
Young Adults' Intergenerational Communication Schemas in Taiwan and the USA

Mei-Chen Lin

Kent State University, Kent, Ohio

Jake Harwood

University of Arizona, Tucson

Mary Lee Hummert

University of Kansas, Lawrence

The present research systematically examines cognitive representations of stereotypes of old age and young adults' and older adults' perceptions of their own communication accommodative behaviors, emotions, and communication satisfaction when a particular Intergenerational Communication Schema is activated. Taiwanese respondents show both congruent and incongruent patterns of responding: Some schemas yield consistently positive or negative responses across dependent variables, whereas others yield mixed and apparently inconsistent patterns. Respondents from the USA show that a helping orientation, when it is associated with different schemas (positive, very sympathetic, or negative) may result in different overall evaluations of the intergenerational conversation experience. Results are discussed in relation to the Communication Predicament of Aging Model and Chinese cultural values of intergenerational communication. Limitations are acknowledged and future studies are suggested.

Keywords: *intergenerational communication; older adults; schema; stereotypes; aging.*

As populations have aged around the globe, research on intergenerational communication has flourished (see Harwood, 2007, for review). Scholars have produced much research on the determinants and consequences of intergenerational communication (e.g., Coupland, Coupland, & Giles, 1989; Giles, Fox, & Smith, 1993). This research contributes to our understanding of old age in modern times and emphasizes how intergenerational dynamics influence interpersonal, family, health, and organizational communication.

The present study takes a cognitive and cultural perspective on intergenerational communication, examining younger people's cognitive schemas of intergenerational

Authors' Note: This research was supported by the National Institute of Health/National Institute on Aging Grant AG16352 to the third author. The authors wish to thank the two anonymous reviewers for their insightful suggestions to the revision of this article. Please address correspondence to Mei-Chen Lin, P.O. Box 5190, School of Communication Studies, Kent State University, Kent, OH 44242-0001; e-mail: mclin@kent.edu.

communication. As Fiske and Taylor (1991) stated, a schema is “a cognitive structure that represents knowledge about a concept or type of stimulus, including attributes and the relations among those attributes” (p. 98). Schemas are cultural or social products developed through numerous—and in many cases, routine—interactions (Fussell & Krauss, 1992). They offer a culturally grounded guide for a person’s behaviors, and they influence attributions for events (Fiske & Taylor, 1991). Communication schemas are cognitive representations of communicative events, including notions about the interlocutor, the emotions experienced, specific communicative behaviors, and overall evaluations of the interaction (Harwood, McKee, & Lin, 2000). Such schemas influence interactions and provide a framework within which to understand interpersonal dynamics. This study examines intergenerational communication schemas (ICSSs) in Taiwan and the USA with the goal of explicating their precise content and understanding the ways in which expectations for intergenerational contact differ across these cultural contexts.

Stereotypes, Schemas, and Intergenerational Communication

A fundamental quality of human cognition is our tendency to categorize people, objects, or events into groups based on their characteristics (Cantor, Mischel, & Schwartz, 1982). When people are categorized, stereotypes based on social group memberships may result (person perception schemas; Ashmore & Del Boca, 1981; Hamilton, 1981). The Communication Predicament of Aging Model (CPA) has been a central theoretical framework in research on intergenerational communication (Ryan, Giles, Bartolucci, & Henwood, 1986). This model suggests that salient aging characteristics (e.g., chronological age, physical cues, and context) activate stereotypes of older people. These stereotypes may cause inappropriate communication (e.g., patronizing speech based on a stereotype of elder cognitive impairment), and that inappropriate communication leads to negative outcomes for both parties. Specifically, younger people will be dissatisfied with the communication and not seek out additional intergenerational contact; older people may experience unfulfilling social interaction and suffer a loss of personal control and potentially negative health consequences (e.g., Langer & Rodin, 1976; Levy, 1996).

The CPA model emphasizes the role of stereotypes in activating the negative communication cycle. Hummert, Garstka, Shaner, and Strahm (1994) identified multiple positive and negative stereotypes of old age shared across different age groups (also see Brewer, Dull, & Lui, 1981; Brewer & Lui, 1984). Along with others, Hummert et al. (1994) suggested that stereotypes, like other schemas, are loosely organized in a hierarchical fashion with the label *older adults* as the superordinate category subsuming multiple more specific subcategories. Subsequent research has demonstrated links between specific stereotypes and impressions of older people, beliefs about communicating with older people, and actual communication directed to older targets

(Harwood & Williams, 1996; Hummert, 1994; Hummert, Shaner, Garstka, & Henry, 1998; Ryan, 1992).

ICSs

The CPA model and Hummert et al.'s (1994) work treat stereotype traits as the primary cognitive variable driving intergenerational dynamics. The current research, as noted earlier, focuses on communication schemas. Our communication schema approach stems from two research perspectives. First, Cantor et al. (1982) suggest that our social knowledge about the world and people is most accessible as person-in-situation knowledge structures. An implication of this argument is that social knowledge is stored by the compound of types of people in specific contexts. Cantor et al. demonstrate that richer cognitive representations, including information in addition to traits, function more effectively in influencing behaviors. Second, Carlston's (1994) Associated Systems Theory describes how social knowledge is structured as cognitive representations that are composed of a variety of information, such as category information, traits, and behavioral and affective responses. Carlston suggests that the use of these cognitive representations is easier and more efficient than representations based on a single type of information such as traits.

