

## Gender-of-author differences in study design of older adult friendship surveys

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### **Abstract:**

This research extends literature documenting gender differences in choice of quantitative or qualitative methods by examining whether men and women make different decisions regarding study design within one type of quantitative method—survey research. The population consists of 117 surveys (1960–1999) of older adults about friendship. We find that the use of communal methods, especially by women scholars, increased over time, and researchers who are women are more likely to use "communal" survey methods than researchers who are men. The gender difference in use of communal methods is not necessarily explained by essential differences between men and women or even by gender differences in commitment to feminist research as previous scholars have argued; rather, it is possibly explained by structured differences in access to resources to do agentic research.

### **Article:**

As is true of research on most types of personal relationships, the majority of the studies on older adult friendship have been conducted during the past 40 years, a period which coincides with an increase in the overall percentage of social scientists who are women. Although one could assume a connection between these two trends by arguing that women are more likely to focus on friendship than men because it is more central to their everyday lives (Bernard, 1973; Chodorow, 1978; Ward & Grant, 1985), this has not been confirmed. Furthermore, the friendship literature has developed in a variety of ways since its inception in the 1960s. Among the developments that have been noted are shifts from purely quantitative studies of friendship to qualitative or multimethod studies, studies of the amount of contact people have with friends to those of the qualities of relationships, studies treating friendships as attributes of individuals to those examining dyads and networks as relationships, and studies examining friendship as a peripheral topic to those in which it is the central focus (Blieszner & Adams, 1992).

It is possible that these shifts are the result of the natural maturation of the subfield (i.e., the movement from addressing simple to complex questions) or reflect broader intellectual trends (e.g., the shift from positivism to postmodernism or the increased centrality of social

constructionism) (see Allan, 2006, for a discussion of these intellectual trends and others). These changes in approach to the study of friendship could also be at least partially attributed to the influx of women into social science and their possible tendencies to use different methods than men, but the connection between a possible increase in the number of women who study friendship and these shifts in methods has not been demonstrated.

In this paper, we report on an analysis of the survey research literature focused on the topic of friendship among older adults. This analysis is designed to examine the development of the literature in this area and to document the impact of women on methodological approaches used in this subfield of personal relationship scholarship.

### **Feminist challenges to social science research**

Beginning in the early 1970s, successive waves of women's and feminist scholarship challenged social science. Critics of then mainstream research practices charged that, in addition to concentrating on topics more central to men's lives than to women's, social science research focused disproportionately on men. Furthermore, when researchers studied women, they held them to men's standards and used concepts and methods more suitable for studying men's lives than women's (Bernard, 1973; Carlson, 1971, 1972; Gutmann, 1965; Harris, 1972). In their 1996 study, Ward and Grant detailed how the increasing entry of women into academia resulted in profound critiques of the social sciences. Confronting bias meant arguing for the legitimacy not only of women as the topic of research but also of methods of study that seemed best suited to diverse experiences.

These critics also argued that gender and research method preferences were linked, with women favoring qualitative methods and men favoring quantitative ones. In 1972, Carlson summarized Bakan's (1966) familiar typology of agentic and communal modalities of human sexuality and how these modalities might be related to choice of research method. Arguing that scientific operations such as separating, ordering, quantifying, manipulating, and controlling may be best classified as agentic operations, Carlson also noted that "... naturalistic observation, sensitivity to intrinsic structure and qualitative participation of the investigator" (p. 20) are communal operations. In discussing this distinction, Bernard (1973) wrote that the agentic approach produces "hard" data, and the communal approach produces "soft" data. She added, "[a]gency tends to see variables, communion to see human beings" (p. 22). Referring to a distinction introduced by Bernard in the same article, Reinharz (1979) later noted, "the 'machismo' style of discovery reflected in science is characterized as hard, rational, and controlled. The feminine style is characterized as soft, deep, humanistic, and concerned with the inner world" (p. 7). She went on to note that the "female social scientist chooses among following the feminine style of discovery, adopting a masculine one, or disguising the masculine one as 'feminist'" (p. 7).

Scholars offered a variety of explanations for this perceived gender difference in research method preference (see Grant, Ward, & Rong, 1987, for a summary of these explanations). Some argued that there were essential differences between men and women and that the skills necessary to do quantitative and qualitative research differed and were gender linked (e.g., Carlson, 1971; Gilligan, 1982). Others (e.g., Oakley, 1974; Smith, 1974), following Bernard (1973, p. 20), argued that qualitative methods were more appropriate for studying the "status

nexus" world in which women lived, where bonds are based on love and duty, and quantitative methods were more appropriate for studying the "cash nexus" world that men occupied, where bonds are based on the exchange of money. Finally, some scholars argued that qualitative research was more likely than quantitative to correct the "androcentric" (male centered) biases in social science research and therefore appealed to feminist researchers (e.g., Stacey & Thorne, 1985).

For whatever reason, feminists entered what Oakley (2000) later called "the paradigm wars," weighing in on the side of qualitative research. Wanting to be more inclusive, feminist scholars encouraged what Oakley discussed as a sort of Golden Rule of research: to do unto a research participant as you would have research done unto you. To that end, qualitative studies strove to reflect an "expansionist" and "oriented-to-understanding" stance toward the participant (Oakley, 2000, p. 26). According to her, quantitative methods, on the other hand, could best be described as "reductionist" and "oriented-to-prediction" (Oakley, 2000, p. 26).

### **Statement of problem**

Subsequent research substantiated claims that in sociology and psychology, women were more likely than men to use qualitative than quantitative methods (e.g., Grant et al., 1987; MacKie, 1985; Unger, 1983), but by the early 1980s, women increasingly relied on quantitative methods. MacKie reported that, as compared with 1967 or 1973, in 1981 scholars of both genders were more likely to use quantitative methods than qualitative ones. This increase in the use of quantitative methods was documented in another study by Grant et al. (1987), who found through a systematic investigation of all articles appearing in ten major sociology journals between 1974 and 1983 that the use of quantitative methods increased during this time period. While women were far more likely than men to use qualitative methods, both men and women were more likely to use quantitative than qualitative methods in research.

