

Accommodation predictors of grandparent–grandchild relational solidarity in Taiwan

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ABSTRACT

Grounded in communication accommodation theory, this research examined Taiwanese grandchildren's ($N = 100$) and grandparents' ($N = 108$) perceptions of communication behavior in grandparent–grandchild (GP–GC) interactions. This study investigated noncommunicative and communicative predictors of communication satisfaction, liking, and emotional closeness in the relationship. Regression analyses showed that communication accommodation behaviors accounted for significant variance in GP–GC relational solidarity. For grandchildren and grandparents, the best single predictor was their perception of their own accommodative involvement with their grandparents/grandchildren. The findings also indicated that contact frequency significantly predicted GP–GC relational solidarity. Demographic variables were not particularly effective predictors. The findings are discussed in terms of cultural differences in GP–GC relationships and communication accommodation theory.

KEY WORDS: culture and accommodation behavior • family communication • grandparent–grandchild relations • Taiwan

The majority of research on family communication has focused either on individuals from the same generation (e.g., interactions between spouses

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or siblings) or between adjacent generations (e.g., parent-adolescent, elderly parent-adult child). In contrast, grandparent-grandchild (GP-GC) relationships have not received a great deal of research attention in the area of family communication. People can become grandparents when they are 50 years old or even younger, and with increasing life expectancies their relationships with their grandchildren may last over 30 years. Grandparents' roles have become multidimensional. They are symbols of family continuity, information sources for family and historical stories, morality guides, and affectionate sources of emotional support (Cherlin & Furstenberg, 1986). As discussed later, positive GP-GC relations are important in influencing healthy family functioning, younger people's attitudes towards aging, and other important outcomes. Therefore, it is necessary to begin investigating the factors that influence the quality of this dynamic relationship.

Research on intergenerational communication between strangers has flourished in the last decade (see A. Williams & Nussbaum, 2001, for a review). Included in this research has been a considerable amount of work examining cultural differences in such communication. It is commonly assumed that the Asian values of Confucianism and filial piety have a positive influence on the quality of intergenerational relations due to the norms of respecting older people. However, recent Pacific Rim studies examining perceptions of older people outside of the family context find that preaching of respect for older adults does not necessarily yield positive intergenerational relationships or positive perceptions of older people. The gap between what Chinese values prescribe and what these recent empirical studies show is discussed later in more detail. However, we suggest that work examining intergenerational relationships in the family may be more likely to find results reflective of Confucian values in general, and the filial piety dynamic specifically. The current study examined the grandparent-grandchild relationship in Taiwan. In the past 50 years, Taiwan has experienced radical economic, social, and cultural modernization (Yang, 1996). These changes have resulted in attitudes towards self and others that reflect more modern and less traditional orientations (e.g., moving away from a social orientation to a more individualistic consciousness), or in other cases the coexistence of traditional (e.g., family/relationship orientation) and modern traits (e.g., self-reliance, egalitarianism; Hwang, 1993; Yang, 1992). This transition has resulted in older people feeling marginalized and having a less positive self-image, because their importance in the family has gradually decreased (Tien-Hyatt, 1987).

Given this background, the purpose of the current study was to identify communicative and noncommunicative predictors of the strength of GP-GC relationships in Taiwan. Understanding such predictors may help us understand how to encourage more positive family relations between younger and older people, as well as inform our theoretical models of family relationships and intergenerational communication. This article is grounded in communication accommodation theory (CAT), which has proven a useful frame for research on intergenerational dynamics in East

Asia and other contexts (Shepard, Giles, & Le Poire, 2001). Before presenting specific research questions, we review research examining intergenerational communication from a CAT perspective, as well as discussing research on grandparent–grandchild relationships in the East and West.

Intergenerational communication and communication accommodation theory

Communication accommodation theory (CAT) has been a dominant theoretical paradigm to examine language use and communication in intergroup encounters (e.g., intergenerational: Coupland, Coupland, Giles, & Henwood, 1988; intercultural: Gallois, Giles, Jones, Cargile, & Ota, 1995; see Giles, Mulac, Bradac, & Johnson, 1987, for a review). The premise of CAT lies in individuals adopting strategic behavior to negotiate desired social distance with their interaction partners (Shepard et al., 2001). Grounded in social identity theory (SIT: Tajfel & Turner, 1979), CAT suggests that people attune their communication styles or conversation topics to be similar to or different from their partner in order to achieve various relational goals such as group identification or interpersonal solidarity. The adjustment could be based on others' language production (convergence, divergence, maintenance) or others' perceived or stereotyped need (over-accommodation) (Giles, Coupland, & Coupland, 1991). For instance, adjusting accent to be similar to or different from others has been shown to signal interethnic solidarity or division (Bourhis, Giles, & Lambert, 1975). Continuing one's original communication style without any adjustment (i.e., maintenance), in a psychological sense, may be interpreted as divergence from others (Tong, Hong, Lee, & Chiu, 1999). Thus, CAT offers a link connecting psychological, social, and sociolinguistic aspects of communicative behavior. 'CAT's purview encompasses the description, prediction and explanation of the underlying motivations, communication processes, and consequences of shifts in behavior in interactions' (Shepard et al., 2001, p. 33).

The principles of CAT have been applied to the study of intergenerational relationships to understand the link between intergenerational attitudes and communicative behaviors. Such work has been important in helping illuminate some links between stereotypes of older adults, communication processes, and negative outcomes for older adults (Ryan, Giles, Bartolucci, & Henwood, 1986). Adjusting communication in terms of stereotypes is often described as 'over-accommodation.' Over-accommodation is 'a category of miscommunication in which a participant perceives a speaker to exceed the sociolinguistic behaviors deemed necessary for synchronized interaction' (Shepard et al., 2001, p. 38). For example, younger people sometimes patronize older people (e.g., use simplified vocabulary, speak slower), particularly in clinical contexts such as nursing homes (Caporael, Lukaszewski, & Culbertson, 1983). Such behavior is often explained as a product of negative stereotyping processes (Hummert & Ryan, 2001; Ryan et al., 1986) – the talk is tailored to a negative stereotype of incompetence,

rather than the actual abilities of the target (Caporael, 1981). Negative consequences of such talk have been demonstrated: older recipients may show reduced levels of personal control or self-esteem, and may ultimately conform to (and reinforce) the stereotypes on which the talk was based (Caporael, 1981; Langer & Rodin, 1976; Rodin & Langer, 1977; Ryan et al., 1986; A. Williams & Nussbaum, 2001).

Intergenerational researchers also have examined *under-accommodation* phenomena. Under-accommodation is defined as 'a category of miscommunication in which a speaker is perceived to insufficiently utilize the sociolinguistic behaviors necessary for synchronized interaction' (Shepard et al., 2001, p. 39). For example, studies found that older adults have a tendency to disclose their painful life experiences (e.g., health/financial problems, bereavement) to younger strangers, talk that often makes younger people feel uneasy and unsure of how to respond (Coupland, Coupland, Giles, Henwood, & Wiemann, 1988). This kind of talk is perceived as under-accommodative because it is maladapted to young people's conversational needs (A. Williams & Nussbaum, 2001). Consequently, young people may be less willing to engage in future intergenerational contact and their negative stereotypes of older people may be reinforced.