These two perspectives were the basis for Harwood's (1998) study of ICSs. Harwood's study yielded six ICSs (helping, learning, gerontophobic, gerontophilic, pity, and polite) representing different sets of expectations about conversations with an older lady whose trait characteristics were manipulated. For instance, the learning ICS included references to older adults' wisdom and experience (traits) as well as descriptions of what the young people in the study believed that they might learn from older people and some of the communication behaviors that might occur (e.g., storytelling). This schema elicited reports of positive affect and high levels of communication satisfaction. A communication schema approach was also adopted to understand other types of interpersonal interaction. For instance, Hajek and Giles (2005) uncovered heterosexuals' communication schemas with gay men. Their study informed us the ways in which social identity (i.e., sex preference) operates to influence heterosexuals' construction of conversations with gay men.

Harwood et al. (2000) extended this research by examining younger and older people's ICSs and understanding the hierarchical structure of these schematic representations. Methodologically, this was accomplished using in-depth interviews that were extensively coded to develop descriptions of conversations. Those descriptions were then sorted by other participants to understand structural interrelatedness of different types of conversations (schemas). Due to the focus of the current study, only the ICSs that emerged from young people's responses are reviewed here. Three hierarchically organized levels of schemas emerged from hierarchical cluster analysis: Level 1 (two clusters)—positive, negative; Level 2 (five clusters)—positive and close relationships, positive and respectful, negative and sympathy, negative and no connection,

negative and hostile; and Level 3 (eight clusters)—overwhelmingly positive interactions, positive and desire to help, positive and respectful, neutral, negative and sympathy, negative and no connection, no connection but desire to help, and negative and hostile ICSs. Descriptions of these eight schemas are in Table 1.

Lin, Zhang, and Harwood (2004) replicated Harwood et al.'s (2000) study in Taiwan, an East Asian country deeply rooted in the Chinese cultural heritage, where respecting old age has traditionally defined the nature of intergenerational relationships (Ho, 1994). Five ICSs were identified: mutually satisfying, helping, mixed feelings, small talk, and mutually dissatisfying (again, see Table 1). Taiwanese young respondents expressed an ambivalent feeling about interacting with older people (i.e., they felt sorry for older adults but respected their age). When compared with the USA ICSs in Harwood et al.'s (2000) study, Taiwanese respondents had a smaller repertoire of ICSs, less extreme ICSs (both positive and negative), and fewer levels of abstraction. Lin et al. (2004) argued that, rather than the participants' cognitive complexity, the cultural value of filial piety in Chinese culture constrained permissible behavior as a result of authority and power granted to older people: Under a prescriptive norm of power imbalance, "interaction styles are fairly firmly and unambiguously established, and variation tends to be smaller given the limits set on highly positive and highly negative interaction styles" (p. 336). Lin et al.'s study extended the usefulness of an ICS approach in understanding intergenerational communication in different cultural settings. This work provided evidence that different cultures share some forms of ICSs and yet vary in terms of others. In other words, some ICSs may be universally shared across cultures, whereas other ICSs may be associated with certain cultures due to particular cultural values on aging and intergenerational communication.

Traditionally, U.S. and Chinese cultures differ significantly in filial piety, hierarchical power within the family, and interpersonal bondage (Chinese Culture Connection, 1987; Streib, 1987). Investigation on age stereotypes and intergenerational communication accommodation behaviors also showed differences cross-culturally (e.g., Giles, Harwood, Pierson, Clément, & Fox, 1998; Harwood, 2000; Harwood & Williams, 1996; Lin & Harwood, 2003). Comparing two cultures warrant theoretical values, because it can illuminate the broad cultural values (filial piety, age norms, hierarchical power) influencing local communication practices within families (intergenerational communication). The USA and Taiwan are good examples, because they differ substantially on those dimensions and can provide meaningful understanding of intergenerational communication in the East and the West.

Both Harwood et al. (2000) and Lin et al. (2004) demonstrated that studying representations of ICSs offers a more comprehensive outlook on how young people think about intergenerational communication than a plain trait-based approach. From the theoretical basis of the CPA model, ICSs provide an alternate way of conceptualizing the expectations with which younger people enter an intergenerational interaction. We argue that younger people have a set of expectations for emotions, communication satisfaction, specific behaviors, as well as traits of the older adult, and that those sets

Table 1
Intergenerational Communication Schemas from Lin
et al. (2004) and Harwood et al. (2000)

Taiwan

1. *Mutually satisfying conversation.* You show interest in conversing with the older person. You respect the older person's experiences in life and believe that you can learn from them. You do not indicate the need to make too much adaptation in conversation manners to show proper respect. The notion of generation gap is not mentioned frequently.

2. *Helping conversation.* You feel somewhat sympathetic toward the older person and feel that your conversations would make the older person feel happier. You need to be very polite and careful with your manners and to make certain topic adaptations in the conversation. The perceived generation gap is very large in which the notion, "older people live in the past" is mentioned in some cases. You think that this older person is mildly *laodao* (demanding).