Therefore, if we are to examine the link between gender and type of research method, a dichotomy between qualitative and quantitative research is too simplistic. If women and men approach research differently, this should be apparent within qualitative and quantitative studies as well as across them. As early as 1987, Ivanoff, Robinson, and Blythe argued that quantitative research was not incompatible with feminism. Similarly, in an article that foreshadowed the current position of feminists, Peplau and Conrad (1989) argued that research methods should not be a defining feature of feminist research and that quantitative research had been a valuable tool in combating sexism. They further argued that there is little reason to think that quantitative research cannot be sensitive to feminist concerns or, conversely, that qualitative methods are necessarily so. More recently, Dunn and Waller (2000) argued that feminist methodology is based on a mélange of methodological approaches not limited to qualitative research.

So, now it is fairly widely accepted that quantitative research is not incompatible with feminism. In her recent book, Sprague (2005) described the ways in which feminists do quantitative research, providing examples of studies conducted by leading feminist scholars. She evaluated whether these quantitative researchers were addressing the concerns raised by critical and particularly feminist scholars, arguing that many of these researchers draw on the standpoints of women and other disadvantaged people, acknowledge the ways standard measures may express

the standpoint of privileged men, and create knowledge that empowers the disadvantaged. She argued that quantitative feminist researchers have been less successful in maintaining a diverse discourse by citing qualitative research and using language clear to people unfamiliar with quantitative methods.

Whatever progress has been made in addressing the feminist critique of quantitative research, however, it is clear that at least some feminist researchers strive to conduct quantitative research differently than some nonfeminist researchers. The question that remains is whether women scholars in general conduct quantitative research differently than men do. Note that this is a different question than whether feminists, who may or may not be women, design their studies differently than nonfeminists do.

The survey research literature on the topic of older adult friendship offers an opportunity to examine the relationship between gender of researchers and methodological decisions. In the context of the debate discussed here, this topic is considered a "feminine" one, part of the status nexus world described by Bernard (1973). Nonetheless, at the beginning of the 1960s, before the influx of women into the social sciences and the debate over the link between gender and method began, most of the scholars who published on this topic were men. Hence, survey studies of friendship among older adults from the early 1960s through the end of the 1990s present an opportunity to examine the contributions of women researchers to approaches to scholarship in this area, over a period of time when women started gaining increasing prominence in many social science fields.

In this paper, we examine three basic questions. First, do survey researchers who study older adult friendship tend to use more communal methods now than in the 1960s? Second, do women survey researchers study older adult friendship differently than their counterparts who are men? In other words, are women more likely to use communal methods than men? Finally, if as predicted by previous research both of these questions are answered affirmatively, which is a better predictor of the increase in the use of communal methods: the passage of time or the gender of authors?

### **Agency versus communion**

In order to answer these questions, we first need to specify how a survey, which previous scholars have assumed was inherently agentic, might be designed to employ communal methods. Bakan's (1966) discussion of the differences between agency and communion, which fueled the earlier discussion of whether gender was linked to the use of qualitative versus quantitative methods (e.g., Bernard, 1973; Carlson, 1971; MacKie, 1985), is a useful starting point. As Bakan observed himself, however, his discussion of the conceptualization of the differences between agency and communion is abstract and so does not clearly suggest what variables might be studied. MacKie, who drew on Bakan's distinction when she studied sex differences in research style, classified articles as communal or agentic according to a "global judgment" (p. 196) about the major thrust of the research. According to her criteria, all survey research studies would be classified as agentic, so in order to examine variation in survey research study designs, we need to describe what constitutes communal and agentic research more specifically. In addition to

using Bakan's basic distinction between communion and agency, we therefore draw on feminist critiques of quantitative research.

Three aspects of study design seem both relevant and possible to measure by reading publications based on survey findings. The first dimension concerns how much control survey researchers exercise over the types of responses solicited from participants and whether they retain the participants' voices in the text of reports on the data. According to Bakan (1966, p. 15), "[a]gency manifests itself in the urge to master; communion in noncontractual cooperation. Agency manifests itself in the repression of thought, feeling, and impulse; communion in the lack and removal of repression." Similarly, according to Carlson (1971, p. 269), who drew on Gutmann (1965) as well as on Bakan, "[m]ales represent others in objective, classifying terms; females represent others in subjective, interpretive terms." As we will explore more fully in the discussion section of this paper, Peplau and Conrad (1989) considered the distinction between agency and communion as "false and misleading" (p. 394). Nevertheless, they similarly describe agentic methods as those that involve "the manipulation of subjects" and communal methods as involving "the cooperation of the researchers and subjects" (p. 393). Sprague (2005) observed that survey researchers cannot control the people they study in the same way experimental researchers can, but they can exercise control through measurement. An agentic survey researcher would therefore pose close-ended questions and would not retain the voices of participants in the text. A communal survey researcher, in contrast, would exercise less control over participants by asking open-ended questions and by retaining their personhood and subjectivity through the use of quotations in reports on the data.

The second dimension of study design concerns whether the researcher treats friendships as attributes of individuals or as complex dyads and networks. Although the individual, as opposed to the friendship dyad or network, is the unit of analysis in all surveys on the topic of older adult friendship scrutinized in this article, it is still possible to study the attributes of relationships using individuals as informants on their friends and networks. Carlson (1972, p. 20), following Bakan (1966), identified scientific operations such as "ordering" and "quantifying" as agentic and, along with Bernard (1973), described "sensitivity to intrinsic structure and qualitative patterning" as communal. Similarly, Sprague (2005) noted that one way feminist researchers can unpack the assumptions inherent in standard approaches to measurement is to use multiple indicators of concepts. Hence, an agentic survey researcher would ask global questions about friendships in general, which require the respondent to count relationships or average across them, and a communal survey researcher would ask respondents to describe the complexity and patterning of specific relationships.