A. Williams and Giles (1996) provided increased clarity in terms of intergenerational accommodation issues, as well as providing the stimulus for improved measurement of these issues. They conducted interviews with younger adults and asked them to describe satisfying and dissatisfying conversations with older people. Analysis of the accounts resulted in categories of dissatisfying communication in relation to accommodation strategies (e.g., older under-accommodation), as well as cognitive, behavioral, and emotional aspects of intergenerational relationships. These categories have become important in the research examining intergenerational communication, and are central to the development of measures of accommodation phenomena (A. Williams et al., 1997) such as those used in the current study. In sum, work from a CAT perspective has been important in the development of our knowledge concerning intergenerational communication. However, this work has not often incorporated the special concerns of close relations such as GP-GC relationships.

Grandparent-grandchild relationships

The GP-GC relationship may be the closest intergenerational relationship, and may provide the majority of intergenerational contact. Research shows that GP-GC interactions influence value development for grandchildren and mental health for grandparents (Folwell & Grant, 1999; Kennedy, 1992; Kivnick, 1982). Younger people's attitudes towards older adults in general can be influenced by GP-GC contact (Mitchell, 1998). In addition, a person's sense of family, family history, and moral values is influenced by the GP-GC relationship (Brussoni & Boon, 1998). In other words, this is a close relationship that has consequences not only in terms of the individuals' experiences within the relationship, but also for their more general orientations to other people and their own position in the lifespan.

Most research examining such outcomes has found that GP–GC relationships that are more satisfying or closer tend to have more positive outcomes in terms of these other issues (Isaacs, 1986). For instance, more positive GP–GC relationships are, at least under some circumstances, related to more positive attitudes towards aging in general. Therefore, predicting the quality of the relationship is a key issue. A variety of factors has been examined as potential predictors of relational quality. The sex of the grandparent appears to be important – grandmothers tend to have closer relationships with their grandchildren and to be more willing to devote themselves to the relationships than grandfathers (Roberto & Stroes, 1992; Somary & Stricker, 1998). This may be related to the content of conversations – when grandparents were asked to tell stories that capture the meaning of life, grandmothers tended to focus on family history or personal relationships, whereas grandfathers shared wartime experiences or health problems (Nussbaum & Bettini, 1994). Age is also associated with the level of GP–GC involvement. Younger grandparents have more contact with their grandchildren (Johnson, 1985), and tend to be more involved in the relationship than older grandparents (Cherlin & Furstenberg, 1985; Roberto, 1990). Research also shows that GP–GC relationships vary with family lineage (paternal/maternal). Maternal grandparents indicate a stronger psychological or emotional tie to grandchildren (Somary & Stricker, 1998), and have closer relationships with their grandchildren (Cherlin & Furstenberg, 1985; Pecchioni & Croghan, 2000). Somewhat contradictory results emerge from Harwood's (2000a) data, suggesting that maternal grandmothers and paternal grandfathers have stronger relationships with their grandchildren. However, this research was based on a relatively small sample of paternal grandfathers.

Finally, contact frequency has been investigated as a predictor of relational closeness. Brussoni and Boon (1998) found that contact frequency was significantly correlated with the strength of GP–GC relationships. Similarly, Harwood (2000b) found that when geographical distance was controlled, frequency of contact using a variety of media was correlated with relational solidarity among a group of U.S. college students. Hence, in the current study, we predicted that frequency of contact would be positively associated with relational solidarity.

Little research has examined determinants of closeness beyond the 'structural' elements described above (sex, lineage, etc.). Based on CAT, Harwood (2000a) examined North American grandchildren's and their grandparents' perceptions of accommodation behaviors in the GP–GC relationship in an attempt to predict GP–GC relational solidarity. The findings showed that demographic factors were not significant predictors of relational solidarity. In addition, problematic communicative behaviors from the literature (younger people's patronizing talk and older people's under-accommodation) did not emerge as significant predictors. The most consistent predictor of GP–GC relational solidarity was the perception that their partners accommodated the respondents' communicative needs. This research demonstrated the importance of communicative behaviors to

relational engagement in North America and in the current study we continue to examine the role of communication behaviors in influencing relational harmony. However, compared to Western cultures, we know very little about intergenerational communication in general, and the GP–GC relationship specifically, in Asia.

Intergenerational communication in East Asia

An examination of cross-cultural variation in GP–GC relationships would enhance our understanding of grandparenthood in diverse contexts of social structures and norms (Ikels, 1998). For example, in East Asian countries, the filial piety obligation prescribes that the family is the natural institution responsible for care-giving (Strom, Strom, Shen, Li, & Sun, 1996). Because a son carries his family name, the paternal side of the family is deemed more important for Chinese families. Grandparents will be more likely to live with their sons (normally the eldest) than with their daughters. Living with a daughter is perceived as ‘against social ethics.’ Interaction with grandparents from the paternal side, hence, might be expected to be more frequent than with maternal grandparents (Tam & Detzner, 1998). In addition, to the extent that the filial piety obligation is manifest in interaction, we might expect a greater emphasis on status marking (e.g., older people emphasizing power differentials between generations, expecting status-related terms of address) and less emphasis on intimacy and bonding in East Asian GP–GC relationships (Yeh, Williams, & Maruyama, 1998).

It has been suggested that the norm of filial piety rooted in Confucianism is the fundamental value in East Asian countries and that it guides attitudes toward aging parents and older adults in general (Gao, 1996; Noels, Giles, Gallois, & Ng, 2001). The influence of this cultural value has been well documented in China (Levy & Langer, 1994), Japan (Tobin, 1987), and Taiwan (Lee, Parish, & Willis, 1994). Ho (1994) claimed that intergenerational relationships in Chinese culture are actually defined by filial piety: ‘the attributes of intergenerational relationships governed by filial piety are structural, enduring and invariant across situations within Chinese culture’ (p. 350). He argued that, in addition to obeying and honoring one’s parents, one needs to provide material and emotional support, continue the family line, and perform ceremonies of ancestral worship (Chinese Culture Connection, 1987; Ng, Loong, Liu, & Weatherall, 2000). These principles have usually led researchers to hypothesize positive intergenerational relationships in East Asian countries.