3. *Mixed feelings conversation.* You strongly feel that this older person loves his or her company, and you also feel a strong need to be very polite or respectful. You feel somewhat intimidated; however, this older person is not very *laodao*. The older person has a tendency to complain or disclose unpleasant life experiences in the conversation. Overall, you are not particularly enthusiastic about the conversation but also feel satisfied with the conversation.

4. *Small talk or disinterested conversation.* You are indifferent toward or distant from the conversation. The level of your communication satisfaction is low. You treat the conversation as simply a daily occurrence (e.g., small talk) and make minimum effort in terms of your time or attention to the conversation. This older person, on the other hand, seems to enjoy the conversation. This older person is not very bitter though. There is not much you can say in terms of your feelings about the conversation or the older target.

5. *Mutually dissatisfying conversation.* You try to avoid or show little interest in maintaining such conversations. You strongly feel restraint in the conversation, feel intimidated, and feel the need to be polite. To you, this older person is both stubborn, meddling, and also *laodao*. The older person has a tendency to correct your behavior and extends such negative comments to young people in general. The conversation is very unpleasant and dissatisfying for both you and the older person.

USA

1. *Overwhelmingly positive interaction ICS.* You feel very warm and very connected to this older person. This older person seems to be very friendly, loving, and caring. You think that you can learn something (e.g., about family, comparisons of the present and past, or historical events) from this older adult.

2. *Positive and helping ICS.* You feel warm and connected to this older person. This older person seems to be friendly, loving, and caring. You think that you can learn something (e.g., about family, comparisons of the present and past, or historical events) from this older adult. At the same time, you want to help this older person in some way such as entertaining him or her or keeping him or her company.

3. *Positive and respectful ICS.* You have a general positive feeling about and respect for this older person. However, maybe because of the age difference you perceive between you and this person, you also feel that it is a bit difficult to find common ground in the conversation. You have strong feelings of restraint or being obliged to be polite to this older person as a result of the age difference.

(continued)

Table 1 (continued)

USA
4. <i>Neutral and distant ICS.</i> You have both positive and negative feelings about this older person. You have a high level of respect for him or her and feel restraint and an obligation to be polite to this person. At the same time, you feel bored and even want to leave the conversation.
5. <i>Sympathy and helping ICS.</i> This older person seems to be ill, lonely, or disabled. You feel very sympathetic toward this older person and want to help him or her in some way to get him or her out of the bad mindset. At the same time, you feel restrained and obligated to be polite in the conversation.
6. <i>No connection ICS.</i> You have quite negative feelings about this older person. In the conversation, he or she expresses some hostility or negative attitude toward you. At the same time, you still want to help him or her and be polite, although you do not enjoy this interaction experience.
7. <i>No connection and helping ICS.</i> You do not feel any connection with this older person and have some negative feelings about him or her. You feel very bored and really want to leave this conversation. But at the same time, you still want to help this person a little by keeping him or her company or just making this person feel good about himself or herself.
8. <i>Negative and hostile ICS.</i> This older person seems to be mad for some reason. In the conversation, he or she expresses hostility or anger and displays negative attitudes toward you. Also, this older person is prejudiced against young people in general or other groups (e.g., racial or homosexual). You really want to leave the conversation.

of expectations come somewhat prepackaged as a cognitive schema. A good example is found in Chen and King's (2002) study. They asked the participants to list traits of a typical 70-year-old woman and imagine a conversation with her. Communication satisfaction was measured, and the results showed that positive stereotypes led to higher level communication satisfaction, whereas neutral or negative stereotypes led to lower level of communication satisfaction. Chen and King's study supports the idea that the ICSs (i.e., imagined conversation) functioned to influence communication expectations.

Based on the ICSs identified in Harwood et al. (2000) and Lin et al. (2004), in this article we attempt a more systematic examination of ICS content. As noted above, these schemas emerged from previous studies through interviews and cluster analyses. Interviews permit in-depth and somewhat free-flowing accounts of ICSs, and cluster analyses identify meaningful types of schemas based on these accounts. However, these ICSs do not permit fine-grained measurement of specific content features. The current study attempted more detailed measurement to specify which cognitive, behavioral, or perceptual component(s) may play a central role in differentiating one ICS from another, as well as provide clearer delineation of the schemas for future research on this topic.

Four primary dimensions were adopted to delineate the schemas. First, we focused on stereotype traits, given the centrality of such traits to previous research and theory in this area. Second, we focused on perceptions of communication behaviors. These

behaviors were derived from previous work on intergenerational communication using communication accommodation theory (CAT; Shepard, Giles, & Le Poire, 2001). This theoretical perspective has informed a vast array of work on intergenerational communication, and measures have been developed that tap important dimensions of intergenerational interaction across cultures (e.g., Noels, Giles, Gallois, & Ng, 2001; Williams & Giles, 1996). Third, we examined emotions. Although affect has not always been at the center of research in this area, it is receiving increasing attention as an important element in intergenerational relations (and more broadly, intergroup relations; Paolini, Hewstone, Voci, Harwood, & Cairns, 2006). Finally, we included evaluations of communication satisfaction (Hecht, 1978). Satisfaction is one of the most global evaluative dimensions examined in this area, and consideration of communication satisfaction has been common in previous intercultural research (Lin & Harwood, 2003). Communication satisfaction is crucial in determining desire for future interaction, among other important outcomes (e.g., Barker & Giles, 2003, Ling, 2002; Ryan et al., 1986). Thus, our research question was to understand how Taiwanese and American young people's ICSs link with their perceptions of stereotypical traits of older people, communication satisfaction, communication accommodation, and emotions as experienced in intergenerational interaction.