The third dimension concerns the level of commitment to studying a "feminine" topic represented by the study design. As Sprague (2005) observed, one strategy feminist survey researchers can use is to pay attention to what is missing. In the 1960s, hardly any research literature on friendship and very few studies that examined friendships in depth had been published (Blieszner & Adams, 1992). According to feminist critics of social science research (Bernard, 1973; Chodorow, 1978; Gutmann, 1965; Ward & Grant, 1985), men inhabit often-studied impersonal milieus and women inhabit less-often-studied personal worlds of the family, friendship, neighborhood, and community. Studying friendship, or any personal relationship for that matter, is therefore inherently communal. The question is how committed survey researchers

are to productivity on the topic of friendship. In other words, do survey researchers design their studies to focus entirely on friendship or to include it only as a peripheral topic? Do they collect enough data on the topic to produce multiple publications or only enough for one article?

Although productivity is a poor measure of commitment to a topic, especially given the documented difficulties publishing research on an "feminine" ones (Dunn & Waller, 2000; Grant & Ward, 1991; Lykes & Stewart, 1986; Ward & Grant, 1985, 1996), using it as an indicator of commitment is the best we can do without surveying authors.

## **Methods**

### **Population**

The analysis presented in this paper is of 117 surveys of older adults about their friendships.<sup>1</sup> By a "survey," we mean "a data collection method in which an instrument is used to solicit responses from a sample of respondents" by having them "record the responses on the instrument themselves or provide the responses to interviewers" (Lin, 1976, p. 220). Each study, rather than each article, chapter, or book, is treated as a case. Although the unit of analysis for surveys on personal relationships can vary and is sometimes the dyad or the network, the respondent is the unit of analysis in all of the studies included in this analysis. These 117 cases do not include any studies that discuss friendship only in passing, combine a measure of friendship behavior with other measures of social behavior to create general indices of various kinds (and thus do not study friendship separately), do not distinguish between neighbors and friends, discuss friendships abstractly rather than report on studies of actual friendship behavior, or examine the friendships of other age groups simultaneously with those of older adults (see Adams, 1989, for a discussion of these criteria). Furthermore, we only included studies from which published reports of data were produced in English. When it was impossible to tell whether any two publications were based on the same study from the information included, we contacted the authors for clarification. Of these 117 studies, 20.5% surveyed women only, 1.7% surveyed men only, and the rest surveyed both genders.

We attempted to include the entire population of such surveys by using three bibliographic databases and consulting the bibliographies of articles already gathered. When we first began building this dataset in the late 1980s, we used printed versions of *Sociological Abstracts*, *Psychological Abstracts*, and *Social Science Citation Index* to identify articles potentially based on relevant studies. Later, when electronic databases were available, we redid the searches for earlier years to locate any publications that had been missed and then screened them for possible inclusion in the data. Nevertheless, it is of course possible that we missed some studies. As search terms, we used the term "friend" and its various forms along with terms describing the populations studied, including "older men," "older women," "older male," "older female," "older age," "senior," "elderly," "older adult," and "later year," and their various forms. The first author of this article and one of the coauthors independently screened each abstract to determine whether a given study should be included in the dataset (see criteria described earlier). These same researchers then independently reviewed each complete paper to confirm its appropriateness. We always resolved the small number of disagreements by deciding to include any disputed study in our sample.

## Measurement

Three types of variables were coded for use in this analysis: year of first publication, gender of authors, and agentic-communal study design characteristics. Two of the authors coded these variables independently and then the first author resolved discrepancies. Discrepancies almost always arose because one of the coders had overlooked pertinent material in the text, not because of disagreements over how to categorize an element of the study design. Because cases were coded at three points in time (in the late 1980s, late 1990s, and after the year 2000) and because as new publications appeared based on old studies, the coding of cases had to be updated, the first author coded all of the publications a fourth time, compared the results to what had been done previously, and resolved a few minor discrepancies.

Independent variables include year of first publication from the study on the topic of older adult friendship and proportion of all authors publishing from the study on this topic who were women. Year of first publication was used as an indicator of date of the study rather than year of data collection because the latter information was often omitted from the publications. Note that 21.4% of the studies yielded their first publications between 1960 and 1979, 41.0% between 1980 and 1989, and 37.6% between 1990 and 1999. Thus, attention to this "feminine" topic did increase during the same period in which the proportion of all social scientists who were women increased as well.

On the average, three out of five authors publishing on the topic of friendship from a study were women ( $M=0.60$ ,  $SD=0.43$ ) (see Table 1). All of the authors were women for 47.0% of the studies and, in contrast, all of the authors were men for 26.5% of the studies. Although we do not include the proportion of all first authors on all publications from a study who were women ( $M=0.58$ ,  $SD=0.50$ ) as a variable in our analyses because doing so yielded no additional information, it is worth noting that all of the first authors were women for 58.1% of the studies and, in contrast, men were only the first authors for 40.2% of the studies. These figures show that women authors dominate research on this "feminine" topic.

**Table 1. Percentage distribution of gender composition by decade**

Variable	% of total ( $N=117$ )	% of 1960–1979 ( $N=25$ )	% of 1980–1989 ( $N=48$ )	% of 1990–1999 ( $N=44$ )
Gender composition				
All men	26.5	48.0	18.8	22.7
Mixed	26.5	16.0	29.2	29.5
gender				
All women	47.0	36.0	52.1	47.7
Proportion of all authors women				
$M$	0.60	0.44	0.65	0.63
$SD$	0.43	0.47	0.40	0.41

Notice also in [Table 1](#) that the average proportion of all studies in which women were involved increased over time. The differences between the frequency distributions for the past two decades were trivial, but a big shift occurred between the period ending in 1979 and the period

beginning in 1980. The percentage of all studies from which the authors were all men decreased from 48.0% to 18.8%, and the percentages of studies from which the authors were of mixed gender or all women increased from 16.0% to 29.2% and from 36.0% to 52.1%, respectively.