However, a series of cross-cultural studies has shown little support for these predictions, and at times has suggested that younger people in Eastern cultures have more negative attitudes towards older adults in interactions than their counterparts in the West (Cai, Giles, & Noels, 1998; Pecchioni, Ota, & Bethea, in press). For instance, Harwood et al. (1996) examined the traits younger people associated with young, middle-aged, and older adults in six countries around the Pacific Rim nations. The results showed that young people in Hong Kong had very negative evaluations of aging, a finding replicated in older adults’ perceptions (Harwood et al.,

2001). In addition to trait studies, intergenerational *communication* experiences in different cultures have also been examined. A. Williams et al. (1997) investigated young people's perceptions of their conversations with older people across various Eastern and Western cultures. The findings showed that young people in the Eastern societies were relatively more negative (e.g., perceiving older adults as not being accommodative) than those in the West. A. Williams et al. suggested that perhaps being polite and respectful is a cultural value imposed in Eastern societies; hence, young people are obligated to accommodate to older people regardless of their feelings or enjoyment, and this may lead to private resentment (Sharps, Price-Sharps, & Hanson, 1998).

An alternative explanation for these findings resides in the important contrast between family and nonfamily members (i.e., in-group versus out-group members: Gao, 1996; A. Williams & Nussbaum, 2001) in Eastern societies. This distinction was explored by Ng, Liu, Weatherall, and Loong (1997), who asked young Chinese and European New Zealanders to evaluate their communication experiences with family and nonfamily elderly. For both Chinese and European participants, more negative feelings were associated with nonfamily elderly than with family elderly. In summary, the clear in-/out-group distinction (family versus nonfamily) in social relationships, and the essential element of obligation/politeness prescribed by filial piety, may account for the inconsistencies between the empirical findings of negativity towards older people in the East and the conceptual assumption of more positive attitudes in those settings.

Therefore, we believe that there are no contrasting findings between cultural values and practice. On the contrary, the existing findings support the cultural values comparing family and nonfamily (in-/out-groups; details are discussed later), which show substantial differences in attitudes toward and evaluations of communication behavior with older people. Most of the Pacific Rim work examined older people who are strangers rather than family elderly. Hence, we did not expect direct relations between those studies and the current one that focused on family members. The norm of filial piety may be more influential in the GP–GC relations than with strangers.

As noted by A. Williams and Nussbaum (2001), there is often considerable variation among Eastern nations, and hence, there is potential trouble in 'grouping Eastern cultures together and labeling them as collectivistic' (p. 274). Hence, there is some value in complementing the body of cross-cultural research that is available with detailed examinations of specific cultures. Very few research studies in this area have focused specifically on Taiwan. Giles, Liang, Noels, and McCann (2001) compared Taiwanese, Chinese-American, and Euro-American young adults' perceptions of peers and nonfamily older people. The Taiwanese were more negative about older people, felt more deferential and obligated in interactions, and tended to avoid interactions with older adults. Taiwanese young people, therefore, may endorse the ethic of filial piety or respect for old age, but do not actively engage with old people. The findings also confirmed that Taiwanese young people had negative perceptions in terms of older adults' vitality,

wisdom, activity, and generosity. Yeh et al. (1998) compared Taiwanese and American young people's evaluations of intergenerational relationships, and found that Taiwanese respondents evaluated young targets as less willing to communicate and viewed old targets as less accommodative than did their American counterparts. Strom et al. (1996) examined Taiwanese intergenerational relationships across three family generations (i.e., grandparents, middle generation, and grandchildren) attempting to identify variables predicting successful grandparenthood. Grandparents and grandchildren agreed that grandparents were low on items such as learning from the grandchildren or sharing feelings with them. Strom et al. argued that Chinese people value taciturn behavior as a merit, and tend to hide their emotions and tolerate frustration with other generations. This merit is endorsed especially by older people considering their respected status in society. In summary, similar to previous cross-cultural studies, young people in Taiwan had negative stereotypes of aging, they tended to avoid interacting with older adults, and the quality of communication was less positive than their Western counterparts. Such findings led to our interest in understanding more about communication dynamics in Taiwanese GP–GC relationships, and specifically what elements of communication lead to stronger and more harmonious relationships.

Based on the literature reviewed earlier, three research questions were developed to examine predictors of GP–GC relational solidarity in Taiwan. The first two research questions asked about issues that were identical to those examined in Harwood's (2000a) study. Our primary goal was to understand more about the role of communication variables in this relationship in Taiwan, and hence to provide a cultural comparison with Harwood's (2000a) research. Owing to the importance of communicative behavior in determining relational outcomes, the first research question was designed to analyze the *unique* contribution of communication accommodation dimensions in predicting GP–GC relational solidarity. Demographic variables (i.e., sex, grandparents' age, and relational lineage) were controlled in this analysis to remove any confounding influence they might have.

RQ1: When demographic variables are controlled, to what extent do communication accommodation variables as a set predict levels of relational solidarity in Taiwanese grandparents and grandchildren?

The second research question was concerned with which specific communicative and demographic variables were significantly linked to GP–GC relational solidarity. Demographic variables are examined because of the repeated evidence that they are meaningful predictors in the West, and because our analysis of cultural values suggests that their influence may be somewhat different in the East (due to the strong patrilineal family structure). The combined demographic and communicative predictors included in the current study constitute a broad cross-section of variables that are theoretically relevant to the grandparent–grandchild relationship. Hence, we were interested in which specific variables from this entire set would emerge as statistically important *unique* predictors of solidarity.

RQ2: Which communicative and demographic variables predict unique variance in relational solidarity among Taiwanese grandparents and grandchildren?

The third research question asked about the role of contact frequency – an element that Harwood (2000a) did not examine. As described in more detail earlier, contact frequency was examined because it offers some interesting cultural contrasts: it is a consistent predictor of solidarity in the West, but may not be in the East. Co-residence is more common in Asia, and contact there may also be more respect- and status-oriented (and perhaps therefore, less inherently ‘pleasurable’ by Western standards).

RQ3: Does contact frequency predict unique variance in relational solidarity among Taiwanese grandparents and grandchildren?

Method

Participants

Young adults ($N = 100$: 15% male, 77% female, 8% missing; mean age = 21.92 years; $SD = 2.01$) were recruited from five universities in Taiwan (three northern, one southern, and one central). The grandchildren were 67% Taiwanese (i.e., the majority), 13% second-generation mainlanders, and 20% other (10% half Taiwanese and half mainlander, 9% Hakka, 1% unknown). The ethnicity distribution corresponds to the overall population distribution. Fifty-three percent of the grandchildren reported talking frequently with their grandparents (*almost every day, a few times a week, a few times a month*) and another 37% indicated communicating a few times a year.

Older adults ($N = 112$) were primarily the young sample’s grandparents; however, additional older respondents were recruited from an association of retired academics and personal acquaintances. In the final sample, four cases were excluded because they were outliers in terms of age (they were more than three standard deviations younger than the mean age). The final sample included 108 older adults (48.5% males, 51.5% females, mean age = 71.86 years; $SD = 7.23$). The grandparents who were recruited through the grandchildren had the option to respond to the survey with regard to that particular grandchild or another college-age grandchild. The ethnicity of the grandparents (83% Taiwanese, 10% second-generation mainlander) shows a similar pattern to that of the grandchildren. Sixty-four percent of the grandparents reported talking frequently with their grandchildren, and another 29% indicated talking a few times a year.

