

Season's Greetings: Adults' Social Contacts at the Holiday Season

Karen L. Fingerman and Patricia C. Griffiths
Pennsylvania State University

Close friends and family play an important role in adults' lives, but little is known about the implications of infrequent or peripheral social ties that adults maintain. Eighty-seven adults, ranging in age from 24 to 87 years ($M = 51.25$) provided information about their holiday card networks. Participants completed surveys for up to 25 cards that they received during one holiday season ($n = 1,405$ surveys completed) and provided the holiday greetings as well, if they were willing ($n = 1,152$ cards). Over half of the cards participants received were from individuals whom participants did not consider to be close friends or family members and whom they had not seen in over a year. Adults of all ages described emotional reactions to approximately one third of the cards they received. Younger adults tended to view their holiday greetings as a means of maintaining or building new social ties, whereas older adults were more likely to view their holiday greetings as a link to their personal past. Receiving a greater number of holiday cards and receiving cards from close social contacts were associated with increased feelings of social embeddedness. Similarities and differences between peripheral ties and close social ties are considered.

The importance of close ties with friends and family for health and well-being across adulthood has been clearly established (e.g., Antonucci, Sherman, & Akiyama, 1996; Hansson & Carpenter, 1994). It is also clear that the nature and meaning of these close ties vary as a function of age (Adams & Blieszner, 1994; Connidis & Davies, 1990; Troll, 1994). Specifically, older adults appear to confine their social ties to those that are most emotionally salient (Carstensen, 1992, 1993, 1995). Yet, adults of all ages also maintain contact with individuals who are not immediate members of their intimate social circles (e.g., Adams, 1998). Although a great deal is known about close social contacts in people's lives, very little is known about tangential social liaisons. As is the case with more intimate relationships, individuals of different ages may derive different meaning from their peripheral social contacts. This study focuses on the less intimate social ties that adults do maintain, what less intimate ties mean to individuals, and whether such ties contribute to social well-being in some way.

We use the terms *central* or *close* relationships to refer to relationships with family members and friends whom individuals

might list when asked to describe social ties that are important to them (e.g., Antonucci & Akiyama, 1987). We use the term *peripheral ties* to refer to relationships involving social partners that individuals may see infrequently and whom they might not list when asked to describe their social networks. Peripheral ties may be characterized by the following three types of liaisons: (a) individuals who may later become more intimate social contacts (e.g., a new friend, a neighbor with whom a closer tie may be formed, or even a young niece or nephew with whom one may develop a more intimate relationship with age), (b) individuals who started on the periphery of a social network and who have remained there (e.g., a hairstylist or attorney, a co-worker in one's employment setting, or a long-time neighbor who has never become a more intimate social partner), and (c) people who formerly held a more central place in an individual's social network but who have moved to the periphery of the network for any number of reasons (e.g., geographic moves, changes in jobs, or their children are grown).

The sparse literature addressing peripheral social ties has focused primarily on the second type, those peripheral ties that are likely to have always been and to remain peripheral socially, with little consideration of age-related differences in the nature of these ties. Such studies have focused on one age group at a time. For example, researchers in Australia examined the "mate" relationship in which young adults spend time together in pubs or at sporting events (Morse & Marks, 1985). Cowen and his colleagues examined mental health functions that bartenders, haircutters, and divorce lawyers claim to serve in their young and middle-aged clients' lives (Cowen, 1982; Cowen et al., 1979; Cowen, McKim, & Weissberg, 1981). Few studies have looked at peripheral ties amongst older adults. Limited research indicates that older adults derive short-term emergency aid from neighbors, a social tie based primarily on geographic proximity (Biegel, 1985; Cantor, 1979; Connidis & Davies, 1990; Stolar, MacEntee, & Hill, 1993). In summary, this literature suggests that adults of different ages retain ties to people with whom they are not intimate and from whom they do not derive ongoing social support, yet it does not inform an

Karen L. Fingerman and Patricia C. Griffiths, Department of Human Development and Family Studies, Pennsylvania State University.

Patricia C. Griffiths is now at the Atlanta Department of Veterans Affairs Medical Center, Decatur, Georgia.

We are grateful to the following individuals for assistance in recruiting participants for this study: Miriam Moss, Danielle Swiontek, Elizabeth Michaels, Lois Fingerman, and Lillian Troll. Liane Neagley, Laura Fields, and Jennifer Grimes aided with data entry and transcription. Jennifer Martin helped manage the study. Sara Baumgarten assisted with coding and with research pertaining to the greeting card industry. Andrea Piccinin, Niall Bolger, and Aline Sayer provided invaluable advice pertaining to the analysis strategy used in this article. Kristen Eyssell, Aline Sayer, Catherine Cohan, and Neal Krause provided invaluable comments on drafts of this article.

Correspondence concerning this article should be addressed to Karen L. Fingerman, Department of Human Development and Family Studies, 110 Henderson Building South, Pennsylvania State University, University Park, Pennsylvania 16802. Electronic mail may be sent to kxf18@psu.edu.

understanding of the ways in which peripheral ties differ by age group.

Insights into peripheral ties that may grow into something more in the future or that were something more in the past may illuminate age differences in social networks in general. From a theoretical perspective, Granovetter (1973) proposed that individuals rely on peripheral social liaisons to gather information and bridge ties to other social enclaves. This use of distant ties may be more evident in young adulthood, when social goals focus on gathering knowledge and accumulating a larger and more varied social network. In later life, ties to individuals one has known for a long time may create a sense of continuity. Anthropologists describe ethnic groups in which older adults who encounter a number of familiar faces feel a sense of connection to their communities, regardless of the level of intimacy of those connections (e.g., Myerhoff, 1978). Systematic examination of peripheral ties amongst adults of different ages may provide insight into the dynamics of change in closer social networks.

To investigate peripheral ties, a situation must be found where adults of all ages are likely to engage in such liaisons. Of course, longitudinal data about the movement of individuals in and out of social networks would be ideal. It is unfortunate that such data are not available in the most inclusive longitudinal studies; peripheral ties that have not yet come to fruition as intimate ties would not be reported. Instead, we sought a setting in which age differences might be examined in all three types of peripheral ties: those that were in the process of formation, those that would remain peripheral, and those that had formerly been close social ties. This study examined the types of social ties that are found in exchanges of holiday greetings.

Marketing research reveals that adults of all ages purchase greeting cards (Dortsch, 1997; Mogelonsky, 1996). In addition, some adults write notes, newsletters, or personalized cards (Di Leonardo, 1992). The terms *greeting*, *card*, and *letter* are used interchangeably here. We examined the holiday card forum to address the following three questions: (a) In what ways are relationships maintained through holiday greetings similar to and different from patterns reported in the literature pertaining to central relationships? (b) How do recipients of different ages react to the holiday cards that they receive? and (c) Do such holiday card ties contribute to adults' social well-being?

Holiday Greetings as a Form of Social Contact

Our first question involves descriptive features of holiday greeting networks in comparison with more central social ties described in previous research. Literature addressing descriptive features of social networks has focused on number of social ties, characteristics of individuals in social networks (e.g., gender, age, and relationship to participant), and features of the relationships (e.g., frequency of contact, and relationship quality). We considered these aspects of holiday card networks.

First, we examined the size of the holiday card network. In assessments of close relationships, older adults report fewer relationships and less frequent contact with members of their social networks than do younger adults (Antonucci & Akiyama, 1987; Carstensen, 1995). Holiday greeting networks may show a distinct pattern of age differences, however. Greetings may be used to maintain ties with people who were formerly part of an intimate

social network. Kahn and Antonucci (1980) argued that individuals travel through life surrounded by a convoy of social ties but that the constellation of intimate relationships changes across the life span. For example, in adolescence, a school mate might be among the closest social ties, whereas in midlife, spouse and children might be the most intimate ties. Kahn and Antonucci did not specify what happens to individuals who shift out of the convoy. Ties with some formerly close partners might be retained through holiday cards. Over time, as social networks evolve and contract, holiday card networks might build and accumulate. As a result, older adults may have larger holiday card networks than do younger adults.

Our second descriptive interest involved the composition of holiday card networks. From whom do adults of different ages receive the majority of their holiday cards, intimate friends and close relatives or peripheral social contacts? Across studies, researchers have found that adults of all ages maintain a core of 5 to 10 significant intimate social ties (Antonucci & Akiyama, 1995). Close friends and relatives might exchange holiday cards with these people as well as engage in more intimate forms of social contact. Thus, we expected adults of different ages to receive a comparable number of cards from intimate social partners. Two contradictory patterns emerge with regard to expectations of the number of peripheral cards individuals of different ages might receive. Older adults generally show a decreased interest in acquaintance ties (Carstensen, 1995). Indeed, young and middle-aged adults have more opportunity to exchange cards with business associates, co-workers, and with acquaintances with whom they wish to form stronger ties. Thus, we might expect older adults to receive fewer cards than younger adults do from peripheral ties. On the other hand, as has been mentioned, holiday card networks may be distinct from other social contexts because these networks may include individuals who were formerly intimate social partners: Card exchanges provide an opportunity to retain ties in long-term social liaisons. Given our expectation that older adults would have larger networks overall, we speculated that older adults would receive more holiday greetings from peripheral social contacts than would younger adults. Moreover, as is discussed later, we expected this difference to reflect contact with long-term, formerly intimate ties.