Six measures of the agentic-communal continuum were employed (see Table 2 for the list of these variables, their categories, and the codes assigned to them). The first two measures capture whether the *personhood* of those studied was preserved by giving respondents an opportunity for their voices to be heard. The agentic end of the continuum was indicated by the exclusive use of closed-ended questions and not including quotations in the report, and the communal end was marked by the exclusive use of open-ended questions and the use of some quotations. For an example of a closed-ended question, see Blieszner's (1993) study of resource exchange among elderly Caucasian women in the United States. She developed a list of examples of resources that friends might exchange and asked respondents to say whether they did so "never (0), less than once a year (1), once a year (2), several times a year (3), once a month (4), several times a month (5), once a week (6), several times a week (7), and daily (8)" (p. 71) with each of a series of four friends. In contrast to Blieszner's use of closed-ended questions, MacRae (1996) asked the Canadian elderly women she studied to answer a series of open-ended questions including "what kinds of things they and their friends did together" and "about exchange of assistance" (p. 378). In addition, Blieszner did not report quotations; MacRae did.

**Table 2. Operationalization of the agentic-communal continuum**

Orientation	Study design variables	Agentic-communal continuum codes		
		0 (agentic end)	1	2 (communal end)
Personhood	Question format	Closed ended	Both	Open ended
	Quotations included	No		Yes
Patterning	Measurement of friendship	Global	Both	Dyad or network
	No. of types of friendship characteristics	1	2–4	5–8
Productivity	No. of publications on friendship	1 article or chapter	2–6 articles or chapters	Book
	Focus of study on friendship	Peripheral	Central	Entire

The second pair of measures indicated whether the complexity and *patterning* of the phenomenon were studied. The agentic end of the continuum was indicated by the exclusive use of global questions and by studying only one type of characteristic of friendship. The communal end was marked by the examination of at least one friendship dyad or network and by studying between five and eight types of characteristics of friendship. The types of characteristics of friendship counted (and the percentage of studies including them) are behavioral processes (88.0%), affective processes (60.7%), cognitive processes (24.8%), number of friends (62.4%), friendship network density (11.1%), dyadic or network hierarchy (1.7%), solidarity (37.6%), and



homogeneity (23.9%) (see Adams & Blieszner, 1994, for a discussion of these characteristics). In the studies described earlier, for example, Blieszner (1993) targeted specific friendships with her questions, and MacRae (1996) asked global questions about friends in general. Both of them asked questions about at least five different types of characteristics of friendship.

Finally, the extent of commitment of the investigator to *productivity* in this communal area is measured by the amount of scholarship on the topic of older adult friendship produced from the study. The agentic end was indicated by one article or chapter, and the communal end was marked by a book. For example, Usui (1984) published only one article on the topic of friendship from his survey of older adults in Jefferson County, Kentucky. In contrast, Dykstra (1990) published a book on the topic of friendship from her study of older adults in The Netherlands. Productivity was also measured by the extent to which the study focused on friendship. The agentic end was indicated by a peripheral focus, and the communal end was marked by a study entirely focused on the topic. For example, MacRae's (1996) and Blieszner's (1993) studies both focused entirely on the topic of friendship. In contrast, Ingersoll-Dayton and Antonucci (1988) reported on data from a study on social networks in adult life. The study focused more generally on social support, but friendship was a central topic. DeVries, Jacoby, and Davis (1996) analyzed data on ethnic differences in friendship from the Canadian General Social Survey in which friendship was only a peripheral topic.

See Table 3 for the frequency distributions for these variables within decades. As shown in the first column, communal methods tend to be less common than agentic ones. We noted two exceptions. First, studies are as likely (19.7%) to include a measure of one type of characteristic of friendship as between five and eight. Second, more of the studies in this population were entirely focused on friendship (27.4%) than examined it as a peripheral topic (21.4%). Of further note is that the use of four out of six of the communal methods increased monotonically over time. Exceptions include a higher percentage of studies examining dyads and networks in the 1960s and 1970s (28.0%) and in the 1980s (33.3%) than in the 1990s (18.2%), and a higher percentage of studies producing a book in the 1980s (6.3%) than in the 1960s and 1970s (4.0%) and in the 1990s (4.5%). We will return to these trends when we examine the Spearman rank order correlation coefficients reported in Table 4.

**Table 3. Percentage distributions of study design variables by decade**

Orientation	Study design variable	% of category	% of total	% of 1960–1979	% of 1980–1989	% of 1990–1999
			(N= 117)	(N= 25)	(N= 48)	(N= 44)
Personhood	Question format	Closed ended	58.1	84.0	56.3	45.5
		Both	30.8	12.0	31.3	40.9
		Open ended	11.1	4.0	12.5	13.6
	Quotations included	No	74.4	96.0	72.9	63.6
Yes		25.6	4.0	27.1	36.4	
Patterning	Measurement of	Global	52.1	60.0	45.8	54.5

	friendship	Both	21.4	21.4	12.0	20.8
		Dyad or Network	26.5	28.0	33.3	18.2
	No. of types of friendship characteristics	1	19.7	24.0	16.7	20.5
		2–4	60.7	72.0	62.5	52.3
		5–8	19.7	4.0	20.8	27.3
Productivity	No. of publications on friendship	1 article/chapter	74.4	96.0	70.8	65.9
		2–6 articles/chapters	20.5	0.0	22.9	29.5
		Book	5.1	4.0	6.3	4.5
	Focus of study on friendship	Peripheral	21.4	32.0	10.4	27.3
		Central	51.3	52.0	60.2	40.9
		Entire	27.4	16.0	29.2	31.8

**Table 4.** Spearman rank order correlation coefficients ( $r_s$ ) for year of first publication and proportion of all authors who are women by study design variables ( $N = 117$ )

Orientation	Study design variables	Year of first publication	Proportion of authors women
Personhood	Question format	0.26	0.45
	Quotations included	0.26	0.38
Patterning	Measurement of friendship	-0.04	0.19
	No. of types of friendship characteristics	0.14	0.22
Productivity	No. of publications on friendship	0.23	0.20
	Focus of study on friendship	0.07	0.18

*Note.* Because it seemed possible that with additional publications, the likelihood of women participating as authors and the use of communal methods might increase, we controlled each of these correlations for the number of publications from each survey. We do not report the partial correlations here because they did not differ much from these bivariate ones.