It should be noted that the American and Taiwanese ICSs are uncovered assuming an emic approach; therefore, they are culturally grounded schemas. Our attempt in this study is to demonstrate the various configurations of ICS contents prompted by these culturally sensitive schemas in their own merits. Using the same four dimensions across U.S. and Taiwanese contexts permits us to discuss the contents of these ICSs across the same components. By having two cultures in one study, it illustrates the advantages and appropriateness of an emic approach but at the same time allows for some degree of comparison in terms of overall configurations of these ICSs. Many of the existing studies on intergenerational communication took an etic approach (e.g., Williams et al., 1997). Although this approach encourages statistical comparisons, it may overlook cultural equivalency of the measures and treat cultural values as a post hoc explanation. The current study came from an emic approach incorporating cultural values up front and lined up two cultures so that the assumption of culturally oriented ICSs could be established more clearly than having only one culture in the study. A number of stereotype trait-based studies already provided empirical evidence to establish certain relationships between a single stereotype and other variables (e.g., communication behaviors; Hummert & Shaner, 1994). However, the current study is interested in uncovering associations among diverse variables rather than having a singular emphasis on the effects of trait representation. No previous research has systematically examined ICSs from this perspective, so we simply propose two research questions:

Research Question 1: How are the various cognitive and communicative components of intergenerational communication associated together when a particular Taiwanese ICS is evoked?

Research Question 2: How are the various cognitive and communicative components of intergenerational communication associated together when a particular U.S. ICS is evoked?

Study 1: Taiwan

Method: Participants and Procedures

Two hundred college students (83 males, 117 females, $M age = 22.79$, $SD = 2.13$) were recruited from a university in northern Taiwan. Participants were first asked to read a description of a conversation scenario between an older and younger person. They were then instructed to imagine themselves having a conversation with an older person like the one described and to form a mental picture of this conversation. Participants were randomly assigned to one of five questionnaires, each of which was defined by an ICS type—the conversation descriptions were varied to reflect different ICSs from Lin et al.'s (2004) study.

Method: Materials

The five scenario descriptions are shown in Table 1. Key characteristics from Lin et al.'s (2004) research were incorporated into the descriptions. The ICS descriptions were developed in English and then translated into Mandarin and back-translated to check accuracy. The same translation method was used for questionnaire items. Two pilot studies were conducted to test reliability of measurements ($N = 60$). Items were dropped or replaced based on this pilot work. Four categories of dependent variable were included in the study: (a) stereotype traits of the older adult, (b) young adults' perceptions of self and other communication accommodation behavior, (c) young adults' emotions during the conversation, and (d) young adults' communication satisfaction (see Table 2 for reliabilities of each in the main study). All items were measured using a 7-point scale.

Stereotype traits of the older adult. Twenty-six stereotype traits were selected and categorized into two positive (perfect grandparent and golden ager) and two negative (authoritarianism and despondent) dimensions. Selection of traits and categorization into types was based on Hummert et al. (1994) and Zhang, Hummert, and Garstka (2002), who studied stereotypes of aging in the USA and China, respectively. The authoritarian dimension resembles Hummert et al.'s (1994) shrew stereotype, with one exception. Face consciousness, a unique Chinese age trait that emerged from Zhang et al. (2002) was included and thus the dimension was relabeled to reflect the difference from the original stereotype. Face consciousness may be parallel to the notion of face in Brown and Levinson's (1987) politeness theory. Face is an individual's social image projecting in interpersonal contexts (Ho, 1976; Ting-Toomey, 1988).

Table 2
Items and Reliabilities for Dependent Variables (Study 1: Taiwan)

Dimensions or Items	α
Perfect grandparent: wise, understanding, supportive, loving, generous, mellow	.83
Golden ager: sociable, active, capable, independent, knowledgeable, experienced	.73
Authoritarian: meddling, demanding, stubborn, complaining, nagging, biased, bitter, face-conscious	.73
Despondent: incompetent, sad, frustrated, lonely, slow-thinking, and afraid	.86
Reluctance: I would want to leave, I would have to bite my tongue, I would not act like myself, I would look for ways to end the conversation, I wouldn't know what to say, I would share personal thoughts and feelings (reverse-coded).	.87
Age-related accommodation: I would show respect, I would speak slower than normal, I would not say what I think.	.54
Older authoritarianism: He or she would talk down to me, would make angry complaints, would patronize me, would complain about his or her life, would show affection to me (reverse-coded).	.76
Older underaccommodation.: He or she would complain about his or her health problems, would talk about issues related to his or her health, would talk about things from the past too much.	.68
Positive emotions: happy, satisfied, encouraged, proud, respected	.84
Negative emotions: angry, frustrated, annoyed, disappointed	.83
Satisfaction: I would like to have another conversation like this one, I would have rather done something else than talked with this person, I would be very satisfied with the conversation, This person expressed a lot of interests in what I had to say, I would be interested in talking to this person if I met him or her.	.85

Interpersonal relationships are largely regulated by concerns for face-giving and face-losing, both for the self and others (Gudykunst & Kim, 2003). In Chinese culture, face encompasses many cultural meanings depending on the context and the relationship between interlocutors. In the present study, the term *face consciousness (Ai-Mien-Tzu)* denotes someone who cares extensively about his or her public image and consequently tends to be overly sensitive to others' behaviors towards him or her. Thus, face consciousness is mostly understood as a negative trait; in Chinese culture, it is associated with older adults.