We were also interested in characteristics of the relationships between individuals who exchanged cards. Following the reasoning about formerly close ties, we expected older adults to report that they had gone for longer periods of time without seeing these individuals and to report that they had exchanged cards with them for a greater number of years.

The Meaning of Holiday Card Greetings

Our second research interest focused on individuals' reactions to the cards that they receive. An individual's feelings about a given social tie may be associated with his or her own goals and needs. Carstensen (1993) proposed that adults of different ages approach their social relationships with different motivations. For younger adults, the goal is to obtain information and to broaden the scope of their social networks. For older adults, the goal is to maximize emotional benefits. In keeping with this theory, younger adults would be expected to view the cards that they receive as efforts to maintain or form new social ties, and older adults would be

expected to attribute greater emotional meaning to the cards that they receive.

In addition, we hypothesized that older adults would derive distinct meaning from holiday card ties that is not available from more central relationships. As individuals grow older, some holiday greetings may represent ties to the personal past rather than ongoing relationships. Several theorists have argued that a central task of old age is to reflect on and to make sense of one's life (Butler, 1963; Erikson, Erikson, & Kivnick, 1986). In the service of this goal, some social ties may be perceived as related to the past, creating a sense of cohesion across an individual's life. For example, a holiday card from a former college roommate might draw an older adult back to days when he or she was healthier, more energetic, and facing an open future. This type of meaning may not be as easily derived from relationships involving ongoing interactions with a locus in the present. Moreover, older adults may prefer this type of peripheral social tie over peripheral ties that permit the building of new relationships.

In summary, we expected younger adults to view more of their cards as an invitation to build relationships and older adults to view more of their cards as a link to the personal past. Finally, we expected older adults to derive emotional meaning from more of their cards on the basis of their predilection to derive emotional benefits from relationships in general.

In addition to looking at the meaning of holiday cards in general, we examined how features of a card may influence the meaning attributed to it. Some psychologists have proposed feedback loops in which social input encourages an individual to react to a situation in a certain way. For example, a person suffering from depression may evoke a rejecting response from a social partner that, in turn, leads the depressed person to interpret the interaction in negative terms (Antonucci & Jackson, 1987; Coyne & Gotlib, 1983; Gotlib, 1983). In a like manner, the following two features of a holiday card may evoke the meaning a recipient attributes to it: (a) characteristics of the person who sent the card, and (b) the content of the message within the card.

Holiday greetings constitute social input from a social partner. As such, the type of relationship one has with the sender of the greeting may contribute to its meaning. Cards from close friends might be more likely to evoke emotional reactions than cards from neighbors. Moreover, the length of time individuals have known the people they exchange cards with may play a role in the meaning individuals derive from them. Holiday greetings from long-time companions would be more likely to draw an individual to the personal past, whereas holiday greetings from new acquaintances might be viewed as an effort to build a new relationship. The content of the greetings may also contribute to individuals' reactions. For example, greetings that are more sentimental in tone may evoke more emotional reactions. Someone who receives a card that contains only a brief note may be less likely to attribute emotional meaning to it.

We further expected the strength of these associations between meaning of card and relationship of senders or card characteristics to vary by age of participant, based on age differences in goals and motivations discussed previously. Of course, older adults may receive different types of cards than do younger adults. Thus, it is not possible to separate card type or age of sender from age of participant, but the cards provide some indication of how social stimuli contribute to the meaning individuals derive from them.

Social Embeddedness and Card Sending

Finally, it is important to consider the implications of receiving holiday cards. Age differences in physical and psychological health have been found to be associated with differences in health behaviors, work roles, life transitions, and other factors. Feeling connected to other individuals is also an important aspect of individual well-being (Ryff, 1995), and it is this aspect of well-being that might be enhanced by receiving holiday cards.

Extant literature suggests that holiday greetings may contribute to feelings of social embeddedness. In a qualitative study of oldest old adults, Johnson and Barer (1997) reported that several of their participants spontaneously mentioned the joy they experienced from receiving holiday greetings from distant family members who were rarely seen. In other studies, individuals with fewer social contacts reported greater loneliness (van Tilburg, 1997). Adults who receive many cards may garner the sense that a large number of people think of them and, therefore, feel less lonely. We expected individuals who received more cards, whose cards came from people they felt close to, and whose cards came from long-term senders to feel more socially embedded.

Methodological Implications of Examining Holiday Card Patterns

The use of holiday greetings involves an expansion of existing approaches to measuring social ties. Over the past two decades, considerable advances have been made in self-report measures available for assessing adults' close social ties (e.g., Barrera, Sandler, & Ramsay, 1981; Broese van Groenou & van Tilburg, 1996; Kahn & Antonucci, 1980; Morgan & Rook, 1996), but these measures are not intended to capture social ties that are not salient. Peripheral social ties may not come to mind easily or may not even be considered *relationships* per se. Techniques such as focus groups (e.g., Morgan & Rook, 1996), observation (e.g., Finger- man, 1998), projective techniques (e.g., Bedford, 1989), and event sampling (e.g., Lang & Carstensen, 1997) enhance self-report methodologies but still neglect ties that are maintained at infrequent intervals. In this study, we asked participants to provide self-report information about incoming social contacts (cards received); we also obtained tangible artifacts of that social contact (the holiday messages themselves) and therefore did not have to rely solely on memory. Of course, there are limitations in using holiday cards to assess peripheral ties. Holiday greetings may represent only one aspect of a relationship: The parties may call or see one another on a more frequent basis.

There are also potential cohort differences in the value placed on card sending. As technological advances such as e-mail and less expensive long-distance telephone service become widely available, card sending may decrease (Fitzgerald, 1994). At the same time, the card industry is successfully instigating marketing changes to foster interest in greeting cards among younger adults (Fitzgerald, 1994; Mogelonsky, 1996; Sparks, 1994). Likewise, although some older adults report that they were socialized to value formalities such as holiday cards, other older adults report that they were too poor or had too little leisure time to engage in such rituals when they were younger (Rosenthal & Marshall, 1988). We developed an index of attitudes toward holiday cards to assess the degree to which individuals value sending and receiving such greetings.

Finally, only certain ethnic groups may emphasize card exchanges. Greeting cards have traditionally been the venue of communication for the middle and upper class, particularly among Anglo American groups (Sparks, 1994). This study was limited to a well-educated Caucasian subpopulation in the United States for whom card sending may be a means of maintaining peripheral social contacts. In other groups, a different forum such as a church event or class reunion might serve as a more relevant context for examination of such ties.

In summary, the following issues were examined:

1. Attitudes toward and behaviors (e.g., sending and receiving) involving holiday cards;
2. Descriptive features of holiday card networks (e.g., size of network, characteristics of individuals, and relationship features), with attention to peripheral ties;
3. The meaning that holiday cards have to individuals of different ages, and the ways in which features of the holiday card senders and the holiday greetings themselves influence that meaning;
4. The impact that holiday greetings have on feelings of social embeddedness.

Method

Sample

National data about greeting card sales throughout the year were used to define the sample. Card industry information reveals that, on average, individuals under the age of 24 purchase fewer than 9 cards per year, but that number climbs to 36 cards per year at age 24, continues to climb, and then decreases to 52 per year for adults over the age of 65 (Dortsch, 1997). Based on this skew in per capita card sales, only individuals over the age of 24 were included in this study. Industry research also reveals that women are more likely to send and receive greeting cards (Fitzgerald, 1994). We attempted to recruit equal numbers of men and women, but potential participants who claimed that someone else kept track of their holiday greetings were allowed to have that individual complete the survey packet. Consequently, the sample was disproportionately female.

A volunteer sample of convenience was recruited by the investigators and assistants in four locations: Des Moines, Iowa; State College, Pennsylvania, a medium-size college town; Philadelphia; and the San Francisco Bay Area. Recruitment took place through local organizations, offices, stores, and through word of mouth. Individuals who had exchanged holiday cards with someone participating in the study were excluded. Data collection took place across two holiday seasons, from December 1, 1995 through January 31, 1996, and from December 1, 1996 through January 31, 1997. Collection of data across 2 years and the use of multiple locations were necessitated by the demands of collecting intensive information during a period in which researchers were dispersed geographically and participants were busy with holiday activities. All participants considered their current location to be their permanent residence. There were no differences in the ages of participants or other variables of interest by year in which the survey was completed or by geographic region.

The final sample consisted of 20 Caucasian men and 67 Caucasian women ranging in age from 24 to 87 years ($M = 51.25$, $SD = 17.25$). To provide a better understanding of the distribution of variables by age, background information is presented for three distinct age groups in Table 1: young adults, ages 24 to 39 years ($n = 26$), middle-aged adults, ages 40 to 59 years ($n = 31$), and older adults, over the age of 60 ($n = 30$). Four young adults were male, 6 middle-aged adults were male, and 10 older adults were male. Participants were generally well-educated, $M = 5.2$, $SD = 1.3$ (1 = grade school, 2 = some high school, 3 = high school, 4 =

Table 1
Demographic Characteristics, Presented by Age Groups

Characteristic	Young adults ($n = 26$)	Middle-aged adults ($n = 31$)	Older adults ($n = 30$)
Marital status ^a			
Married or living with partner	.50	.81	.59
Single or divorced	.49	.20	.21
Widowed	.00	.00	.21
Religion ^a			
Protestant	.36	.45	.45
Catholic	.23	.14	.07
Jewish	.14	.24	.34
Other	.18	.10	.09
None	.09	.07	.05
Employment status ^a			
Employed full-time	.73	.74	.15
Employed part-time	.08	.19	.15
Not employed for pay	.19	.06	.70
Education level			
<i>M</i>	5.50	5.16	5.07
<i>SD</i>	1.10	1.10	1.43
Self-rated health			
<i>M</i>	3.77	4.16	3.73
<i>SD</i>	1.03	.73	.91

Note. For education level, 1 = grade school, 7 = graduate degree. For self-rated health, 1 = poor, 5 = excellent.