Procedures

The young participants were asked to respond to a survey based on their interactions with a living grandparent with whom they had contact in the past 12 months. Sixty-six percent of the grandchildren chose a paternal grandparent (48% grandmother, 18% grandfather) and 34% chose a maternal grandparent (26% grandmother, 8% grandfather). Eighty percent of the grandparents chose their son’s children as the target (33.3% grandson, 46.3% granddaughter), while 20% chose their daughter’s children (8.3% grandson, 12.0% granddaughter). Hence, both generations appear to display a preference for the paternal line.

At the beginning of the study, participants were asked not to focus on a specific conversation but to recall how conversations generally go with their grandparent/grandchild. Throughout the study, participants were instructed to continue thinking about such a conversation with their grandparent/grandchild while answering the survey questions. We are interested in assessing a typical conversation because it can reflect representative features of a relationship developed across time, whereas a specific or recent conversation may limit participants' thoughts to idiosyncratic aspects of that conversation that might not reflect their more typical exchanges.

Materials

The grandparents and grandchildren independently completed questionnaires concerning a specific targeted grandchild or grandparent. The survey contained several sections and only the ones relevant to the current study are described. The survey was originally developed in English using items derived from Harwood (2000a) and A. Williams et al. (1997). The survey was first translated into Chinese by the first author. A Taiwanese graduate student read the Chinese version of the survey and translated the items back into English with the first author to check semantic connotations of the word choices.

Criterion measures: Relational solidarity. Three measures of relational solidarity were used. It should be noted that we use the term 'solidarity' here as an umbrella term for concepts such as strength, closeness, or satisfaction. These measures attempted to tap some potential outcomes of communication in the GP–GC relationship. The participants rated their liking of and their emotional closeness to the targeted grandparent/grandchild (both single-item, 5-point scales: *dislike very much* – *like very much*; *very distant* – *very close*). These single items were used productively in previous GP–GC studies (Brussoni & Boon, 1998): they were retained in the current study to maintain comparability with Harwood (2000a). Liking and closeness are constructs that might be relatively stable over time, and that we could attribute as being outcomes of interaction in the relationship. Participants also responded to a short version of Hecht's (1978) communication satisfaction scale concerning a typical conversation with their grandparent/grandchild (5 items, $\alpha = .91$ for grandchildren, $\alpha = .80$ for grandparents; Items: I am generally satisfied with the conversations; I do not enjoy the conversations; I am generally dissatisfied with the conversations; I would like to have other conversations like those I generally have with my grandparent; These conversations flow smoothly). Again, the measure of satisfaction appears to be sufficiently generic and global as to measure a generalized response to the conversations (rather than specific aspects of them as described later). Hence, these three measures of relational solidarity were used as the criterion variables in the analyses. The three measures were fairly highly correlated among the grandchildren, but not so strongly among the grandparents (see later). They were retained as separate measures to allow comparisons with Harwood (2000a), who also analyzed them separately.

Predictor measures: Communication accommodation. The major part of the survey included measures of communicative variables: in all cases, these were designed to measure more specific aspects of the interaction *process* rather than the global outcomes described above. The participants evaluated their own accommodation behaviors with the target (18 items; e.g., 'I share personal

thoughts and feelings’) and their perceptions of the target’s behavior in a typical conversation (25 items; e.g., ‘I find that my grandchild negatively stereotypes me as an old person’). These items were mainly drawn from A. Williams et al.’s (1997) instrument, which has been used extensively in the literature (Cai et al., 1998; Giles et al., 2001; Harwood & Williams, 1998; Ng et al., 1997). In Harwood’s (2000a) study, a few items specifically related to GP–GC relationships were added to the measurement (e.g., ‘My grandparent provides interesting information about my family’) and these were also used in the current study. All items were measured on a 5-point Likert scale (*strongly disagree* – *strongly agree*).

These items were grouped into scales in accordance with CAT and Harwood (2000a). Dimensions for grandchildren’s and grandparents’ evaluations are not identical (see Tables 1 and 2). For example, ‘perceived grandparent under-accommodation’ and ‘perceived grandparent topic management’ only appeared in grandchildren’s evaluations of grandparents. Based on the previous literature, the items for these two categories reflect communication styles that are more associated with grandparents or older people in general rather than with grandchildren or young people. Items, descriptive statistics, and alpha values for each dimension are presented in Tables 1 and 2. For grandchildren’s evaluations, the *grandchild accommodative involvement* dimension measured their involvement in the conversations – the degree to which the participant actively engaged in conversations by showing his/her interest in the targeted person. The *grandchild reluctant accommodation* items characterized the participants feeling constrained in the conversations with the target. The *grandchild role relations* scale measured conformity to traditionally accepted modes of behavior in these interactions, and the *grandchild interpretability strategies* dimension includes items that assessed grandchildren’s behavior used to accommodate their grandparents’ communication competence. *Perceived grandparent accommodation* assessed the extent to which the grandparent was perceived as positively accommodating the grandchild. The extent to which grandchildren felt that they were over-accommodated by their grandparents was assessed by the *perceived grandparent over-accommodation* scale. *Perceived grandparents’ under-accommodation behavior* was assessed using items measuring grandparents’ talk about health or age-related topics. Finally, the dimension of *perceived grandparent topic management* reflected story telling about family or history, a characteristic often associated with older adults (see Table 1).

The evaluations completed by the grandparents were very similar to those described earlier – dimensions of *grandparent accommodative involvement*, *grandparent reluctant accommodation*, *perceived grandchild accommodation*, and *perceived grandchild over-accommodation* were identical to those in grandchildren’s dimensions except that they featured the grandchild as the target rather than the grandparent (see Table 2).