Perceptions of self and other communication accommodation behavior. Principles of communication accommodation theory illuminate links between stereotypes of older adults, communication processes, and negative outcomes for older adults (Bonnesen & Hummert, 2002; Ryan et al., 1986). Items developed by Williams et al. (1997) and Harwood (2000) to capture accommodation phenomena in intergenerational communication were adopted in this study. Some dimensions that were reliable in the pilot study were not reliable in the main study. Thus, two exploratory factor analyses were conducted to define dimensions underlying the items. Twelve items from perceptions of self accommodation behavior and 11 items from perceptions of

other accommodation behavior were analyzed separately using unweighted least squares factor analysis. Varimax rotation yielded two interpretable factors for self-accommodation behavior, which accounted for 58.95% of the item variance, and two factors for other's accommodation behavior, which accounted for 58.52% of the item variance (see Table 2). Double-loaded items were dropped from these factors.

Reliability tests were conducted for these factors. For perceptions of self communication accommodation behavior, only one dimension was reliable and was termed *reluctance*. It assessed young adults' feelings of restraint in the conversation or their tendency to avoid such an encounter, similar to that found in other cross-cultural studies on intergenerational communication (Giles, Liang, Noels, & McCann, 2001; Noels et al., 2001). For perceptions of other communication accommodation behavior, both factors were reliable: One is a dimension assessing older adults' authoritarian communication—their tendency to act as authority figures. The dimension of perceived older adults' underaccommodation measured older adults' tendency to discuss health-related issues and engage in excessive reminiscence. Within communication accommodation theory, underaccommodation occurs when interlocutors pay insufficient attention to their partner's needs or when they engage in egocentric behavior.

Young people's emotions during the conversation. Participants were asked to rate the emotions they would experience in this imaginary conversation on a 9-item scale. Emotions fell into two general affect categories—positive and negative emotions, as in previous studies on intergenerational communication (Harwood, 2000; Ryan, Hamilton, & Kwong See, 1994).

Young people's communication satisfaction. Five items from Hecht's (1978) interpersonal communication satisfaction inventory were used.

Results

MANOVA and ANOVA tests were conducted to examine the effects of the ICSs on the dependent variables. For domains involving multiple variables (stereotype traits, accommodation, emotions), an initial MANOVA was followed by individual ANOVAs with Bonferroni-controlled alpha and then by Tukey post hoc tests. For communication satisfaction, an ANOVA followed by Tukey tests was used (See Table 3 for details of all ANOVA results and means).

Stereotype traits of the older adult. The MANOVA revealed a significant effect of ICS type on stereotyping of the older adult, Wilks's $\Lambda = .55$, $F(16, 587) = 7.81$, $p < .001$, $\eta^2 = .14$. Individual ANOVAs were significant for all stereotype dimensions. Tukey tests revealed a general pattern whereby the mutually satisfying schema scored significantly higher than the other four ICSs on the positive stereotype traits. The

Table 3
Means (Standard Deviations) and ANOVAs for Dependent Variables Across Intergenerational Communication Schema Types (Study 1: Taiwan)

Intergenerational Communication Schemas or Trait Variables	Mutually Satisfying	Helping	Mixed Feelings	Small Talk	Mutually dissatisfying	F	η^2	p
Perfect grandparent	5.10 _a (1.03)	3.86 _{bc} (1.14)	4.26 _b (0.86)	4.18 _b (1.06)	3.30 _c (1.04)	16.15	.25	.00
Golden ager	5.52 _a (0.96)	4.28 _b (0.95)	4.70 _b (0.85)	4.32 _b (0.83)	4.10 _b (0.99)	15.15	.24	.00
Authoritarian	3.36 _c (1.26)	4.64 _{ab} (1.04)	4.02 _c (1.20)	3.90 _{bc} (1.00)	5.38 _a (0.87)	20.36	.30	.00
Despondent	2.65 _b (1.06)	4.16 _a (1.03)	3.51 _{ab} (1.07)	3.75 _a (0.97)	4.07 _a (1.17)	12.88	.21	.00
Reluctance	3.58 _b (0.79)	3.65 _{ab} (0.42)	3.48 _b (0.52)	3.86 _b (0.62)	3.92 _a (0.57)	3.81	.07	.01
Authoritarianism	3.60 _b (0.98)	4.24 _{ab} (0.97)	4.25 _{ab} (0.97)	3.94 _b (0.97)	4.95 _a (0.81)	11.19	.19	.00
Underaccommodation	4.53 (1.21)	4.88 (1.18)	4.82 (1.25)	4.90 (1.25)	5.02 (1.30)	0.85	.02	.50
Positive emotions	4.76 _a (1.15)	4.30 _a (1.14)	4.72 _a (0.81)	3.98 _{ab} (1.10)	3.38 _b (1.60)	11.11	.19	.00
Negative emotions	2.61 _b (1.09)	2.97 _b (1.21)	2.73 _b (1.14)	2.79 _b (1.16)	3.87 _a (1.19)	7.66	.14	.00
Satisfaction	5.35 _a (1.07)	4.66 _b (1.20)	4.94 _a (1.00)	4.10 _{bc} (1.22)	3.61 _c (1.27)	14.98	.24	.00