^a Expressed in proportions.

technical school, 5 = some college, 6 = bachelor's degree, and 7 = advanced degree), with no significant age group differences in education level, $F(2, 84) = .94$, $p > .30$. Although the distribution of religious affiliation was not consistent across age groups (in particular, a disproportionate number of older adults listed their affiliation as Jewish), these differences in distribution did not appear to be associated with the pattern of findings in this study.

Procedure

Participants were provided with a packet containing individual survey sheets for greetings they received, and a large questionnaire involving questions about card sending patterns and attitudes toward holiday cards, a social embeddedness scale, and background information. The larger questionnaire took between 30 min and 1 hr to complete, with an additional 5–10 min for each card survey. After participants had received all of their cards for that season, they returned the completed surveys and greetings in a stamped envelope provided. Follow-up calls were initiated in early February for packets that had not been received.

Because of time considerations, participants who received more than 25 cards were asked to select 20 to 25 cards that meant the most to them. This approach is in keeping with self-report methods assessing social relations, in which only the first 10 or 20 individuals in potentially larger networks are considered in detail (e.g., Antonucci & Akiyama, 1987). Asking participants to select only a subset of card relationships introduces limitations in the use of the data, but this approach allows examination of those ties that are most valued in this context. During the Christmas season, we could not request data for more than 25 cards. By asking about the most meaningful relationships, we sought to examine the number of close, intimate ties in this context, followed by information about the peripheral ties that individuals considered most important to them. If participants selected the most meaningful cards to include in the study, their remaining cards should be even more peripheral than those that were supplied. As is described, analyses were conducted to compare those who selected their

cards from a larger pool of available cards (e.g., those who received more than 25 cards) with those who provided information about their entire holiday card network (e.g., those who received fewer than 25 cards). Participants completed surveys pertaining to 1,405 cards.

Participants stapled each holiday greeting (or a photocopy of it) to the corresponding survey form. Participants who did not wish to turn in a card were asked to complete a survey about that card and to indicate why the card was not included. In total, participants returned 1,152 holiday cards. Table 2 contains information about missing cards by age group. There were no age differences in likelihood of turning in cards nor in the proportions of missing cards for different reasons. Some individuals provided some cards but accidentally threw a few cards away or reported that a few greetings were too private. Seven individuals, distributed across age groups, did not return any cards but did complete surveys for those cards.

Measures

Holiday card questionnaire. In the larger questionnaire, participants provided information about their holiday card sending patterns. They indicated whether they usually send cards, save their cards, and receive or send cards to people whom they do not consider to be intimate friends or relatives. In addition, participants provided information about their card exchanges during that specific holiday season, including number of cards sent and received and whether or not the participant had received a card that was particularly special.

We developed an index to assess participants' general level of interest in exchanging greetings at the holiday season. This measure is referred to as the Attitudes Toward Holiday Cards Index (AHCI). Participants indicated their level of agreement using 4-point scales (1 = *strongly disagree*, 2 = *disagree*, 3 = *agree*, 4 = *strongly agree*) with regard to 11 items, including the following: "I feel that holiday cards are an important part of my life;" "I don't understand why people send holiday cards, I keep in touch with people through other means;" and "I look forward to receiving holiday cards at this time of year." Items disparaging holiday greetings were reverse scored. The total score represents an endorsement of this form of social contact (alpha = .92).

Social embeddedness. Cutrona and Russell's (1987) Social Provisions Scale (SPS) was included to assess participants' feelings of social embeddedness. This scale has been used in populations over the age of 65 as well as with younger populations (Mancini & Blieszner, 1992). Participants rated their level of agreement with 24 statements pertaining to social ties, using a 4-point scale (1 = *strongly disagree*, 4 = *strongly agree*). Items included, "There are people I can count on in an emergency" and "No one cares for me." Negative items were reverse scored. This scale can be used to assess dimensions of social embeddedness, but a total score was used here (alpha = .95).

Background questionnaire. Participants provided their age, education

level, religious affiliation, and other demographic information, along with ratings of their health. In addition, participants provided gross information about the size of their close social networks by indicating the number of close friends and relatives who lived within a 1-hr drive and the number of close friends and relatives who lived at a distance greater than a 1-hr drive.

Individual card surveys. On the individual card surveys, participants indicated the age and gender of sender, their relationship to the sender, number of years cards exchanged, the last time they had seen the sender, whether they had sent a card to that individual, and psychological closeness to the sender, rated on a 7-point Likert scale (1 = *not very close*, 7 = *very close*). Finally, participants answered an open-ended question, "What did receiving this card mean to you?" Although we made predictions about the meaning that individuals might derive from their cards, an open-ended approach was used because of the lack of groundwork in this area.

Coded Responses

Card meaning. The open-ended responses regarding the meaning of each card were coded according to the categories described previously: (a) emotional reactions, (b) perceived efforts to continue or build an existing relationship, and (c) a sense of linkage to the personal past. A post hoc code was also included for responses indicating that the card was merely a holiday greeting, without other meaning, "Just a greeting" or "Just another Christmas card" (kappa = .98). Codes were not mutually exclusive; a given response could fall under more than one code. Two independent raters coded the responses and established reliability across 15 participants (n = 251 responses), and Cohen's kappas are reported for interrater reliability across these cases.

The emotional reaction code involved an explicit statement of sentiment such as the following: "I was very moved that she thought to write me," "I always feel happy when I hear from him," or "It makes me sad to think how sick she has been this year" (kappa = .98). The code for building or maintenance of a relationship encompassed the following: "Maintenance of a friendship," "Getting to know him," or "Glad to hear from her and hope to see her again soon" (kappa = .96). Responses falling under the personal past code included the following: "A letter from my last remaining relative on my mother's side of the family," "Thoughts of our college days," and "Good memories" (kappa = .98).

Content of the greetings. To protect the confidentiality of senders and recipients, the content of the cards was transcribed by trained research assistants, who deleted all identifying information. The transcriptions included any formal printed material in the card, followed by a separate section involving the personal notes included. The personal notes were coded along an ordinal continuum: 1 = *signature only* (including comments such as, "Season's Greetings" or "All the Best for the New Year"), 2 = *a lengthy signature including short personal comments*, such as "Glad to see you a few weeks ago and to hear about your new job" or "I hope to see you soon," 3 = *a form-like letter discussion of past year's events*, 4 = *a personal letter*, 5 = *a deeply personal letter*. These codes were exclusive; each card was coded under the category it best fit. Two independent raters coded the cards, establishing reliability across 100 cards (kappa = .92).

Table 2
Number of Cards Supplied or Missing for Each Reason,
by Age Group

Status of card	Young adults (375 card surveys)	Middle-aged adults (565 card surveys)	Older adults (465 card surveys)
Cards supplied	316	479	357
Card too private	14	35	32
Card thrown away	11	16	38
Other reasons for no card (e.g., recycled, decoration)	13	22	9
No reason given for not providing card	21	13	29

Results

We report findings from the following three types of data: (a) information pertaining to participants, their attitudes, and general behaviors regarding card exchanges (obtained from the larger questionnaire); (b) information pertaining to the individuals who sent the cards and their relationships with the participants (obtained from the individual card surveys); and (c) the content of the cards that participants received (obtained from the cards). The latter two types of data are nested within participants; each participant provided information about several card senders and most

participants provided several cards. Thus, data pertaining to the senders and cards are considered lower level units; each participant had several of these lower level units. Participants' attitudes toward cards, general card behaviors, and size of the card network are analyzed as upper level units; each participant had only one of each of these units. As was described, different analyses were used for each type of data. Data are presented by age group in the tables to provide a better sense of the distribution of variables, regardless of the analysis strategy.

The four research issues are addressed in order. First, participants' attitudes toward holiday cards and general holiday card behaviors are examined. The composition of the holiday card network is then described. Next, what the cards mean to the participant, and the impact of characteristics of senders and cards on that meaning, are considered. Finally, the association between holiday card variables and social embeddedness is examined.

Behaviors and Attitudes Toward Holiday Cards

Table 3 contains information about participants' card sending patterns and attitudes toward holiday cards obtained from the larger questionnaire. In examining age differences in participants' card sending behaviors and attitudes, age was treated as a continuous variable when possible. Pearson's correlations were used when patterns of association between age and continuous variables were estimated, and Spearman's correlations were used when patterns of association between age and dichotomous variables were estimated. In situations in which nonlinear age group differences were evident (e.g., in which the middle-aged adults scored higher or lower on an indicator than the other two age groups), participants' responses were grouped according to the three age groups described previously, and analyses of variance (ANOVAs) were performed.