A seventh variable, which sums the scores on the six previously discussed measures, was computed as an overall index of how agentic or communal the study design was. A zero on this measure of the agentic-communal continuum indicates that only agentic methods were used, and

a 12 would indicate that only communal methods were used ( $M= 4.2, SD= 2.8$ ). Although a few of the studies (4.3%) used only agentic methods, no studies used only communal methods and the maximum number of communal methods used was 10. Note that we intentionally measured the distinction between agentic and communal studies as a continuum rather than as a dichotomy to distinguish our approach from the categorical approach used by previous researchers (e.g., Bakan, 1966; Carlson, 1972; MacKie, 1985). The internal consistency of this additive scale as measured by Cronbach's alpha is 0.73. Eliminating any of the items except for the number of publications lowers the internal consistency of the index (and eliminating number of publications does not change the Cronbach's alpha at all), so all six items are included in the index. The mean score for this index increases from the first time period ( $M= 2.7, SD= 1.8$ ) to the second ( $M= 4.6, SD= 2.7$ ), but not from the second to the third ( $M= 4.6, SD= 3.2$ ).

### Interpretation of findings

Given that we made every attempt to identify the complete population of survey research studies on older adult friendship and are not attempting to generalize our findings beyond the population of studies examined here, it is not necessary to use inferential statistics (see Blalock, 1972, for a discussion of significance tests and generalizations to populations). Although we may have missed some studies, these would not be randomly distributed in the population and so inferential statistics would not be useful in compensating for our oversight. Furthermore, our goal is rather modest: to document the differences in study designs across genders of authors and across time, speculating about, but not explaining, why these potential differences exist. If our goal were instead to test theoretical explanations for the existence of any differences, tests of significance would be informative. So, with the exception of a regression analysis reported in Table 6, which predicts the use of communal methods, we will not report tests of significance. Instead, we will rely on the relative size of effects to guide us as we interpret our findings. (Following Cohen's [1988] discussion of the size of correlations, we interpret a correlation between 0.10 and 0.29 to be small, between 0.30 and 0.49 to be medium, and 0.50 or higher to be large.) Any future research that attempts to test the theoretical explanations we suggest in our conclusions will, however, require the use of inferential statistics even if an entire population of studies is examined.

**Table 6.** *Summary of hierarchical regression analysis for variables predicting agentic-communal continuum ( $N = 117$ )*

Variable	<i>B</i>	<i>SE</i>	$\beta$
Step 1			
Year of first publication	0.07	0.03	0.21*
Step 2			
Year of first publication	0.05	0.03	0.14
Proportion of all authors women	2.56	0.57	0.38**
Step 3			
Year of first publication	0.06	0.03	0.16
Proportion of all authors women	2.61	0.57	0.39**
Year of First Publication $\times$ Proportion of All Authors	0.08	0.07	0.10

## Women

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*Note.* The two independent variables were centered before they were entered into the equation, and the interaction term entered in Step 3 was computed by multiplying these centered variables.  $R^2=0.04$  for Step 1;  $\Delta R^2=0.14$  for Step 2 ( $p < 0.001$ );  $\Delta R^2=0.01$  for Step 3 ( $p > 0.26$ ).

\* $p < 0.05$ ; \*\* $p < 0.01$ .

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## Results

Table 4 addresses our first two questions regarding whether the use of communal methods has increased over time and whether women survey researchers who studied older adult friendship were more likely to use communal methods than their counterparts who are men. Spearman rank order correlation coefficients are reported because we hypothesized linear relationships between the use of communal methods and each of two variables: the proportion of authors who were women and the year of first publication.

The information in the first column of Table 4 reflects the trends reported in Table 3. Note that the correlations between year of first publication and each of the study design variables are all small (according to Cohen's 1988 standards), but five of six of them are in the expected direction. The exception is whether global questions are asked as opposed to questions about a specific dyad or more than one member of a network ( $r_s=-0.04$ ).

In the second column, note that although most of the correlations between the proportion of authors who are women and each of the study design variables are small, all six of them are in the expected direction and the coefficients for the two variables measuring personhood are medium sized ( $r_s=0.45$  for question format and  $r_s=0.38$  for quotations included). Given that these are population parameters rather than sample statistics and that the pattern is consistent, these findings are worth noting.

Table 5 reports Spearman correlation coefficients for the year of first publication with each of the study design variables within the extreme categories of the proportion of all authors who were women (i.e., 0% and 100%) and within the middle categories combined. All but 2 of the 18 coefficients are positive. Although some of these positive correlations are very close to zero, this nonetheless, indicates that with two exceptions (the correlation of the year of first publication with the type of measurement of friendship for mixed-gender research teams and with the extent of focus on friendship for teams composed entirely of men), authors were more likely to use each type of communal method as time passed no matter what the gender composition of their research team.