Note: Means that do not share subscripts across columns differ significantly; $df = 4, 195$ for all analyses; alpha levels vary for different dependent variables due to Bonferroni correction (traits: .0125; communication accommodation: .017; emotions: .025; satisfaction: .05).

helping and mutually dissatisfying schemas generally scored higher than the other ICSs on the negative stereotype traits. Positive stereotype traits were associated with a mutually satisfying ICS, whereas negative traits were associated with helping and mutually dissatisfying conversations.

Young people's perceptions of self and other accommodation behavior. MANOVA yielded overall significant differences among the five ICSs on the communication accommodation dimensions, Wilks's $\Lambda = .75$, $F(12, 510) = 4.86$, $p < .001$, $\eta^2 = .09$. ANOVA tests indicated no difference between ICSs on underaccommodation but significant differences on the other two accommodation variables. Post hoc pairwise comparisons did not yield any single significant difference between ICSs on reluctance. That is, young people, regardless of the ICS assigned, expressed a moderate level of distancing from or attempting to finish the conversation with the older adult. For the authoritarianism dimension, the mutually dissatisfying ICS scored the highest, and the mutually satisfying and small talk scored the lowest. There was no difference between mixed feelings and helping schemas and any of the others.

Young people's emotions during the conversations. MANOVA yielded an overall significant difference, Wilks's $\Lambda = .76$, $F(8, 388) = 7.23$, $p < .001$, $\eta^2 = .13$, and ANOVAs for both emotion dimensions were significant. The post hoc analysis showed that respondents reported the lowest level of positive emotions with the mutually dissatisfying ICS and more positive emotions with the mutually satisfying, helping, and mixed feelings ICSs. The most negative emotion scores were with the mutually dissatisfying ICS.

Communication satisfaction. The ANOVA was significant, and the post hoc test indicated that those assigned to the mutually satisfying and mixed feelings ICSs reported highest levels of satisfaction, whereas those in the mutually dissatisfying condition reported least communication satisfaction.

Discussion

In large part, the evaluations are as might be expected for the two extreme ICSs—the mutually satisfying condition is rated most positively on most variables, and the mutually dissatisfying condition is rated as least satisfying. The primary departure from this pattern occurs for the reluctance and underaccommodation variables, each of which yielded no differences.

Two major findings are discussed here. First, some of the ICSs reveal a relatively consistent pattern across the dependent variables. Small talk and the mutually dissatisfying schemas both revealed congruent patterns of results in that negative traits were associated with negative feelings and negative communication behaviors. In contrast,

the mutually satisfying, helping, and mixed feelings schemas revealed unexpected and apparently inconsistent patterns. These schemas were similar in three aspects associated with a similar behavioral tendency; to avoid conversations, the participants also evaluated the conversations to be satisfactory and had positive emotions and a few negative emotions. But they differed in terms of stereotype traits of older people.

The obligations of politeness and respect prescribed by filial piety may explain the incongruent or congruent patterns (Lin et al., 2004). In a hierarchical society, carefully crafted conversation manners are required interpersonal skills to sustain appropriate role relationships and preserve harmony. Taiwanese young people were taught from a very early age that they should “talk less and listen more” (as expressed in a Chinese saying, “children only have ears; no mouths”) and that they should not talk back or challenge authority. An asymmetrical role relationship and a deferential speech style go hand in hand in intergenerational relations (Young, 1994). Young people today, however, desire to have autonomy to choose their own lifestyles and opinions about the society (Yang, 1996). In other words, as ascribed role relationships still largely define possible behavioral options over young people’s private liking, their behavioral choices are relatively limited, even though they may perceive older persons as having positive and/or negative traits, and they may have somewhat negative emotions when the conversation and/or older person is dissatisfying (Zhang, Harwood, & Hummert, 2005; Zhang & Hummert, 2001).

Second, the overall outlook of the helping schema might be positive and encouraging. However, this helping orientation seems to work under an assumption of a somewhat negative image of aging (i.e., see stereotype traits) that reflects the essence of the CPA model. The CPA model focuses on the detrimental consequences for older adults, but it does not discuss the motivation or young people’s satisfaction level in this process. It is possible that a helping schema is one of the main cognitive structures operating in young people’s minds. Young people’s helping orientation becomes a double-edged sword in that young people gain satisfaction by helping older adults and at the same time reinforce their existing negative stereotypes, which in turns encourage recurrence of the same schematic representation. If that is the case, then, whether a helping schema should be perceived as a positive intergenerational communication becomes questionable. A similar concern was echoed in Baltes, Neumann, and Zank’s (1994) study on long-term care institutions. They found that without proper intervention, young staff had a tendency to support behaviors that increase older people’s dependence level (e.g., brushing teeth or shaving for them).