Most dimensions for both grandchildren’s and grandparents’ data had good reliabilities (alphas ranging from .70 to .91). Three dimensions’ reliabilities were below .70: *perceived grandparent over-accommodation*, *grandchild accommodation role-relations*, and *perceived grandchild over-accommodation*. Because the alpha values of these three dimensions were close to .70, they were included for further analyses. The items for all dimensions were identical to those used in Harwood’s (2000a) study with one exception. One item (‘My grandparent provides interesting information about history’) was removed

TABLE 1
Dimensions of grandchildren's evaluations

Dimensions: Items

- Grandchild Accommodative Involvement (Alpha = .82, $M = 3.34$, $SD = .65$): I share personal thoughts and feelings; Talk about topics my grandparent enjoys; Compliment my grandparent; Don't know what to say (R); Look to end the conversation (R); Want to leave (R).
- Grandchild Reluctant Accommodation (Alpha = .79, $M = 3.35$, $SD = .61$): I have to 'bite my tongue'; Avoid certain ways of talking; Don't always say what I think; Don't act like myself; Avoid certain topics.
- Grandchild Accommodating Role-Relations (Alpha = .69, $M = 3.85$, $SD = .60$): I show respect for his/her age; Feel respect for his/her knowledge and wisdom.
- Grandchild Interpretability Strategies (Alpha = .72, $M = 3.63$, $SD = .69$): I speak louder; Speak slower than normal.
- Perceived Grandparent Accommodation (Alpha = .86, $M = 3.47$, $SD = .66$): My grandparent compliments me; Shows affection for me; Shows respect for me; Shares personal thoughts and feelings; Is attentive; Is supportive.
- Perceived Grandparent Over-accommodation (Alpha = .68, $M = 2.38$, $SD = .74$): My grandparent negatively stereotypes me as a young person; Talks down to me.
- Perceived Grandparent Under-accommodation (Alpha = .80, $M = 3.21$, $SD = .72$): My grandparent complains about his/her life circumstances; Complains about his/her health; Talks about his/her health; Makes angry complaints.
- Perceived Grandparent Topic Management (Alpha = .88, $M = 3.29$, $SD = .99$): My grandparent provides interesting information about my family; Tells interesting stories.
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Note. (R) indicates reverse-scored items.

from the *perceived grandparent topic management* dimension (grandchildren's evaluations) to improve reliability.

Results

We report some descriptive statistics before the main analyses. The grandchildren and grandparents indicated moderate levels of liking, emotional closeness, and communication satisfaction (respectively, for grandchildren: $M = 3.95$, $SD = .91$; $M = 3.25$, $SD = 1.09$; $M = 3.49$, $SD = .13$; for grandparents: $M = 3.93$, $SD = .81$; $M = 3.50$, $SD = .88$; $M = 3.49$, $SD = .11$). Correlation matrices of the variables for grandchildren's and grandparents' evaluations were examined to gain a general impression of their interrelations (see Tables 3 and 4, respectively). For grandchildren's evaluations, the strongest correlation between predictors was between *grandchild accommodation involvement* and *perceived grandparent accommodation involvement*. The weakest relations all involved the grandchild's *interpretability strategies* and *perceived grandparent under-accommodation* dimensions: these dimensions correlated only weakly or not at all with the other dimensions. The strongest correlation between predictor and criterion variables was between communication satisfaction and *grandchild accommodation involvement*. The criterion variables were fairly highly correlated with one another.

TABLE 2
Dimensions of grandparents' evaluations

Dimensions: Items

Grandparent Accommodative Involvement (Alpha = .73, $M = 3.49$, $SD = .57$): I share personal thoughts and feelings; Talk about topics my grandchild enjoys; Compliment my grandchild; Don't know what to say (R); Look to end the conversation (R); Want to leave (R).

Grandparent Reluctant Accommodation (Alpha = .79, $M = 2.96$, $SD = .67$): I have to 'bite my tongue'; Avoid certain ways of talking; Don't always say what I think; Don't act like myself; Avoid certain topics.

Perceived Grandchild Accommodation (Alpha = .83, $M = 3.60$, $SD = .52$): My grandchild compliments me; Shows affection for me; Shows respect for me; Shares personal thoughts and feelings; Is attentive; Is supportive.

Perceived Grandchild Over-accommodation (Alpha = .69, $M = 2.65$, $SD = .76$): My grandchild negatively stereotypes me as an old person; Talks down to me.

Note. (R) indicates reverse-scored items.

For the grandparents, the matrix showed fewer high correlations between variables – including substantially weaker correlations between the criterion variables. The strongest correlation between predictors was the same as that for grandchildren: own *accommodation involvement* with other's *accommodation involvement*. The weakest was between *own reluctant accommodation* and *other's over-accommodation*. The strongest correlation between a predictor and a criterion variable was communication satisfaction with *grandparent accommodation involvement*, again a similar pattern to that shown by the grandchildren. The weakest such relationship was that between liking of one's grandchild and *perceived grandchild accommodation*.

For the first two research questions, six hierarchical regression analyses were performed to examine whether Taiwanese GP–GC relational solidarity could be accounted for by the demographic and communicative/cognitive predictors. The sequence of variable entry was the same as that in Harwood's (2000a) study for the purpose of comparison. Grandparents' and grandchildren's responses were analyzed separately. In each regression, the dependent variable was one of the three measures of relational solidarity. Relational solidarity (*liking of one's grandparent/grandchild*, *emotional closeness to one's grandparent/grandchild*, and *communication satisfaction*) was predicted in three steps by (1) demographic variables (both parties' sex, grandparent's age, and lineage), (2) the interaction between grandparent's sex and lineage, and (3) the accommodation dimensions (see Tables 1 and 2: one's own and the other's accommodation behaviors). The first two steps served as demographic controls given the reported importance of such demographics in some previous research (see introduction). Grandparent's sex and relational lineage were converted into standardized scores before the interaction term was computed. Grandparent's age was included only in predictions of grandparents' evaluations: we did not ask grandchildren to estimate their grandparents' age due to the likely unreliability of such estimates. The results of these analyses are described in the following two sections and also presented in Tables 5 and 6, which also provide comparisons with the previous U.S. study. Contact frequency was not included

TABLE 3
Correlations between all predictor and criterion variables for grandchildren ($N = 100$)

	1	2	3	4	5	6	7	8	9	10	11
1. Communication satisfaction	–	.74**	.73**	.85**	–.49**	.52**	.03	.72**	–.56**	.07	.66**
2. Liking for grandparent		–	.75**	.67**	–.41**	.49**	.11	.64**	–.57**	.04	.50**
3. Emotional closeness to grandparent			–	.69**	–.54**	.39**	.06	.66**	–.48**	.15	.53**
4. Accommodation involvement				–	–.52**	.59**	–.03	.74**	–.57**	.04	.61**
5. Reluctant accommodation					–	–.18	.22*	–.46**	.31**	.02	–.33**
6. Accommodating role relations						–	.21*	.45**	–.45**	–.09	.50**
7. Interpretability strategies							–	–.04	–.10	–.05	.10
8. Grandparent accommodation								–	–.55**	.19	.60**
9. Grandparent over-accommodation									–	.09	–.37**
10. Grandparent under-accommodation										–	.25*
11. Grandparent topic management											–

* $p < .05$; ** $p < .01$.

TABLE 4
Correlations between all predictor and criterion variables for grandparents
(*N* = 108)

	1	2	3	4	5	6	7
1. Communication satisfaction	–	.47**	.62**	.75**	-.50**	.62**	-.49**
2. Liking for grandchild		–	.38**	.44**	-.27**	.18*	-.21**
3. Emotional closeness to grandchild			–	.59**	-.33**	.47**	-.35**
4. Accommodation involvement				–	-.45**	.62**	-.54**
5. Reluctant accommodation					–	-.37**	.26**
6. Grandchild accommodation						–	-.35**
7. Grandchild over-accommodation							–

* $p < .05$; ** $p < .01$.

in these primary analyses because its inclusion would reduce our ability to compare the current results with those of Harwood (2000a) who did not include contact frequency in his analysis.