Holiday greeting exchanges were pervasive across age groups. Every participant reported receiving at least some cards on a yearly

basis. The majority of adults of all ages either send cards or their spouses send them on their behalf. There were age differences in the likelihood of sending cards, however. A one-way ANOVA revealed that middle-aged adults were more likely to send cards than were younger or older adults (coded 1 = *send cards*, 0 = *do not send cards*), $F(2, 84) = 5.03, p < .01$. Indeed, all but one middle-aged adult sent at least some cards every year.

Cohort differences in attitudes toward holiday cards were not found. Adults of all ages indicated a moderate investment in holiday cards as a means of social expression. Average scores on the AHCI showed that participants generally agreed with items endorsing the value of holiday greetings but did not strongly agree with these items. There were no significant age differences in the likelihood of saving cards, a behavior that might also be viewed as a proxy for valuing cards. There was, however, an association between the AHCI and the number of cards individuals received, Pearson's $r = .52, p < .001$, indicating that individuals who received more cards valued card exchanges more.

Holiday Card Network in a Specific Holiday Season

Size of network. Table 4 contains information about the size of participants' entire holiday card networks, including average number of holiday greetings sent and average number of holiday greetings received during a single holiday season. The number of cards sent ranged from 0 cards (sent by 17 participants) to 300 cards (sent by one older woman). The number of cards received ranged from 2 cards received by a younger man to 165 cards received by an older woman. Number of cards sent and received were highly correlated, Pearson's $r(85) = .86, p < .001$.

Our initial prediction was that older adults would receive more cards than younger adults did. In fact, Pearson's correlations revealed that the older an individual was, the greater the absolute number of holiday cards sent and received, $r(85) = .71, p < .001$, and $r(85) = .43, p < .001$, respectively. A few older adults sent and received a large number of cards, however. To adjust for this skew, the sample was divided into quartiles. The correlation between quartile groups for number of cards sent and participant's age was not significant. The same analyses were conducted for cards received. The quartile cut-offs for number of cards received were 1 = 2 to 18 cards, 2 = 19 to 30 cards, 3 = 31 to 49 cards, and 4 = 50+ cards. Even when analyses were conducted in this more conservative manner, age was still associated with the number of cards received, Spearman's $r(85) = .39, p < .001$.

It should be noted that, because participants were only asked to complete surveys for up to 25 cards, receiving more than 25 cards is also an important issue in this study. When the distribution of cards was examined above and below 25 cards, middle-aged adults were most likely to receive more than 25 cards, $F(2, 83) = 9.10, p < .001$. In other words, although older adults received the most cards, many older adults received fewer than 25 cards.

Characteristics of card senders. Next, we focused on characteristics of holiday card senders for up to 25 cards that participants received. These data, found in Table 5, are lower level units derived from the individual card surveys that participants completed. Each participant had from 2 to 25 of these units. These data represent (a) complete information about holiday card networks for participants who received fewer than 25 cards, and (b) information about a subset of 25 cards for individuals who received

Table 3
General Card Exchange Patterns, by Age Group

Question	Young adults (<i>n</i> = 26)	Middle-aged adults (<i>n</i> = 31)	Older adults (<i>n</i> = 30)
Do you receive holiday cards?	1.00	1.00	1.00
Do you (or your spouse) send cards?	.78	.97	.74
Do you receive cards from people who were never close friends?	.69	.84	.86
Do you send cards to people who were never close friends?	.50	.68	.55
Do you save most of your cards?	.19	.23	.10
Do you save special cards only?	.33	.39	.50
Attitudes toward holiday cards			
<i>M</i>	30.88	33.61	31.83
<i>SD</i>	5.62	5.27	7.95

Note. Responses expressed as proportions answering "yes." For attitudes toward holiday cards, range of responses = 4 to 44.

Table 4
Average Number of Greetings Sent and Received in One
Holiday Season, by Age Group

Measure	Young adults (<i>n</i> = 26)	Middle-aged adults (<i>n</i> = 31)	Older adults (<i>n</i> = 30)
Number of cards sent			
<i>M</i>	24.00	37.07	49.83
<i>SD</i>	31.71	18.71	65.19
Number of cards received			
<i>M</i>	25.16	38.44	52.37
<i>SD</i>	26.15	28.60	42.79

more cards. Analyses comparing information from participants who completed surveys for their entire network (those with fewer than 25 cards total) and those who completed surveys for only a subset of their networks (those with more than 25 cards total) are presented later.

Our findings were congruent with other research on social network maintenance in which individuals of both genders list more women in their social networks: The majority of cards received by participants of all ages were attributed to female senders. Participants of all ages also claimed that nearly a quarter of cards were from couples, without specifying the gender of the actual sender. Fewer than one fifth of the cards were attributed to male senders.

In addition, in data not presented in Table 5, the average age of senders was 41.24 years (*SD* = 8.88) for young adults, 51.03 years (*SD* = 7.90) for middle-aged adults, and 56.42 years (*SD* = 10.96) for older adults. Although the average sender was middle-aged for participants of all ages, there was a strong association between

participants' ages and the ages of people who sent participants cards, Pearson's $r(85) = .81, p < .001$.

A series of *t* tests were conducted comparing the group of participants who completed surveys for only a subset of their cards (e.g., those who received more than 25 cards) versus the group of participants who completed surveys for all of their cards (e.g., those who received 25 or fewer cards). The *t* tests examined differences in the gender of senders and marital status of senders (1 = sent by a couple, 0 = sent by an individual as the dependent variables). An additional *t* test examined differences in ages of senders. These tests did not reveal significant differences between participants who selected cards and those who did not. It is possible that individuals who received more than 25 cards selected those cards from women and from people who were close in age to themselves to include in the study, but this selection indicates that individuals in this study found such cards to be most meaningful.

Characteristics of participants' relationships with card senders. Next, we examined the composition of the holiday network by focusing on the types of relationships participants reported having with senders. Again, these data, found in Table 5, are derived from the individual card surveys. Our initial premise was that adults of all ages would receive a comparable number of holiday cards from close social partners. The card survey forms asked participants to differentiate between a variety of relationships with senders, including a distinction between close friends and friends (presumably less close) and a distinction between close relatives and distant relatives. On average, participants received 5.56 (*SD* = 3.49) cards from close social contacts (close friends and close relatives), with no age differences in these numbers.

In total, participants attributed 478 cards to intimate social contacts, accounting for just over one third of cards for which surveys were completed. Thus, the majority of the cards for which

Table 5
Characteristics of Card Senders' Relationships to Participants, by Age Group

Characteristic	Young adults (375 card surveys)	Middle-aged adults (566 card surveys)	Older adults (465 card surveys)
Gender or marital status of sender ^a			
Male	.16	.18	.21
Female	.68	.55	.55
Couple	.17	.27	.23
Sender's relationship to participant ^a			
Close relative	.18	.17	.14
Distant relative	.08	.13	.10
Close friend	.20	.19	.16
Friend	.35	.27	.40
Business contact	.10	.14	.10
Acquaintance	.09	.10	.09
Psychological closeness			
<i>M</i>	4.58	4.26	4.34
<i>SD</i>	1.05	1.29	.88
Years cards exchanged			
<i>M</i>	6.64	13.62	16.62
<i>SD</i>	5.19	6.52	8.24
Months since last saw sender			
<i>M</i>	14.90	31.66	51.41
<i>SD</i>	14.88	33.11	45.01

Note. For psychological closeness, 1 = not very close, 7 = very close.

^a Expressed as proportions.

participants completed surveys came from distant relatives, general friends (who were not considered close), business associates, and acquaintances (including neighbors who were not considered friends). Because participants were asked to turn in their most meaningful cards, presumably, individuals who received more than 25 cards (and thus, who received cards that are not reported here) received these cards from even more distant social contacts.

Again, a series of *t* tests were conducted to try to determine whether the card networks of participants who received more than 25 cards (and who, thus, completed surveys for only a subset of their cards) differed from the card networks of participants who completed surveys for all of their cards. Separate analyses examined the number of cards fitting each type of relationship (e.g., friend, close friend, or business acquaintance). Participants who had selected the cards for which they completed surveys from a larger pool attributed a greater number of those cards to distant relatives, $t(85) = 7.24, p < .01$, and a greater number of those cards to distant friends, $t(85) = 3.28, p < .005$. In addition, participants who had selected their cards tended to have more cards from acquaintances, $t(85) = 1.71, p < .10$.

Table 5 also contains information about qualities of participants' relationships with the senders of the cards. As might be expected given the presence of close friends and relatives, participants of all ages considered themselves on average to be moderately (but not very) psychologically close to the senders. Participants of all ages had gone over a year without seeing the average holiday card sender. Indeed, many of these social ties appear to be confined to seasonal contact rather than ongoing social interactions. In addition, as was expected, at an aggregate level, older participants had received cards from their senders on average for a greater number of years, Pearson's $r(85) = .73, p < .001$, and had gone for longer periods of time without seeing the card senders, Pearson's $r(85) = .51, p < .001$.