Study 2: USA

Method: Participants and Procedures

College students from a Midwestern university participated ($N = 320$; 192 females, 128 males; M age = 21.20; $SD = 1.71$). This study followed the same procedure as

the Taiwan study except that participants were randomly assigned a description of a conversation with an older person based on the eight U.S. ICSs identified in Harwood et al.'s (2000) study rather than the Taiwanese ICSs. Forty participants were assigned to each ICS (see Table 1). Participants completed a survey evaluating their perceptions of the older target's traits, communicative behaviors, emotions, and satisfaction. A pilot study was conducted to test reliabilities of measurements ($N = 83$).

Method: Materials

The ICS scenario descriptions were generated using key characteristics of the ICSs identified in Harwood et al.'s (2000) study (see Table 1). The purpose of these descriptions was to prompt participants' cognitive schemas. The questionnaire items used in the U.S. study were the same as those used in the Taiwan study except for two differences. First, the stereotype of shrew consisted of only seven traits—face consciousness was excluded in the U.S. study, because this trait was not part of the stereotype traits that emerged in Hummert et al.'s (1994) study. Second, the communication accommodation items were categorized differently in the U.S. study. The ones used in the Taiwan study were a result of factor analysis (see the section on Taiwan study for explanation). In the U.S. study, the scales were reliable in configurations matching their previous use in the literature, and hence the previously used scales were retained (e.g., Harwood, 2000). Table 4 shows items and reliabilities for all dependent variables. Analysis plan was the same as for the Taiwan data.

Results

Stereotype traits of the older adult. The MANOVA revealed a significant effect of ICS type on perceived traits of the older adults, Wilks's $\Lambda = .29$, $F(28, 1115) = 16.61$, $p < .001$, $\eta^2 = .27$. Individual ANOVAs were significant for all stereotype dimensions. Tukey post hoc revealed that the eight ICSs could be grouped into three broader categories, positive (overwhelmingly positive, positive and helping, respectful and polite), neutral (neutral and distant, sympathy and helping) and negative (no connection, no connection and helping, negative and hostile). For the two positive ICSs—overwhelmingly positive and positive and helping—despite the latter suggesting young adults' helping tendency (i.e., to cheer up the older person or perceive older adults as in need of company and/or assistance), older adults in these two ICSs were evaluated the same—they were high on positive traits (perfect grandparent, golden ager) and low on negative traits (despondent and shrew). Similarly, two negative ICSs—no connection, negative and hostile—were almost the same on these four stereotype traits. It was interesting that the older adult in the no connection and helping ICS (another negative ICS) shared several characteristics with ICSs in the neutral category and was

Table 4
Items (Where Different from Study 1) and Reliabilities for Dependent
Variables (Study 2: USA)

Dimensions or Items	a
Positive stereotypes: perfect grandparent, golden ager	.90, .77
Negative stereotypes: authoritarianism, despondent	.89, .82
<i>YA accommodation</i> : I would want to leave ^a , look for ways to end the conversations, share personal thoughts and feelings, I wouldn't know what to say.	.74
<i>YA reluctant accommodation</i> : I would avoid talking about certain topics, not always say what I think, have to bite my tongue, not be able to act like myself.	.67
<i>YA role relations</i> : I would show respect for his or her age, feel respectful for his or her knowledge and wisdom.	.76
<i>YA interpretive strategies</i> : I would speak louder, speak slower than normal.	.72
<i>OA accommodation</i> : He or she would compliment me, show respect for me, show affection to me.	.81
<i>OA overaccommodation</i> : He or she would talk down to me, patronize me, stereotype me as a young person.	.80
<i>OA underaccommodation</i> : He or she would complain about his or her life circumstances, complain about his or her health, talk about his or her health, make angry complaints, talk about things from the past too much.	.81
Positive emotions	.88
Negative emotions	.87
<i>YA communication satisfaction</i> : I would like to have another conversation like this one, I would have rather done something else than talked with this person, I would be very satisfied with the conversation, This person expressed a lot of interests in what I had to say, I would be interested in talking to this person if I met him or her.	.92

Note: OA = older adult; YA = younger adult.

a. indicates items that were reverse-coded.

perceived more positively than the other two negative ICSs on the perfect grandparent traits and the shrew traits.

Young people's perceptions of self and other accommodation behavior. The dependent variables included four categories on the self and three categories on other accommodation behaviors. MANOVA results revealed significant difference, Wilks's $\Lambda = .38$, $F(49, 1557) = 6.74$, $p < .001$, $\eta^2 = .13$. ANOVAs indicated significance for six variables. The ANOVA on the interpretive strategies dimension was not significant. In general, the findings suggested an overlap between the positive and neutral ICSs on most of these CAT dimensions. Most of the statistical differences were yielded from the comparisons between negative ICSs and other types of ICSs. One noteworthy result was that the two extreme ICSs—overwhelmingly positive and negative and hostile—were not significantly different from each other on the reluctant accommodation.