Predictors of relational solidarity for grandchildren

The communication satisfaction measure was not significantly predicted by demographic variables in step 1 ($R^2 = .04$, *ns*) or the interaction effect in step 2 (R^2 change = .01, *ns*). However, the communication variables in step 3 accounted for significant variance in communication satisfaction ($R^2 = .77$, $F(12,78) = 25.85$, $p < .001$; R^2 change = .75, F change (8,78) = 36.25, $p < .001$). In the final equation, the grandchild's sex was negatively associated with GP-GC communication satisfaction, indicating that granddaughters reported less communication satisfaction with their grandparents. *Grandchild accommodation involvement* and *perceived grandparent topic management* were positively associated with GP-GC communication satisfaction.

Demographic variables ($R^2 = .03$, *ns*) in step 1 and the interaction effect in step 2 (R^2 change = .01, *ns*) were not significant predictors of grandchildren's liking of their grandparents. Liking was significantly predicted by the communicative variables in step 3 ($R^2 = .56$, $F(12,78) = 8.37$, $p < .001$; R^2 change = .52, F change (8,78) = 11.58, $p < .001$). *Perceived grandparent over-accommodation* was the only significant predictor (negative) of liking one's grandparent.

Grandchildren's emotional closeness was not significantly predicted in step 1 ($R^2 = .04$, *ns*), but it was significantly predicted in step 2 (R^2 change = .05, F change (1,86) = 4.60, $p = .04$). Examination of means indicated that the significant interaction effect (grandparent's sex \times lineage) was caused by grandchildren reporting less emotional closeness with their paternal grandfathers. The details of the interaction effect were examined using four *t*-tests: maternal grandfather ($M = 4.00$, $SD = .76$) versus maternal grandmother ($M = 3.31$, $SD = 1.12$), $t(17.48) = -2.0$, $p = .06$; paternal grandfather ($M = 2.83$, $SD = .79$) versus paternal grandmother ($M = 3.25$, $SD = 1.16$), *ns*; maternal grandfather versus paternal grandfather, $t(24) = -3.53$, $p = .002$; and maternal grandmother versus paternal grandmother, *ns*. As can be seen from these results, relationships with paternal grandfathers appear to be lower in emotional closeness than any of the other relationships, and significantly lower than those with maternal grandfathers; the others did not differ substantially.

TABLE 5
Significant predictors of relational solidarity for grandchildren in final regression equation ($N = 100$)

Criterion variable	Significant predictor variables	Beta	<i>pr</i>	Significant predictors in US (from Harwood, 2000a)
Communication satisfaction	Grandchild's sex	-.11*	-.24	GC accommodation involvement
	Grandchild accommodation involvement	.59***	.58	GP over-accommodation
	Perceived grandparent topic management	.25**	.36	GP accommodation
Liking of grandparent	Perceived grandparent over-accommodation	-.21*	-.23	GP over-accommodation GP accommodation
Emotional closeness to grandparent	Grandchild's sex	-.15*	-.23	GP accommodation
	Grandchild accommodation involvement	.32*	.27	GC accommodation involvement
	Grandchild reluctant accommodation	-.24*	-.28	

Note. Partial correlation is indicated by *pr*. GC = grandchildren; GP = grandparents.

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

TABLE 6
Significant predictors of relational solidarity for grandparents in final regression equation ($N = 108$)

Criterion variable	Significant predictor variables in Taiwan	Beta	<i>pr</i>	Significant predictors in the US (from Harwood, 2000a)
Communication satisfaction	Grandparent accommodation involvement	.52***	.50	GC accommodation involvement
	Perceived grandchild accommodation involvement	.21*	.16	Reluctant accommodation GP accommodation involvement GP sex \times lineage interaction Role relations
Liking of grandchild	Grandparent accommodation involvement	.52**	.34	GC accommodation involvement
Emotional closeness to grandchild	Grandparent accommodation involvement	.45**	.30	GC accommodation involvement

Note. Partial correlation is indicated by *pr*. GC = grandchildren; GP = grandparents.

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

The final equation showed that grandchildren's emotional closeness was significantly predicted in step 3 ($R^2 = .62$, $F(12,78) = 10.45$, $p < .001$; $R^2\text{change} = .53$, $F\text{change}(8,78) = 13.41$, $p < .001$). That is, in the final equation, the grandchild's sex was negatively associated with his/her emotional closeness. Granddaughters felt less close to their grandparents. The interaction effect was no longer significant in the final equation. *Grandchild accommodation involvement* (positive) and *grandchild reluctant accommodation* (negative) accounted for significant variance in the criterion variable.

Predictors of relational solidarity for grandparents

As with grandchildren's evaluations, communication satisfaction was not predicted by demographic variables (step 1: $R^2 = .02$, *ns*) or the interaction effect (step 2: $R^2\text{change} = .01$, *ns*). However, communication satisfaction was significantly predicted in step 3 ($R^2 = .65$, $F(9, 68) = 13.93$, $p < .001$; $R^2\text{change} = .62$, *ns*). Grandparent accommodation involvement and perceived grandchild accommodation involvement were positively associated with reported GP-GC communication satisfaction.

Demographic variables (step 1: $R^2 = .03$, *ns*) and the interaction effect (step 2: $R^2\text{change} = .01$, $F\text{change}(1, 72) = .98$, $p = .33$) were not significant predictors of liking. Liking of grandchild was significantly predicted in step 3 ($R^2 = .26$, $F(9,68) = 2.60$, $p = .01$; $R^2\text{change} = .21$, $F\text{change}(4,68) = 4.88$, $p = .002$). Grandparent accommodation involvement was positively associated with liking of the grandchild.

Grandparents' perception of GP-GC emotional closeness was not significantly predicted in step 1 ($R^2 = .02$, *ns*) or step 2 ($R^2\text{change} = .01$, *ns*). It was significantly predicted in step 3 ($R^2 = .39$, $F(9,68) = 4.86$, $p < .001$; $R^2\text{change} = .37$, $F\text{change}(4,68) = 4.88$, $p < .001$). *Grandparent accommodation involvement* had a positive association with the dependent variable.

Six additional hierarchical regression analyses were conducted to address *RQ3*. These were identical to those described earlier, except that contact frequency was included. In this report, we mention only the significant results for contact frequency: the results for the other variables are largely redundant with those already reported. For grandchildren, contact frequency was not significant in predicting communication satisfaction. It was significant in predicting liking both when first entered (step 1) and in the final step of the regression (i.e., when the communication variables were controlled: $\text{Beta} = .22$, $pr = .30$, $p < .01$). It was also significant in predicting emotional closeness at both steps (step 3: $\text{Beta} = .19$, $pr = .29$, $p < .05$). For the grandparents, contact frequency was not significant in predicting communication satisfaction or liking. However, it did predict significant variance in emotional closeness, both when first entered and in the final step ($\text{Beta} = .34$, $pr = .38$, $p < .01$). As can be seen, all associations were positive: more contact was associated with higher levels of relational solidarity.