Again, *t* tests were conducted to examine differences between those who selected their cards and those who did not on these variables. There were no significant differences in ratings of closeness or number of years that participants had been exchanging cards based on selection of cards. Participants who had selected their cards from a larger pool did report going for longer periods of time, on average, without seeing their senders, however, $t(85) = 8.89, p < .005$. These findings suggest that their card networks may be larger because they maintain holiday card ties across time, thus accounting for the longer average period without seeing these social contacts.

Meaning of Cards Received

Participants' responses to the open-ended questions about what the cards mean to them from the individual card surveys were considered next. Table 6 contains the proportions of participants' responses about the meaning of the cards falling under each content code. As mentioned previously, these codes are not mutually exclusive. We initially predicted that older adults would find more sentimental meaning and ties to their personal past in their cards than younger adults and that younger adults would be more interested in building relationships. Age differences in the meaning participants attributed to each card were tested by using hierarchical linear modeling. The findings from these analyses are described later. In addition, *t* tests were conducted to examine

Table 6
Proportions of Responses About Meaning of Holiday Cards,
Fitting Each Code by Participant Age Group

Type of meaning	Young adults (375 card surveys)	Middle-aged adults (566 card surveys)	Older adults (465 card surveys)
Emotional or sentimental meaning			
<i>M</i>	.35	.30	.37
<i>SD</i>	.25	.25	.29
Link to one's personal past			
<i>M</i>	.11	.17	.22
<i>SD</i>	.16	.14	.22
Maintenance of relationship			
<i>M</i>	.41	.40	.37
<i>SD</i>	.24	.30	.27
Just a holiday greeting			
<i>M</i>	.16	.26	.23
<i>SD</i>	.17	.27	.21

whether individuals who had more than 25 cards selected cards with specific types of meaning relative to the meaning individuals with fewer than 25 cards attributed to their entire holiday card networks. There were no statistically significant differences in the proportions of cards that were considered to have emotional meaning, were considered an opportunity to build a relationship, represented a connection to the personal past, or were thought of merely as holiday greetings across these two groups.

The influence of sender characteristics on meaning. We had initially expected greater emotional meaning to be attributed when participants felt psychologically closer to the sender. We expected participants' sense that the card was intended to maintain or build a relationship to be associated with the number of years cards had been exchanged, and more specifically, that knowing someone for a shorter period of time would lead to greater likelihood of attributing this type of meaning. Finally, we predicted that perceiving a card as a link to the personal past would be associated with exchanging cards for a greater number of years. We further expected that the strength of these associations would vary by age of participant.

Our analysis strategy involved estimation of hierarchical linear models, using HLM Statistical package (Bryk & Raudenbush, 1992). This approach to data analysis is also referred to as mixed-effects modeling, multilevel modeling, random-coefficient regression modeling, and covariance components modeling in other disciplines (Bryk & Raudenbush, 1992; Kenny, Bolger, & Kashy, 1996; Kenny, Kashy, & Bolger, 1997). Multilevel modeling is appropriate whenever there are unequal numbers of lower level units nested within upper level units (i.e., unequal numbers of surveys or of actual cards for each participant). Many studies have used HLM to examine individuals nested within organizations. For example, Braun, Jones, Rubin, and Thayer (1983) examined how test scores are used for minority applicants to business schools. Different numbers of minority students applied to different schools, and thus, as in our study, there were varying numbers of lower level units (minority applicants) nested within upper level units with different characteristics (schools) in that study. Kenny et al. (1997) examined training programs for soldiers nested within

different regiments. HLM has also been used to examine communication processes in relationships. Laurenceau, Barrett, and Pietromonaco (1998) assessed associations between participants' ratings of self and partners' disclosures on these participants' perceptions of intimacy. Each participant reported on multiple interactions with multiple social partners. Likewise, in our study, each participant completed multiple surveys involving multiple social partners.

In this study, the reported characteristics of senders and the content of the cards constituted the lower level units, and the participants constituted the upper level units. Each participant had from 2 to 25 lower level units. The outcome measures involved the meaning that participants attributed to each card. Although HLM is usually used for outcome variables that are continuous in nature, it is possible to use this analysis procedure for dichotomous outcome variables (e.g., 1 = *attributed emotional meaning to card*, 0 = *did not attribute such meaning*; Bolger, personal communication, June 1997).

Computation begins by fitting the Level 1 model in which the outcome (e.g., emotional meaning) is regressed on the lower level predictor (e.g., closeness of sender). These analyses are conducted separately for each upper level unit (e.g., each participant). In Level 2 analyses, between-subjects differences in the pattern of association found in the Level 1 associations are examined. The individual intercepts and slopes from the Level 1 regressions are considered as outcomes to be predicted by upper level variables (e.g., participant age) in the Level 2 regressions. This analysis approach allowed us to analyze within-subjects (e.g., lower level, and sender characteristic) and between-subjects (e.g., upper level, and age of participant) variation simultaneously.

We investigated two outcome variables by using hierarchical linear models: attributing emotional meaning to a card and indicating that a card is intended to maintain or foster a relationship. Participants only considered 10–20% of their cards to be links to the personal past, and thus hierarchical linear models were not deemed appropriate for this outcome. Our first analysis involved the relationship between deriving emotional meaning from the card and psychological closeness of sender by fitting the following multilevel model:

$$\text{Level 1: } \text{Emotion}_{ij} = B_{0i} + B_{1i} (\text{Closeness}_j - \text{Closeness}),$$

where emotion_{ij} is the degree to which participants attributed emotional meaning to cards, B_{0i} is the average emotion across all cards for each participant, and (because we centered psychological closeness of sender around the sample mean) B_{1i} is the slope of emotional meaning and psychological closeness for each participant. The Level 2 analyses involved the following two regression equations:

$$\text{Level 2: } B_0 = \gamma_{00} + \gamma_{01} \text{ age}$$

$$B_1 = \gamma_{10} + \gamma_{11} \text{ age},$$

where γ_{00} represents the average proportion of cards for which emotional meaning was attributed for the sample, γ_{01} represents the effect of participant's age on average proportion of cards for which emotional meaning was attributed, γ_{10} represents the average association between attributing emotional meaning and psy-

chological closeness of senders, and γ_{11} represents the effect of participant's age on the relationship between attributing emotional meaning and psychological closeness of senders.

Table 7 presents results from the hierarchical linear models involving prediction of emotion from psychological closeness of sender and age of participant. Cards received from individuals who were perceived as psychologically close to the recipient had more emotional meaning than cards received from individuals who were perceived as less close to the recipient ($\gamma_{10} = .05$, $t = 7.33$, $p < .05$). There were no age differences in participants' likelihood of attributing emotional meaning to their cards or in the pattern of association between psychological closeness of sender and emotional meaning.

The same analyses were conducted again, this time examining attributions that a card was intended to build or maintain a relationship as the outcome variable, and number of years cards exchanged as a lower level predictor. The results of this hierarchical linear model are found in Table 8. In keeping with our initial prediction, age of participant was negatively related to deriving this type of meaning from cards ($\gamma_{01} = -.005$, $t = -2.92$, $p < .05$). In other words, younger adults were more likely to view their cards as an effort to maintain or build social ties. On the other hand, in that same regression, when age was controlled, participants were more likely to consider cards part of an effort to build and maintain relationships if they had been exchanging cards with their sender for a greater number of years ($\gamma_{10} = .005$, $t = 3.02$, $p < .05$). This finding is in the opposite direction of our initial prediction. It suggests that holiday cards may be a distinct aspect of these particular social ties and how they are maintained.

To examine whether or not individuals who selected only a subset of their cards attributed meaning to their cards in a different manner than those who did not, HLM analyses were conducted again, using selection of cards as a covariate (1 = *completed surveys for only a subset of cards*, 0 = *completed surveys for all cards received*). The pattern of findings did not change.

We were also interested in knowing whether aspects of relationships with the sender were associated with participants' derivation

Table 7
Hierarchical Linear Model Results for Emotional Meaning Predicted by Psychological Closeness of Sender as a Function of Participants' Age

Predictors	Coefficient	SE	t
Fixed effects			
Average emotion, B_0			
Intercept, γ_{00}	0.344*	0.028	12.06
Age of participant, γ_{01}	-0.001	0.002	-0.71
Closeness of sender slope, B_1			
Intercept, γ_{10}	0.052*	0.007	7.33
Age of participant, γ_{11}	0.000	0.004	-0.91
Variance components			
	Estimate	Chi-square	df
Variance of average emotion, B_0	0.057	493.25***	82
Variance of closeness to sender slope, B_1	0.001	121.05**	82
Variance of Level 1 error	0.155		

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 8
Hierarchical Linear Model Results for Relationship Maintenance Predicted by Number of Years Cards Exchanged as a Function of Participants' Age

Predictors	Coefficient	SE	<i>t</i>
Fixed effects			
Average relationship maintenance, B_0			
Intercept, γ_{00}	0.403*	0.029	14.01
Age of participant, γ_{01}	-0.005*	0.002	-2.92
Number of years exchanged slope, B_1			
Intercept, γ_{10}	0.005*	0.002	3.02
Age of participant, γ_{11}	0.000	0.000	-1.21
Variance components			
	Estimate	Chi-square	<i>df</i>
Variance of average relationship maintenance, B_0	0.051	337.125***	83
Variance of years exchanged slope, B_1	0.000	112.066*	83
Variance of Level 1 error	0.178		

* $p < .05$. ** $p < .01$. *** $p < .001$.

of a sense of their personal past from the card. Given that only approximately one tenth of younger adults and one fifth of older adults considered their cards to be links to the personal past, multilevel modeling was not appropriate. Spearman's correlations were calculated to provide an overview of patterns of association between variables. These analyses must be considered with caution because they do not take into account the fact that participants received different numbers of cards and, moreover, it was not possible to examine age differences in patterns of association. Older adults were more likely to consider their holiday cards a link to their personal past, Spearman's $r(85) = .24$, $p < .05$. In addition, participants' attributing a sense of the personal past to the card was moderately associated with the number of years a sender had sent cards, Spearman's $r(1379) = .28$, $p < .001$, and the number of months that had passed since the participant had seen the sender, Spearman's $r(1381) = .25$, $p < .001$.

