network size and race/ethnic heterogeneity are exceptions). The results are not reported in detail here to conserve space and because this report is concerned with zero-order subgroup differences.

though statistically insignificant, are in the direction predicted by the view that network range grows with urbanization.

CONCLUSION

The GSS survey network data describe relatively small, kin-centered, dense, homogeneous social environments surrounding Americans. Variability in network range is substantial, however, and patterned by respondent characteristics. To the extent that the success of "networking" as an instrumentally oriented pursuit depends on access to diverse others, those best situated to make use of it are the young and middle-aged, the well-educated, and those living in larger places.

The wide variety of potential response variables in the GSS data permit network-related research into numerous substantive areas. For instance, levels of individual well-being can be examined as correlates of the availability of social support operationalized in terms of network size or density (Burt 1986); the traditionalism of sex role attitudes can be studied in relation to network density, sex composition, and sex diversity (Marsden and Copp 1986). Methodologically, these data can support research on important issues in network measurement (Burt, Marsden, and Rossi 1985). They can facilitate the development of standardized protocols for the collection of information on the structure and composition of interpersonal environments. They can also contribute to the construction of high-quality, reliable measures of network characteristics.

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