In summary, *RQ1* asked about the variance in GP-GC relational solidarity uniquely accounted for by the communication accommodation variables. We found that CAT variables were good predictors, accounting for a mean of 46% of the variance in GP-GC relational solidarity. The second research question asked which specific communicative and demographic variables predicted relational solidarity. The findings indicated that most demographic variables were not significant predictors; however, grandchild sex was associated with perceptions of GP-GC relational solidarity. Granddaughters had less positive

evaluations of GP–GC relationships than grandsons in terms of communication satisfaction and emotional closeness. In terms of communication dimensions, for grandchildren, the *grandchild accommodation involvement* dimension was a significant predictor of GP–GC communication satisfaction and emotional closeness. For grandparents, the *grandparent accommodation involvement* variable was a very strong predictor of all three measurements of GP–GC relational solidarity. *RQ3* asked whether contact frequency predicted levels of Taiwanese GP–GC relational solidarity. The regression analyses showed that contact frequency had a significant positive association with GP–GC relational solidarity for both grandchildren (liking and emotional closeness) and grandparents (emotional closeness).

Discussion

The current study investigated the roles of demographic and communicative factors in predicting the strength of Taiwanese GP–GC relationships. This section discusses the primary findings of this study from the perspective of CAT as well as in terms of important cultural influences in inter-generational relationships in Taiwan. Statistical issues, limitations of the study, and future research are also addressed.

Demographic variables and GP–GC relational solidarity

Grandparents' age and relational lineage did not emerge as significant predictors of GP–GC relational solidarity. This result is consistent with Harwood's (2000a) findings, but not with most previous research in the West. In the current study, the majority of the respondents chose the paternal side as targets suggesting the underlying importance of lineage (66% for grandchildren, 80% for grandparents). However, lineage was not a significant factor in predicting GP–GC solidarity, as one would anticipate from the concept of male preference. This finding may be explained by the coexistence of traditional and modern values in Taiwan (Yang, 1992, 1996; see introduction). The traditional parental supporting network may not be restricted to sons only. For example, Hsu, Lew-Ting, and Wu (2001) examined the changes in attitudes toward supporting parents (e.g., living arrangements). The participants supported the idea of 'parents-supported-by-son,' but the percentage of 'supported-by-any-children' or even 'not living together' was also found to be increasing gradually among older people. We may infer that grandchildren may have more frequent opportunities to spend time with their maternal grandparents than previous generations. Lineage priority may be less emphasized. This explanation requires further examination in a sample with more balanced proportions of paternal and maternal targets, probably in a sample in which respondents were not permitted to 'choose' the target for the questionnaire.

Grandchildren's sex did emerge as a significant predictor in grandchildren's reports. That is, granddaughters reported less communication satisfaction and less emotional closeness with their grandparents than grandsons did. Two plausible explanations are offered here. First, despite the change

in parental support arrangements, the 'idea' of son preference may have an impact on the younger generation's feelings – granddaughters may feel distant from their grandparents because they are not perceived to be as important as sons or grandsons who will continue the family name and have familial obligations to care for the older generations. This male preference can be seen or observed in ritual performances (e.g., females are not allowed to host family ceremonies such as funerals or ancestor worship), language use (e.g., 'getting a brick' for a baby girl, and 'getting jade' for a baby boy). Therefore, granddaughters may not have as many opportunities as grandsons to cultivate meaningful relationships with their grandparents, and they may tend to be less emotionally attached to their grandparents. Second, because of different socialization practices, women in general tend to be emotionally sensitive to the quality of relationships or tend to desire more emotional support than men (Aries, 1996; Kirtley & Weaver, 1999). These gender norms/traits appear to be stable across the East and West (Offer, Ostrov, Howard, & Atkinson, 1988; J. E. Williams & Best, 1990, cited in Gibbons, 2000; Xu & Burleson, 2001). The granddaughters' lower satisfaction with GP–GC relationships in the current study may be because they demanded or expected a greater degree of interpersonal closeness and involvement from the GP–GC relationship than did grandsons. Further examination is needed to investigate cultural influences on gender roles in intergenerational communication.

Consistent with previous studies (Brussoni & Boon, 1998), contact frequency had a positive influence on aspects of GP–GC relational solidarity such as liking and emotional closeness. However, it was not a significant predictor of communication satisfaction for either party. Contact frequency alone does not necessarily lead to satisfying conversations, but it can create opportunities for GP and GC to become acquainted and close. As noted by Cherlin and Furstenberg (1986), degree of influences (e.g., contexts of GP–GC contacts, depth of conversations) in combination with contact frequency determine the GP–GC relationship type and hence communication satisfaction, for example.

Communication accommodation theory and culture

According to Harwood's (2000a) findings, it was the perceptions of the level of 'the other party's accommodation' that contributed the most to perceived GP–GC relational solidarity, whether from the grandchild's or grandparent's perspective (see Tables 5 and 6) – A. Williams and Giles (1996) also noted a general tendency in the West for people to hold their conversational partners responsible for communication success. Contrary to those findings, the results of the current study suggested that in Taiwan the participants' *own* accommodation behavior contributed the most in predicting solidarity – indeed only in one analysis did the others' level of accommodation predict significant unique variance. The zero-order correlations tell a similar story, with own accommodation providing the highest zero-order correlations with a criterion for both the grandchildren and the grandparents, and one of the lowest correlations occurring for a relationship between a criterion and the

other's accommodation (*perceived grandchild accommodation* was correlated only .18 with grandparent's liking of their grandchildren).

This effect may be partially accounted for by the notion of filial piety, which states that young people are expected to respect and obey older people. Hence, it is not surprising that Taiwanese grandchildren perceived themselves as primarily responsible for GP–GC relational solidarity. However, filial piety norms do not explain why the same pattern emerged in the grandparents' evaluations. Given the superior status of older people in Chinese societies, one might expect Chinese older people to demand that younger people accommodate their communication needs. A further cultural construct may provide some explanation for this finding. Interpersonal relationships in Chinese culture are deeply influenced by other-oriented self-construal and strong identification with in-group members. Chinese culture is commonly categorized as collectivist (individuals are interdependent with, rather than independent of, each other: Gudykunst & Matsumoto, 1996; Yum, 1988). As part of this, the culture defines fairly rigidly which elements in a particular relational network are to be treated as in-groups versus out-groups (Gallois et al., 1996; Gao, 1996), and hence the individuals to whom one is willing to accommodate. Perceptions of the participant's *own* accommodation behavior reflects this other-oriented cultural construct for the purpose of in-group harmony. Family is one of the most fundamental in-groups in Chinese contexts. Thus, because grandchildren are seen as innermost in-group members (Chang, 1999), and because it is important to maintain group harmony within family contexts (other-oriented self-construal), Taiwanese grandparents may be willing to accommodate their grandchildren's communication needs. Perhaps grandparents are inclined to de-emphasize the customary intergenerational communication desire for age status differences, and instead defer to the family norm of in-group accommodation, especially given that the types of accommodative behaviors examined here do not contradict respect for grandparents' age status. Comparative studies are needed to determine whether self-accommodation retains its power as a predictor in other collectivist settings.