**Table 5.** *Spearman rank correlation coefficients ( $r_s$ ) for year of first publication by study design variables within extreme and middle categories of gender of authors variables*

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Study design variable	Gender of authors category	Spearman coefficient
Personhood		

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Question format	All authors women ( $N= 55$ )	0.31
	Authors mixed gender ( $N= 31$ )	0.16
	All authors men ( $N= 31$ )	0.15
Quotations included	All authors women ( $N= 55$ )	0.31
	Authors mixed gender ( $N= 31$ )	0.14
	All authors men ( $N= 31$ )	0.23
Patterning		
Measurement of friendship	All authors women ( $N= 55$ )	0.07
	Authors mixed gender ( $N= 31$ )	-0.34
	All authors men ( $N= 31$ )	0.05
No. of types of friendship	All authors women ( $N= 55$ )	0.17
	Authors mixed gender ( $N= 31$ )	0.08
	All authors men ( $N= 31$ )	0.15
Productivity		
No. of publications on friendship	All authors women ( $N= 55$ )	0.22
	Authors mixed gender ( $N= 31$ )	0.24
	All authors men ( $N= 31$ )	0.03
Focus of study on friendship	All authors women ( $N= 55$ )	0.09
	Authors mixed gender ( $N= 31$ )	0.09
	All authors men ( $N= 31$ )	-0.02

Note that although most of these correlations are small, some of these coefficients are medium sized, reflecting greater changes in methods over time. With only one exception, the correlations between use of various communal methods and year of first publication were highest when all of the authors publishing from a study were women. The exception is that when the gender of authors is mixed rather than all women, there is a very slightly higher correlation between number of publications on friendship and year of first publication ( $r_s= 0.24$  and  $r_s= 0.22$ , respectively). Note, however, that both of these correlations are higher than the comparable one for the studies with all authors who are men ( $r_s= 0.03$ ). Also, the largest correlations are between variables measuring the preservation of the personhood of the respondent and year of first publication, especially for the studies where all of the authors were women ( $r_s= 0.31$  for each of these two measures).

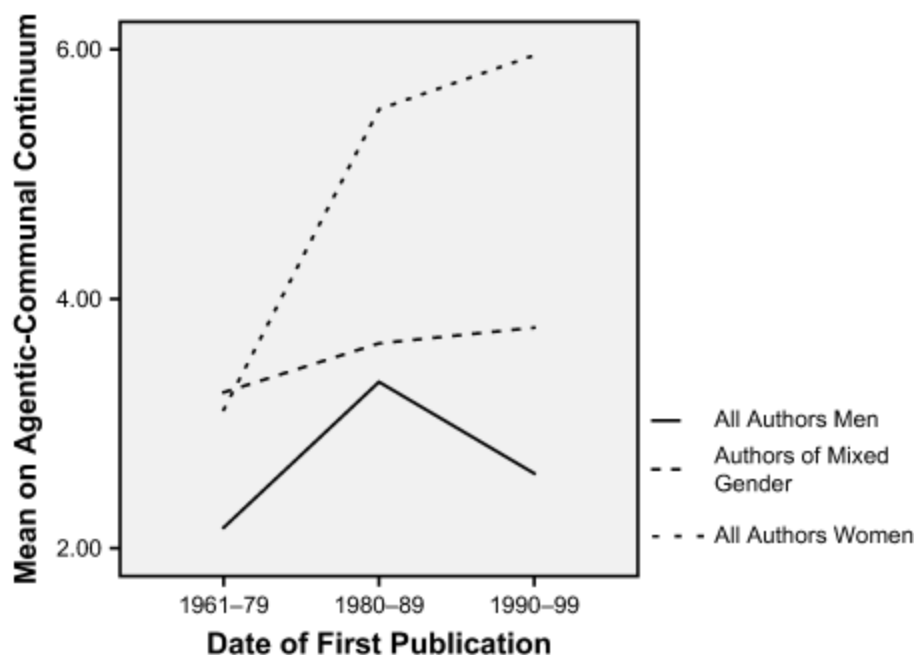
These findings demonstrate a small increase in the tendency of teams of survey researchers, regardless of their gender composition, to use most of the communal methods examined in this research more now than in the past. These findings also suggest that women's use of these methods has increased more than men's. Table 6 summarizes a hierarchical regression of the agentic-communal continuum on a continuous version of the year of first publication variable (Step 1), proportion of all authors who were women (added in Step 2), and an interaction term (added in Step 3), conducted to test this emergent hypothesis.

The interaction term was highly correlated with the proportion of all authors who were women ( $R= 0.99$ ,  $p < 0.001$ ). To address the problem of multicollinearity, the two independent variables

were centered (i.e., the mean of each variable was subtracted from all scores), and the interaction term entered in the regression was computed by multiplying centered versions of the two independent variables (Aiken & West, 1991; Jaccard, Turrisi, & Wan, 1990). The resulting interaction term was not significantly correlated with proportion of all authors who were women ( $R=-0.126$ ,  $p > 0.08$ ), thus centering the independent variables and interaction term solved the multicollinearity problem.

Although the year of first publication is a significant predictor of score on the agentic-communal continuum when entered into the regression alone, it is reduced to nonsignificance when the proportion of all authors who are women is entered in the second step. Although this second model explains significantly more variation than the first one ( $\Delta R^2 = 0.14$ ,  $p < 0.001$ ), the addition of the interaction term in Step 3 does not explain more variation than the second one ( $\Delta R^2 = 0.01$ ,  $p > 0.26$ ). Therefore, the second model is the one that we interpret theoretically in the discussion of these results: Over time the use of communal methods increases because the average proportion of women publishing from each study increases.

It is possible, however, that if this were a larger population, the effects of the passage of time and the interaction term would have been significant (i.e., it is possible we did not have enough power to produce significance). For this reason, and because our goals are descriptive as well as theoretical (Blalock, 1972), Figure 1 depicts the mean changes in the use of communal methods over time for teams composed only of women, mixed-gender research teams, and teams composed only of men to provide more detailed insight regarding this particular population of surveys. Although adding the interaction term in Step 3 of the regression reported in Table 6 does not explain a significantly greater amount of the variance, this figure shows that in this population, the rate of the increase in the use of communal methods is greater when women are involved as authors but that the use of communal methods by authors who are men also increases over time, albeit at a lower rate. The greatest increase in the use of communal methods was by all-women research teams; the next greatest increase was by mixed-gender teams; and the smallest increase was by teams composed exclusively of men. The use of communal methods by teams composed only of men actually peaked in the 1980s. Had teams composed of all men continued to increase their use of communal methods through the 1990s, the discussion that follows would have been different.



**Figure 1.** Mean on agentic-communal continuum by year of first publication for studies from which all authors were women, the gender of authors was mixed, and all authors were men.