The influence of card characteristics on meaning. Next, we examined the actual holiday greetings that participants received. The card codes were mutually exclusive and lay along a continuum from least personal to most intimate (1 = *signature only*, 5 = *highly personal letter*). Cards that contained only a signature were received most frequently by participants. Indeed, the averages for type of card received were as follows: 1.72 ($SD = 0.42$) for young adults, 1.73 ($SD = 0.56$) for middle-aged adults, and 2.09 ($SD = 0.56$) for older adults. Only 4% of cards ($n = 44$) were photocopied newsletters of the year's happenings.¹ As was initially anticipated, there was a moderate association between age of participant and type of card received, Pearson's $r = .30$, $p < .01$; older adults do appear to receive more sentimental holiday greetings.

We were interested in knowing whether the degree of intimacy of the cards evoked the meaning participants attributed to them. Two hierarchical linear model analyses were conducted, examining two outcomes—attribution of emotional meaning and the belief that the card was intended to build or maintain a relation-

ship—predicted by the content of the holiday card. These analyses included only 73 participants; 7 participants were excluded because they did not turn in any cards to be coded (although they did complete surveys), 7 additional participants had too few instances in which they reported the cards had emotional meaning or were intended to build a relationship and had also supplied that card. Excluded participants were distributed evenly across age groups.

Participants' attributions of emotional meaning were not predicted by the content of the cards, and there were no age differences in these patterns. These findings are not presented. The results from the analyses pertaining to building a relationship are found in Table 9. The type of card received did relate to feeling that the greeting was intended to help build or maintain the relationship. Individuals who received a more intimate holiday greeting were more likely to report that they felt the greeting was intended to foster that social tie ($\gamma_{10} = .041$, $t = 2.93$, $p < .05$). There were no age differences in the pattern of findings in this context.

In addition, we examined the correlation between type of card and attributions that the holiday greeting was a link to the personal past and found a modest association, Spearman's $r(1108) = .21$, $p < .01$. More personal cards were associated with increased reports of feeling the card was a link to the personal past.

Associations Between Holiday Season Contact and Social Embeddedness

Finally, the impact of holiday greetings on individuals' feelings about their social ties was examined. In general, participants reported feeling that they had adequate social networks, as measured by the Social Provisions Scale (possible range of scores for average item ranking = 1.0–4.0). There were no age differences in social embeddedness. Average item scores on this measure were as follows: for younger adults, $M = 3.55$, ($SD = .31$), for middle-aged adults, $M = 3.55$ ($SD = .34$), and for older adults, $M = 3.47$ ($SD = .46$).

We initially predicted that higher social embeddedness would be associated with having more cards, cards from close senders, and cards from individuals who had been known longer. As was mentioned, our first set of analyses examining size of holiday card network revealed a significant association between age of participant and number of cards received and between age of participant and years cards exchanged. To address this multicollinearity of age with other independent variables, we first regressed number of cards received on age and also regressed years cards exchanged on age (thus partialing out the effect of age on these two variables). We saved the unstandardized residuals from each of these calculations to use in the next set of analyses. Then, to examine the influence of the holiday card characteristics on social embeddedness, we regressed social embeddedness scores on the following:

¹ The 44 photocopied newsletters that were turned in for this study were distributed across 23 participants of different ages, suggesting that participants either did not receive additional newsletters or did not consider them to be amongst their 25 most meaningful cards. An informal follow-up survey revealed that a majority of photocopied newsletters are sent by individuals who have PhDs or other advanced degrees and that this is not a preferred format of sending holiday greetings amongst individuals with less education.

the unstandardized residuals of the number of cards and age of participant regression, average closeness of senders, and the unstandardized residuals of average number of years participants had known senders and age of participant regression.² As can be seen in Table 10, receiving more cards and feeling closer to senders were associated with increased feelings of social embeddedness at the holiday season, regardless of the age of the participant.

Post hoc analyses were also conducted to examine other aspects of holiday cards that might be associated with social embeddedness. A correlation between scores on the AHCI and the SPS was calculated to see if valuing cards more was associated with feeling better about one's social life. This correlation was not significantly different from zero.

Finally, to examine other social network contributions at the holiday season, social embeddedness was regressed on the following: the gross indicators of social network size (number of close friends living nearby, and number of close relative living nearby) and the variables pertaining to the holiday cards network (the unstandardized residuals of the number of cards and age of participant regression, the unstandardized residuals of years sent and age of participants, and closeness of senders). This regression equation was not significantly different from zero. Moreover, social embeddedness regressed on number of close friends and family living nearby did not result in significant findings, although number of close friends living nearby was correlated with social embeddedness, Pearson's $r(87) = .29, p < .05$.

Discussion

In this sample, adults of all ages engaged in holiday card exchanges. Indeed, these individuals appear to be moderately invested in this form of communication at the holiday season and to view it in favorable terms, with little evidence of cohort differences in this investment. With regard to the actual card networks, older adults tended to send and to receive a greater absolute number of cards, although there was also wide variability in card

Table 9
Hierarchical Linear Model Results for Relationship Maintenance Predicted by Content of Card as a Function of Participants' Age

Predictors	Coefficient	SE	t
Fixed effects			
Average relationship maintenance, B_0			
Intercept, γ_{00}	0.401*	0.029	13.63
Age of participant, γ_{01}	-0.002	0.001	-1.31
Content of card slope, B_1			
Intercept, γ_{10}	0.041*	0.015	2.93
Age of participant, γ_{11}	-0.001	0.001	-1.29
Variance components			
	Estimate	Chi-square	df
Variance of average relationship maintenance, B_0	0.048	260.67***	73
Variance of content of card slope, B_1	0.002	68.535	73
Variance of Level 1 error	0.187		

* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 10
Regression Predicting Social Embeddedness from Number of Cards Received, Closeness to Senders, and Years Cards Exchanged

Predictors	Beta	SE	t
Constant		.160	24.30***
Number of cards received	.27	.001	2.56**
Years exchanged	.13	.006	1.24
Closeness to sender	.25	.035	2.41*

$F(3, 80) = 4.74, p < .01; R^2 = .15$

Note. Number of cards received and years cards exchanged were first regressed on age. Residualized scores were used in the equation.
* $p < .05$. ** $p < .01$. *** $p < .001$.

sending patterns in the oldest age group. Of note was that this form of social contact does include peripheral social ties along with close ones for all age groups. Individuals appear to maintain periodic ties with people who are not central to their immediate day-to-day emotional support. Moreover, there were age differences in the meaning that these ties had, with older adults more likely to consider them a link to the personal past and younger adults more likely to consider them as an opportunity for building future relationships. Regardless of age, receiving cards does appear to contribute to social embeddedness.

Holiday Card Relationships and Other Forms of Social Contact

In some regards, holiday card exchanges appear to parallel other forms of social contact. For example, women appear to be more actively engaged in receiving and sending holiday cards. Previous research has shown that men and women are more likely to list women as important members of their social networks (Antonucci & Akiyama, 1987). Although men seem more likely to maintain non-intimate ties in arenas such as sports events or sharing a drink (Morse & Marks, 1985), few men appear to keep track of the cards they receive. It is possible that the skew in participants' gender reflects women's willingness to participate in studies rather than appropriation of gender roles with regard to holiday cards. Yet, men who were approached to participate did not indicate that they did not wish to do so. Rather, they indicated that someone else kept track of their cards. Older men tended to be more willing to participate in this study than younger men, suggesting that differ-

² We conducted analyses to examine how sensitive our regression model was to the influence of potential outliers. We examined sample influence statistics that indicate the presence of atypical cases in the dataset. Cook's Distance, which considers changes in other residuals when a specific case (e.g., a potential outlier) is deleted, did not reveal any potential outliers in the dataset. SPSS leverage statistic, which also identifies possible outliers in the data, revealed two participants with relatively high values on the predictor variable number of cards received. The first participant had a leverage statistic value of .19 and the second participant had a leverage statistic value of .16, compared with a sample average leverage statistic of .05. Removal of these two cases singly and jointly did not seriously disturb overall findings in the regression model (reduction in $R^2 = .006$). Therefore, we have reported the results of analyses for the entire sample.

ences in leisure time or loosening of gender roles in later life may play a role in holiday card patterns. Participants also reported that few of their cards came from men. Researchers have suggested that holiday greetings might be viewed as a form of family kinkeeping, which is a function commonly served by a woman (Di Leonardo, 1992). In this study, holiday greetings were received from distant friends and acquaintances as well as from family, suggesting that women may serve a role in maintaining ties across a range of social contacts.