One caveat is warranted here. We are not suggesting that partner's accommodation is unimportant in the Taiwanese context. As can be seen from Tables 3 and 4, most of the accommodation variables were significantly associated with the solidarity measures in bivariate analyses. The regression analyses simply illustrate the relative power of certain variables when they are pitted against one another. Overall, the results demonstrated that CAT variables were good predictors of GP–GC relational solidarity in a non-U.S. cultural context. The communicative dimensions alone accounted for a mean of 46% of the variance in the criterion measures when demographic variables were controlled. Self-accommodation was the strongest predictor for both grandchildren and grandparents' evaluations, with few other accommodation dimensions explaining significant unique variance in the criterion measures. Problematic accommodation behaviors (over-accommodation/under-accommodation) only emerged as significant

predictors of one relational solidarity measure. We speculated that the participants may be reluctant to admit having trouble communicating with each other (e.g., 'I have to bite my tongue'; 'My grandparent negatively stereotypes me as a young person') given their close family relationship. Any unpleasant experience with their grandparent/grandchild might be treated as an aberrant or exceptional event, not a typical pattern of communication to be reported on a questionnaire. Of course, it is also possible that the lifetime of experience in the GP-GC relationship results in intergenerational communication that is genuinely easier and less prone to negative accommodation behaviors.

Limitations

First, we acknowledge that our survey instrument was driven by a Western conceptualization of GP-GC communication accommodation. Therefore, it is possible that the items are not able to capture culturally specific characteristics of Taiwanese GP-GC relationships. For example, grandchild 'over-accommodation' conveys a disrespectful tone of voice in the West (suggesting incompetence in the older adults). In the East, however, this may be interpreted in a different manner. Because the norm of deference to old people is still emphasized, the tone of voice, especially to family elderly, is more likely to be respectful with carefully chosen words. Hence, *perceived over-accommodation* in the sense it is used in the current study (in the grandparents' evaluations) may have been less likely to emerge as a significant predictor. However, the scale as a whole has been used in several cross-cultural studies (Cai et al., 1998; A. Williams et al., 1997) and yielded sensible results. The current study provides further support for its cross-cultural utility. That said, we would not advocate limiting examination of this relationship to the types of accommodation examined in the current study. Ethnographic and qualitative work in the Taiwanese context might reveal other interesting dimensions.

Second, we acknowledge translation issues in this study. We had some difficulty finding appropriate translations for concepts of emotional closeness and communication satisfaction because they are to some extent Western ideas. However, reliability values for the communication satisfaction items, and the correlations between the criterion measures suggest some level of validity for these measures. Third, over 70% of the grandchild participants were female. Although the surveys were collected from five different universities, most of the participants were majoring in social science and nursing, which traditionally have more females enrolled. Given the cultural difference in preference for males, it is important for future research to include more males (who might be more satisfied with the GP-GC relationship). We acknowledge that this imbalance may have impaired our ability to detect sex differences in certain variables and hence our interpretations of sex differences should be understood with caution. That said, we do not suspect sex differences in the correlations between variables that were the key area of interest in the current study.

Fourth, the current study did not assign the participants a specific

grandparent/grandchild when responding to the survey. Therefore, many participants may have chosen a grandparent or grandchild who was closer to them as the target. Thus, the data may be biased toward a fairly positive picture of GP–GC relationships. This issue resonates with the fact that problematic accommodative behaviors generally did not emerge as significant predictors of GP–GC relational solidarity. Family lineage is another variable that was not specified when the data were collected. Without a balanced sample that can represent different GP–GC relationships (e.g., dissatisfied and satisfied; close and distant; maternal and paternal), our ability to generalize is limited.

Future directions

Filial piety defines an asymmetrical relationship between older and younger people. When this concept is measured in terms of communication satisfaction, which stresses mutual contribution to conversations, it is plausible that assessments of ‘dissatisfaction’ are a reflection of the asymmetry that is inherent in filial piety. Gallois et al. (1996) stated that, ‘despite its importance in intergenerational relationships, filial piety hasn’t been conceptualized very clearly or operationalized very well for research purposes’ (p. 195). Their study showed that Asian students endorsed the practical aspect of filial piety (e.g., financial support, look after older people), whereas Western students tended to endorse values related to communication and contact. Even within East Asian cultures, the elements of filial piety may be stressed and prioritized differently in different areas. Therefore, intergenerational communication operates from very different scripts. A better understanding of how filial piety is conceptualized in communicative behavior is desired in order to appropriately frame the tone of intergenerational relationships and related research in East Asia. The initial step has been taken with qualitative research conducted in China (Zhang & Hummert, 2001), and we would encourage more qualitative and quantitative studies to enhance our knowledge of filial piety.

Future studies should also continue to examine in-/out-group differences (i.e., family/nonfamily, young/old) in GP–GC relationships. Pacific Rim studies suggest that people evaluate family elders more positively than nonfamily elders (e.g., Ng et al., 1997). Young people may perceive nonfamily older people as very distant out-group members (i.e., in terms of family and age) for whom they reserve nothing but respectful feelings. Young people may feel less desire to maintain relationships with such individuals and may interpret their behavior negatively. However, different rules may be employed with GP–GC relationships because grandparents are viewed as in-group members within family systems. As family elders are perceived as more supportive and nurturing than nonfamily elders, young people may be more inclined to seek ways to improve those relationships or avoid confrontation. Future studies can focus on these questions: Does family group membership override age differences in terms of accommodation choices? Which factors influence grandparents/grandchildren to perceive their interaction as an intergroup interaction (i.e. based on age differences)

or an intragroup interaction (i.e., based on a common in-group identity as family members – Gaertner & Dovidio, 2000)? Do older people evaluate family and age group memberships differently from younger people? The extent to which age and family intersect in identity and relational negotiations is a fertile area for research (Harwood & Lin, 2000). Knowledge regarding these questions can be advanced by continuing research on intergenerational stereotyping processes. Stereotypes of older and younger adults have already been examined in Taiwan (Giles et al., 2001), China (Zhang, Hummert, & Garstka, in press) and cross-culturally around the Pacific Rim (Harwood et al., 2001). These findings provide a basis for future investigation of Taiwanese adults' perceptions of age stereotypes in relation to GP–GC communication.

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