### Discussion

The older adult friendship literature afforded us the opportunity to study the impact of the influx of women scholars into social science during the last half of the 20th century on the types of decisions researchers make regarding the study design of surveys. Our research builds on a relatively old literature documenting gender differences in choice of research method (i.e., quantitative vs. qualitative) by documenting the impact of gender on methodological decisions regarding study design within a type of quantitative research method (i.e., survey research). Although most of the researchers who published on this topic at the beginning of the period studied here were men, women now dominate this area, and so it was possible to study how their survey research styles were different from men's and whether men's styles changed to be more like those more typical of women.

### Answers to basic research questions

In the introduction to this article, we posed three questions, which we repeat here. Have survey researchers who study older adult friendship increased their use of communal methods since the 1960s? Are women who are survey researchers and study older adult friendship more likely to use communal methods than their counterparts who are men? Does the gender of authors or the time period better predict the constellation of methods used? Based on a review of the literature, we hypothesized that the first two questions would be answered affirmatively and they were. The answer to the third question is that the gender of authors is a stronger predictor of types of methods used than the year of first publication from a study.

Despite their gender composition, research teams studying friendship and aging tend to use more communal methods now than they did in the past. The main increases are in preserving the personhood of respondents by asking open-ended questions and including quotations in reports

on the data and in publishing more from a given study on this "feminine" topic. These changes are not only in keeping with feminism but also with broader intellectual trends such as the shift away from positivism and toward postmodernism and social constructivism. Postmodernists such as Lyotard (1979/1984), for example, argue that in the face of skepticism about science and other grand narratives that deny the experiences of people, "consensus has become an outmoded and suspect value" (p. 66). Similarly, social constructivists argue that there are no objective references for truth to discover, simply many voices to hear (K. Gergen, 1999; M. Gergen, 2001). Preserving the voices of participants by asking them open-ended questions and including quotations in reports on the data is one way of capturing the diversity of approaches to friendship without entirely abandoning positivism.

The argument that Giddens makes about how in late modernity social structures have been subject to "disembedding mechanisms" (1991, pp. 14–34) seems relevant to understanding the increased productivity of scholars on the topic of friendship. According to Giddens, one of the primary effects of this process is an emphasis on "pure relationships": "a social relation which is internally referential, that is, depends fundamentally on satisfactions or rewards generic to that relation itself" (1991, p. 244). Also relevant is the postmodern observation that activities are no longer tied to specific places, but to personal spaces (Harvey, 1990; Lash & Urry, 1987). Scholars may now feel more freedom to study friendships *per se* rather than the ways in which friendships contribute to other aspects of social life (e.g., job success, the functioning of work organizations) or are structured by them. Perhaps this means that scholars can focus more of their research on friendship rather than being restricted to studying it only in passing.

Although the gender differences in how research is conducted are small, we are convinced they are important because they are consistent across measures of the agentic-communal continuum. Furthermore, we intentionally chose a population of studies in which gender differences were less likely to be found in order to strengthen our argument that, for whatever reason, men and women tend to make different decisions about study design. Had we studied a wider range of types of social science studies, such as experiments or field research, we suspect our findings would have been more robust. We may have also found greater gender differences in a population of surveys on a topic in an area that is not as dominated by women as research on aging and friendship is.

Gender differences are a bit larger for the two variables measuring whether attempts are made to preserve the personhood of the respondent. It is possible these correlations reflect the impact of feminist theory on research methods because this has certainly been a major thrust of much that has been written on this topic (see Oakley, 2000; Sprague, 2005). And, as we mentioned earlier, we agree with Peplau and Conrad (1989) that not all feminists are women, but women are certainly more likely to be affected by feminist thought than men. Additionally, it is possible that women's interest in examining patterns and being productive on this topic have been somewhat repressed by forces outside of their control. Holding size of sample constant, asking questions about specific dyads or networks instead of global questions about friendships in general and asking about more aspects of friendship rather than fewer involves conducting a more expensive study. Historically, forces outside the control of the researchers such as access to funding and a light enough teaching load to achieve publication have affected women more than men (Rong, Grant, & Ward, 1989; Ward & Grant, 1996). Although we did not code the size of the samples of



the studies in this population, it is also possible that women compensated for relatively smaller sample sizes by asking more in-depth questions.

The third question we posed is whether the increase in the use of communal methods is better accounted for by the passage of time or by the influx of women into social science. The answer to this question is that gender of authors is a stronger predictor of communal methods use than the year of first publication (in fact, it explains the effects of year of first publication on the use of communal methods). One reason the use of communal methods has increased is because more women are now publishing on the topic of older adult friendship and using communal methods. As the descriptive data and the graphic depiction of them show, however, the increase in the use of communal methods in this population of surveys is not totally attributable to the increase in the number of women publishing on the topic. Men increased their use of these methods during the same time period. As we discussed above, broad intellectual changes in theory, methods, and methodology and contextual shifts in funding opportunities could, among other factors, also affect choice of methods.

Note that during the 1990s, men decreased their use of communal methods while women continued to increase their use of them. This suggests that whether the relevant external forces are cultural (i.e., theoretical) or structural (i.e., resources), they ceased having as much influence on men during the 1990s as they did during the 1980s. It is possible that as the initial general emphasis on postmodernism and social constructionism subsided, women continued to be more influenced by these perspectives than men via feminist scholarship. It is also possible that once it became more acceptable to study personal relationships, men were better positioned to receive funding sufficient to do bigger studies and thus returned to using agentic methods. Due to a lack of relevant research, these possible explanations of the reversal of the trend for research teams composed entirely of men and not those including women are highly speculative as are the assumptions about changes in theoretical fashions and funding patterns on which they depend.

Although it is not clear whether women authors influenced men or whether women were simply more affected by the same forces that also influenced men, it is clear that women's use of communal methods has transformed the way surveys of older adults on the topic of friendship are designed merely because more of them publish in this area now than in the past. Although the results of this study cannot be generalized beyond this subfield of personal relationships research, this example helps substantiate Sprague's (2005) claim that women's impact on how social science research is conducted is not limited to qualitative studies.