Adults of all ages received an average of 5 cards from intimate social partners. This finding enforces the robustness of the 5 to 10 intimate social contacts reported in studies using self-report instruments (Antonucci & Akiyama, 1987; House, Kahn, McLeod, & Williams, 1985). It is notable that even in what appears to be a non-intimate forum, adults maintained a core intimate circle of comparable size to that found in research addressing supportive social networks. Moreover, in this study, participants were not asked to list individuals to whom they feel close, but rather to indicate the psychological closeness of individuals who contacted them. In selecting 25 cards for detailed reports, individuals who reported on only a subset of their relationships selected that subset from an array of tangible social stimuli rather than from memory. Thus, the finding of 5 to 10 close ties does not reflect a memory failure of other ties or a lack of available social relationships to choose from (nearly all participants received more than 5 cards).

On the other hand, holiday card networks do appear to differ in certain ways from patterns of social contact found in other domains, particularly with regard to older adults. Older adults appear to maintain holiday greeting ties that do not involve intimate social ties and that do not seem to serve any direct supportive functions. Only one third of the cards for which older adults completed surveys came from people whom they considered to be close friends or relatives. Presumably, adults who received more than 25 cards received even more cards from individuals to whom they did not feel close. Moreover, older adults were likely to have gone for considerable periods of time without seeing the senders of cards they received. Thus, in this context, older adults retain peripheral ties to individuals who are not central in their social networks.

Adults' Reactions to Holiday Greetings

Meaning of holiday cards. In addition to examining structural aspects of the holiday card network, the meaning participants attributed to the cards was considered. For the most part, participants of all ages considered their cards to have emotional meaning, to be an effort to maintain a social tie, or to be just a holiday greeting. According to previous work, differences in long-term goals and motivation contribute to differences in the ways in which older and younger adults approach social ties (Frederickson & Carstensen, 1990). Thus, in this study, younger adults were expected to view holiday cards as an opportunity for forming social ties, and older adults were expected to value the emotional meaning of their cards. In keeping with the predicted pattern, younger adults in this study were more likely to view their cards as an opportunity to build relationships. There were no age differences in reports of sentimental meaning derived from cards, however. One reason for this finding may reflect the relatively low investment of social energy involved in maintaining such social ties. An

individual can contact dozens of people by sitting down for a few evenings with a box of cards, an address book, and a pile of stamps. For adults with the means to afford these things and the health to complete the correspondence, exchanging holiday greetings may constitute a small use of resources. Even some oldest old adults with relatively severe disabilities still manage to send out holiday cards on a yearly basis (with some assistance) and derive satisfaction from completion of this task (Johnson & Barer, 1997). Thus, although older adults might not choose to invest large quantities of time or energy in maintenance of extended social networks, the holiday card forum may allow them to retain some distant ties in a more limited manner.

The association between psychological closeness to sender and deriving emotional meaning also suggests that when emotion is attributed to cards, the locus for that emotional connection lies in aspects of the relationship that may or may not be evident in the card itself. Researchers have suggested that individuals derive greater emotional meaning from ties with social partners who are psychologically close (e.g., Carstensen, 1993). The findings of our study follow this pattern. Although other studies have found that older and younger adults differ in their propensity to retain ties with peripheral social contacts (e.g., Lang & Carstensen, 1994), there were no age differences in the psychological closeness of senders in our study. In the holiday card context, older adults had many individuals in their networks who were not close social contacts, and they did not derive emotional meaning from such peripheral social ties.

Although it was not a frequent response, as predicted, older adults did consider a greater proportion of cards as having a link to their personal past. This connection clearly involves a social element and is distinct from internal reminiscence. Rather, participants who derived a link to their personal past seemed to take comfort in the continued existence of this tie at the holiday season. Yet, this type of social contact appears to be related more to one's own life than to a reciprocal relationship. This phenomenon was exemplified in an open-ended addendum one older participant supplied where he described how he had continued to exchange cards with a friend from high school over the years and had unwittingly continued to send cards for 3 years after that friend had died. The friend's widow finally called to give him this news. It is clear that these greetings were not integral to an ongoing interchange between two parties.

In contrast to many other studies of social relationships, this study included some assessment of the social stimuli themselves, the holiday cards. A high proportion of holiday greetings involved succinct messages that did not appear to provide a personal, relationship-oriented communication. This suggests that something about receiving a card from the sender, rather than the message within, contributed most to the meaning that individuals derived from the cards. On the other hand, in those cases where senders wrote personal messages, the meaning attributed to cards did appear to reflect the sense of personal connection. For example, there was an association between feeling that the cards involved efforts to maintain a relationship and the degree to which the greeting in the card expressed personal or intimate feelings.

Because they were more likely to receive more than 25 cards, middle-aged and older adults were more likely to provide detailed information for only a subset of the cards that they received, whereas younger adults were more likely to provide information

about all of their cards. It is possible that age differences in meaning reflect the types of cards individuals selected for inclusion. The findings from this study did not reveal systematic differences between those individuals who selected their cards and those who did not, however. Moreover, middle-aged adults were most likely to select their cards, but the majority of age differences in this study were linear in nature. Had selection of cards played a key role in the pattern of results, we would have expected middle-aged adults to have shown distinct types of relationships to senders and meaning of cards. Finally, the majority of cards for which participants of all ages completed surveys were from individuals who were not currently close ties and were not seen frequently. Within the holiday card context, meaningful ties include those that are not central or intimate. Future studies might specifically address the issue of the general content of the larger network. For the purposes of this initial study, we wished to obtain specific information about the meaning of at least a subset of holiday card relationships.

Implications of holiday cards for social embeddedness. These types of seasonal relationships appear to play an important role in some individuals' lives. The quantity of ties, in addition to the closeness of senders, contributed to feelings of social embeddedness. Researchers interested in supportive functions have been less interested in size of network in recent years because size of network is not a good indicator of the supportive functions that a network provides. On the other hand, in previous studies, when adults were asked about ways in which their well-being could be improved, some older adults reported a desire for more social ties than they currently had (Ryff, 1989). The findings of our study suggest that receiving a large quantity of holiday cards may bolster a sense of social inclusion or buffer against the sense that one's social network is being depleted.

On the other hand, quantity alone does not tell the whole story behind feelings of social embeddedness. Cards from closer social contacts contributed to a sense of social embeddedness, again substantiating the value of intimate social contacts. Moreover, number of close friends correlated independently with social embeddedness, despite the fact that the measures of close friends and family in this study were superficial. Of note, however, was that number of close friends and relatives in the area did not contribute to feelings of social embeddedness when controlling for variables pertaining to holiday cards. It seems unlikely that receiving holiday cards at one time of year is as important as having close friends throughout the year. Rather, these findings may be an artifact of the fact that all assessments were obtained in December and January. The contribution of holiday cards to social embeddedness might be lessened if social embeddedness was measured in July.

Directions for Future Research

The generalizability of this study is limited. The sample was confined to upper middle class European Americans, a group that has traditionally engaged in exchange of greeting cards. There is evidence that infrequent social ties have meaning in other groups and cultures, however. For example, Shostak's (1983) ethnographic account of an older Kung woman includes references to individuals this woman had not seen for periods of many years and whom she enjoyed seeing when she did encounter. The important

issue may not be the forum in which such contact takes place—in this case, holiday greetings—but rather, the presence of peripheral or periodic social contacts in later life.

Future research should focus on other ethnic groups. To capture a wider range of customers, the card industry has expanded from specialty stores in expensive neighborhoods to K-Mart, Target, and Wal-Mart stores (Fitzgerald, 1994). Findings from a national study suggest that African American and Hispanic American adults are beginning to engage in card sending patterns similar to those found more traditionally amongst European American groups (Erickson, 1997). Alternatively, for some ethnic groups, a church gathering or community center may be appropriate settings for assessing infrequent social ties. Class reunions, dedications of war memorials, and even professional conferences may provide contexts in which researchers might examine why and when individuals maintain ties that are not central to their daily lives. In one creative undertaking, a sociologist investigated social ties amongst individuals who followed the rock group The Grateful Dead on their concert tours (Adams, 1998). In addition, anthropologic work conducted over prolonged periods of time may be necessary to examine social ties that are not immediate and constant in individuals' lives.

The literature on social support has clearly established the value of strong, emotionally central ties in individuals' lives. Yet, peripheral social ties do appear to have value and meaning. Given the relatively small investment of time and energy they entail for the individuals involved, such contacts warrant further investigation.

References

- Adams, R. G. (1998). The demise of territorial determinism: Online friendships. In R. G. Adams & G. Allan (Eds.), *Placing friendship in context* (pp. 153–182). Cambridge, England: Cambridge University Press.
- Adams, R. G., & Blieszner, R. (1994). An integrative conceptual framework for friendship research. *Journal of Social and Personal Relationships, 11*, 163–184.
- Antonucci, T. C., & Akiyama, H. (1987). Social networks in adult life and a preliminary examination of the convoy model. *Journal of Gerontology, 42*, 519–527.
- Antonucci, T. C., & Akiyama, H. (1995). Convoys of social relations: Family and friendships within a life span context. In R. Blieszner & V. H. Bedford (Eds.), *Handbook of aging and the family* (pp. 355–371). Westport, CT: Greenwood Press.
- Antonucci, T. C., & Jackson, J. S. (1987). Social support, interpersonal efficacy and health: A life course perspective. In L. L. Carstensen & B. P. Edelman (Eds.), *Handbook of clinical gerontology* (pp. 291–311). Elmsford, NY: Pergamon Press.
- Antonucci, T. C., Sherman, A. M., & Akiyama, H. (1996). Social networks, support, and integration. In J. E. Birren (Ed.), *Encyclopedia of gerontology* (pp. 505–514). San Diego, CA: Academic Press.
- Barrera, M., Sandler, I. N., & Ramsay, T. B. (1981). Preliminary development of a scale of social support: Studies on college students. *American Journal of Community Psychology, 9*, 435–447.
- Bedford, V. H. (1989). A comparison of thematic apperceptions of sibling affiliation, conflict, and separation at two periods of adulthood. *International Journal of Aging of Human Development, 28*, 53–66.
- Biegel, D. E. (1985). The application of network theory and research to the field of aging. In W. J. Sauer & R. T. Coward (Eds.), *Social support networks and the care of the elderly: Theory, research, and practice* (pp. 251–274). New York: Springer.
- Braun, H. I., Jones, D. H., Rubin, D. B., & Thayer, D. T. (1983). Empirical

- Bayes estimation of coefficients in the general linear model from data of deficient rank. *Psychometrika*, 489, 171–181.
- Broese van Groenou, M. I., & van Tilburg, T. G. (1996). Network analysis. In J. E. Birren (Ed.), *Encyclopedia of gerontology: Age, aging, and the aged* (Vol. 2, pp. 197–210). San Diego, CA: Academic Press.
- Bryk, A. S., & Raudenbush, S. W. (1992). *Hierarchical linear models: Applications and data analysis methods*. Newbury Park, CA: Sage.
- Butler, R. N. (1963). The life review: An interpretation of reminiscence in the aged. *Psychiatry*, 256, 65–76.
- Cantor, M. H. (1979). Neighbors and friends: An over-looked resource in the informal support system. *Research on Aging*, 1, 434–463.
- Carstensen, L. L. (1992). Social and emotional patterns in adulthood: Support for socioemotional selectivity theory. *Psychology and Aging*, 7, 331–338.
- Carstensen, L. L. (1993). Motivation for social contact across the life span: A theory of socioemotional selectivity. In J. Jacobs (Ed.), *Nebraska Symposium on Motivation: 1992. Developmental perspectives on motivation*. (Vol. 40, pp. 209–254). Lincoln: University of Nebraska Press.
- Carstensen, L. L. (1995). Evidence for a life-span theory of socioemotional selectivity. *Current Directions in Psychological Science*, 4, 151–155.
- Connidis, I. A., & Davies, L. (1990). Confidants and companions in later life: The place of family and friends. *Journal of Gerontology: Social Sciences*, 45, S141–S149.
- Cowen, E. L. (1982). Help is where you find it: Four informal helping groups. *American Psychologist*, 37, 385–395.
- Cowen, E. L., Gesten, E. L., Boike, M., Norton, P., Wilson, A. B., & DeStefano, M. A. (1979). Hairdressers as caregivers: I. A descriptive profile of interpersonal help-giving involvement. *American Journal of Community Psychology*, 7, 633–648.
- Cowen, E. L., McKim, B. J., & Weissberg, R. P. (1981). Bartenders as informal, interpersonal help-agents. *American Journal of Community Psychology*, 9, 715–729.
- Coyne, J. C., & Gotlib, I. H. (1983). The role of cognition in depression: A critical appraisal. *Psychological Bulletin*, 94, 472–505.
- Cutrona, C. E., & Russell, D. W. (1987). The provisions of social relationships and adaptation to stress. *Advances in Personal Relationships*, 1, 37–67.
- Di Leonardo, M. (1992). The female world of cards and holidays: Women, families, and the work of kinship. In B. Thorne & M. Yalom (Eds.), *Rethinking the family: Some feminist questions* (pp. 246–261). Boston, MA: Northeastern University Press.
- Dortsch, S. (1997, February). Greetings, America. *American Demographics*, 19, pp. 6–9.
- Erickson, K. C. (1997). *Postal rate and fee changes* (Docket No. R97-01). Hearing before the United States Postal Rate Commission.
- Erikson, E. H., Erikson, J. M., & Kivnick, H. Q. (1986). *Vital involvement in old age: The experience of old age in our time*. New York: Norton.
- Fingerman, K. L. (1998). Tight lips: Aging mothers' and their adult daughters' responses to interpersonal tensions in their relationship. *Personal Relationships*, 5, 121–138.
- Fitzgerald, K. (1994). Hallmark alters focus as lifestyles change: Greeting card king focuses on loyal customers. *Advertising Age*, 65, 4.
- Frederickson, B. L., & Carstensen, L. L. (1990). Choosing social partners: How old age and anticipated endings make people more selective. *Psychology and Aging*, 5, 335–347.
- Gotlib, I. H. (1983). Perception and recall of interpersonal feedback: Negative bias in depression. *Cognitive Therapy & Research*, 7, 399–412.
- Granovetter, M. S. (1973). The strength of weak ties. *American Journal of Sociology*, 78, 1360–1380.
- Hansson, R. O., & Carpenter, B. N. (1994). *Relationships in old age: Coping with the challenge of transition*. New York: Guilford Press.
- House, J. S., Kahn, R. L., McLeod, J. D., & Williams, D. (1985). Measures and concepts of social support. In S. Cohen & S. L. Syme (Eds.), *Social support and health* (pp. 83–108). Orlando, FL: Academic Press.
- Johnson, C., & Barer, B. (1997). *Life beyond 85 years: The aura of survivorship*. New York: Springer.
- Kahn, R. L., & Antonucci, T. C. (1980). Convoys over the life course: Attachment, roles, and social support. In P. B. Baltes & O. C. Brim (Eds.), *Life-span, development, and behavior* (pp. 254–283). New York: Academic Press.
- Kenny, D. A., Bolger, N., & Kashy, D. A. (1996). *Estimation of multilevel models using weighted least squares*. Manuscript submitted for publication.
- Kenny, D. A., Kashy, D. A., & Bolger, N. (1997). Data analysis in social psychology. In D. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *Handbook of social psychology* (4th ed., pp. 233–265). New York: McGraw Hill.
- Lang, F. R., & Carstensen, L. L. (1994). Close emotional relationships in late life: Further support for proactive aging in the social domain. *Psychology and Aging*, 9, 315–324.
- Lang, F., & Carstensen, L. L. (1997, November). The initiation and daily experience of social contact. In K. L. Fingerman & F. Lang (Co-chairs), *Social relationships across adulthood: Methodological and conceptual contributions*. Symposium conducted at the 50th Annual Meeting of the Gerontological Society of America, Cincinnati, Ohio.
- Laurenceau, J. P., Barrett, L. F., & Pietromonaco, P. R. (1998). Intimacy as an interpersonal process: The importance of self-disclosure, partner disclosure, and perceived partner responsiveness in interpersonal exchanges. *Journal of Personality and Social Psychology*, 74, 1238–1251.
- Mancini, J. A., & Blieszner, R. (1992). Social provisions in adulthood: Concept measurement in close relationships. *Journal of Gerontology: Psychological Sciences*, 47, 14–20.
- Mogelonsky, M. (1996, February). Say it with cards. *American Demographics*, 18, p. 10.
- Morgan, D. L., & Rook, K. S. (1996, August). Perceptions of the positive and negative aspects of relationships. In D. L. Morgan (Chair), *Positive and negative aspects of relationships*. Symposium conducted at the bi-annual meeting of the International Society for the Study of Personal Relationships, Banff, Canada.
- Morse, S. J., & Marks, A. (1985). "Cause Duncan's me mate": A comparison of reported relations with mates and with friends in Australia. *British Journal of Social Psychology*, 24, 283–292.
- Myerhoff, B. (1978). *Number our days*. New York: Simon & Schuster.
- Rosenthal, C. J., & Marshall, V. (1988). Generational transmission of family ritual. *American Behavioral Scientist*, 31, 669–684.
- Ryff, C. D. (1989). In the eye of the beholder: Views of psychological well-being among middle-aged and older adults. *Psychology and Aging*, 4, 195–210.
- Ryff, C. D. (1995). Psychological well-being in adult life. *Current Directions in Psychological Science*, 4, 99–104.
- Shostak, M. (1983). *Nisa: The life and words of a !Kung woman*. New York: Vintage Books.
- Sparks, D. (1994). The card game: American Greetings tries to inch by Hallmark to the top spot in greeting cards. *Financial World*, 163, 28–29.
- Stolar, G. E., MacEntee, M. I., & Hill, P. (1993). The elderly: Their perceived supports and reciprocal behaviors. *Journal of Gerontological Social Work*, 19, 15–33.
- Troll, L. E. (1994). Family-embedded vs. family deprived oldest-old: A study of contrasts. *International Journal of Aging and Human Development*, 38, 51–63.
- van Tilburg, T. (1997). There is more to the network than relationships. *ISSPR Bulletin*, 13, 11–13.

Received January 30, 1998

Revision received May 13, 1998

Accepted July 21, 1998 ■