### **Impact of communal methods on what we know about older adult friendship**

When we originally conceptualized this study, we intended to demonstrate how women's use of communal methods in survey research study designs had affected what we know about older adult friendship and particularly about gender differences in them. We thought that if communal methods were better suited to studying women's lives and agentic methods were better suited to studying men's lives, as previous scholars had claimed (Bernard, 1973; Oakley, 1974; Smith, 1974), studies using the former approach would emphasize areas of personal relationships where women have strengths, while studies using the latter approach would highlight those where men have strengths. We were unable to address this question of how the introduction of communal

methods differentially affected what we know about older men and women's friendships. Although 77.8% of the surveys were of both men and women, only 38.5% of these 91 studies compared their friendships.

It is clear, however, without conducting a statistical analysis of the impact of the increased use of communal methods on what we know about older adult friendship that it has had an impact. Our knowledge of older adult friendship is no longer limited to how often they see their friends, how many friends they have, and whether they have a confidant. We now know a great deal more about the affective, behavioral, and cognitive processes involved in their friendships and how friendship dyads and networks are structured (Blieszner & Adams, 1992).

As the authors of *Women's Ways of Knowing* (Belenky, Clinchy, Goldberger, & Tarule, 1986) observed in a book they subsequently edited together (Goldberger, Tarule, Clinchy, & Belenky, 1996), women's ways of knowing overlap with men's ways of knowing. As early as 1971, Carlson pointed out that men sometimes use feminine research techniques and women sometimes use masculine ones. Our research confirms these observations. Although women are more likely to use communal methods than men and men are more likely to use them when they collaborate with women, almost all researchers use a combination of communal and agentic methods. If research in this area was ever a victim of the "unmitigated agency" that Bakan (1966, p. 14) identified as "the villain," balance has now been introduced.

### **Interpretation of findings and future research**

As mentioned earlier, Peplau and Conrad (1989, pp. 394–395) argued that the agentic-communal distinction is "false and misleading." Nonetheless, we have used this distinction as a starting point for our research mainly because the prior research on which we wanted to elaborate used the distinction. Our approach is somewhat different from that of previous researchers, however, and was intentionally designed to address some of the concerns Peplau and Conrad expressed. For example, we do not see communal and agentic approaches to research as categories but as ends of a continuum. Second, we do not argue that gender alone determines methodological decisions. Finally, we do not argue that communal approaches are necessarily used more by feminists or that agentic approaches are used more frequently by sexists. Rather than building on our work and the work that preceded it, however, future researchers may want to study other aspects of study design not captured by the agentic-communal distinction and not historically associated with an essentialist perspective on gender.

Although Carlson (1971) may have used the distinction between agentic and communal research methods to demonstrate that women are essentially different from men, we are not the only ones who have interpreted gender differences in the use of communal and agentic methods from a nonessentialist stance. Very shortly afterward Carlson published her work, Bernard (1973) argued that the differences in the ways men and women do research might also be a result of differences in how they were socialized. Research since that time has shown that structural forces affect the quantity and quality of research women produce (Grant & Ward, 1991). We have argued here that these same forces might affect the types of methods women use. Women are not necessarily more likely to use communal methods because they are essentially different

than men or even because of their greater commitment to feminism. As Harding (1996, p. 448) observed

... The (antiessentialist) differences in women's ways of knowing have two distinguishable sources.... There are gender differences in theories of knowledge that arise from the substantive cultural or historical differences in people's lives. To the extent that women and men are assigned different activities and experiences, those activities and experiences will provide resources and limitations for developing knowledge about different aspects of nature and social relationships with which they interact, and this would be so even if there were no power relations between women and men.... However, we can at least analytically distinguish differences in knowledge and theories of knowledge that arise from how people are positioned in power relations. Some resources for generating knowledge clearly are available primarily to those in powerful positions in a culture.

It is entirely possible that women are more likely to use communal survey research methods than men as a result of the experiences they have had as researchers and because they had less opportunity to do agentic research. Although no one has examined this possibility through systematic research, Rong et al. (1989) observed that the type of research women conduct may explain their increases in productivity despite unvarying research funds.

In some senses, it is obvious what research needs to be done to further our understanding of the impact of women scholars on what we know about older adult friendship. Surveys of researchers would reveal patterns left unexplored in this article because we did not hear their voices. As our previous comments suggest, it would be interesting to ask researchers why they made the methodological decisions they made. Furthermore, it would be informative to conduct a content analysis of the ways in which researchers report and discuss their findings, how their ways of conducting research influence what they find, and how what we know about older adult friendship is consequently affected. Now that gender differences, however small, have been documented here, such studies would be worth undertaking, as would examinations of gender differences in how researchers design their surveys on other social science topics and in non-English-speaking cultural contexts.

Less obvious is a direction implied by Rosenfeld's (2002, p. 16) suggestion that gender researchers "'move up a level' in our thinking, going beyond gender as a category per se." One example she gave of "moving up a level" is comparing findings on gender to findings on other topics, such as racial identity or economic class. It is possible that the racial composition or economic profile of social science researchers also affects the way research is conducted. Perhaps women are merely an example of a group of researchers forced to innovate due to lack of resources to conduct research in keeping with mainstream standards. It is possible that if someone were to compare the tendency of minority scholars or researchers at less affluent institutions to use communal methods to those of Caucasian scholars at elite universities, the patterns reported here would be replicated. Alternatively, perhaps, even though they might share a disadvantaged structural position with women, the socialization experiences of minority researchers or of researchers at less affluent institutions might have led them to adapt in different ways than women have. Assuming the experience of survey researchers who are women and study older adult friendship is any indication, minority researchers and those at less affluent

institutions will not greatly affect what we know about personal relationships until they are better represented among those who publish social science research.

## Footnotes

1. A list of the 117 studies included in this analysis is available by contacting the first author by e-mail.

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