Table 5
Analysis of Variance for Dependent Variables Across Intergenerational
Communication Schema Types (Study 2: USA)

Source	<i>F</i>	η^2	<i>p</i>
Stereotype traits of OA			
Perfect grandparent	51.79	.54	.00
Golden ager	21.99	.33	.00
Authoritarianism	36.92	.45	.00
Despondent	24.87	.36	.00
Comm. accommodation behavior			
YA accommodation	18.22	.29	.00
YA reluctant accommodation	7.57	.15	.00
YA role relations	16.43	.27	.00
YA interpretive strategies	2.82	.06	.007
OA accommodation	32.34	.42	.00
OA overaccommodation	20.14	.31	.00
OA underaccommodation	17.24	.28	.00
Emotions of YA			
Positive	37.37	.46	.00
Negative	45.87	.51	.00
Communication Satisfaction of YA	47.67	.52	.00

Note: OA = older adult; YA = younger adult; *df* = 7, 312 for all analyses. Alpha levels vary for different dependent variables due to Bonferroni correction (traits: .0125; communication accommodation: .007; emotions: .025; satisfaction: .05).

Young people's emotions during the conversations. MANOVA yielded an overall significant difference among the eight ICSs on the two emotions—positive and negative—Wilks's $\Lambda = .44$, $F(14, 622) = 22.26$, $p < .001$, $\eta^2 = .33$. ANOVA results were significant for both emotion dimensions. The pairwise comparison results suggested two points. First, these ICSs had greater impact on the range of negative emotion evaluations than the positive emotion evaluations did. Second, the three ICSs that contained the helping element showed variations in these emotions. The sympathy and helping and positive and helping ICSs were similar on positive emotions and more positive than the no connection and helping ICS. On the other hand, these three ICSs were distinctly different from each other on negative emotions ascending from positive and helping, sympathy and helping, to no connection and helping.

Young people's communication satisfaction. An ANOVA test was significant, $F(7, 312) = 47.67$, $p < .001$, $\eta^2 = .52$. Post hoc results showed that the levels of communication satisfaction descended from positive, neutral, and to negative ICSs, respectively. As shown above, the sympathy and helping ICS was not much different from the positive ICSs.

Discussion

Although the eight schemas identified from Harwood et al.'s (2000) study were rather specific, the profile of each ICS in terms of the cognitive and communicative variables measured in the current study overlapped in various ways. The findings of this study, however, allow us to isolate particular components that perhaps determine the similarities and differences across ICS configurations. A component is perhaps overlooked in certain ICSs while in others it plays a part in influencing the overall tone of that particular ICS. For example, all three ICSs, positive and helping, sympathy and helping, no connection and helping, have a helping orientation as a prominent feature, but they did not necessarily result in the same schematic representation. The positive and helping and no connection and helping ICSs captured very different communication expectations, especially in terms of young people's emotions, satisfaction, and perceptions of older people's traits. These results suggested that these three helping schemas, regardless of the similar component they share, should not be treated as the same schematic composition.

Diagnostic effects might be at work here (Skowronski & Carlston, 1987). A diagnostic effect occurs when people form impression of a person or an event based on one particular cue among all those available (e.g., a behavior). That cue becomes diagnostic. Extreme behaviors are said to be more diagnostic than moderate behaviors and hence serve as diagnostic cues for overall impression formation or social judgment. Negativity bias may occur when an extremely negative behavior is performed by a person who is categorized in a negative light, whereas positivity bias would occur when the target is considered in a positive way. For example, a person who has a criminal record may be considered a suspect if a store in his or her neighborhood was robbed. Extremely negative attributes or behavior contributes to morality-related evaluations, whereas extremely positive attributes or behavior influence ability-related evaluations. For example, the biggest difference between the sympathy and helping and no connection and helping ICSs was the apparent negativity toward the older adult in the latter. This negativity shaped other orientations to the older adult in this schema, thus differentiating it from the sympathy and helping schema.

Furthermore, the variation between these schemas was mediated by other stronger combinations of factors such as an overall positive feeling about the conversation. For example, the effect of a helping component in the positive and helping schema might be overlooked. However, in an overall negative ICS, a helping orientation might function to smooth out its detrimental effect. For example, the no connection and helping schema did present some positive evaluations (e.g., higher on perfect grandparent traits, lower on shrew traits) compared to the other two negative schemas of no connection and negative and hostile.

Table 6
Means (Standard Deviations) for Dependent Variables Across ICS Types (Study 2: USA)

	Overwhelmingly Positive	Positive and Helping	Respectful and Polite	Neutral and Distant	Sympathetic and Helping	No Connection	No Connection and Helping	Negative and Hostile
Perfect grandparent	5.56 _a (0.78)	5.61 _{ab} (0.60)	5.17 _{abc} (0.83)	4.44 _{cd} (1.12)	4.75 _{bcd} (0.71)	3.18 _d (1.00)	4.25 _d (0.86)	2.91 _e (1.09)
Golden ager	5.27 _a (0.75)	5.27 _a (0.75)	5.13 _a (0.73)	4.73 _{ab} (0.81)	4.20 _{bc} (0.72)	3.83 _{bc} (0.84)	4.16 _{bc} (0.89)	4.09 _{bc} (0.82)
Shrew	2.74 _c (1.00)	2.71 _c (1.03)	3.48 _{bc} (1.14)	4.11 _b (0.98)	4.03 _b (0.93)	5.14 _d (1.17)	4.15 _d (1.10)	5.40 _d (0.84)
Despondent	2.68 _d (1.04)	2.87 _d (1.07)	3.10 _{cd} (1.06)	3.44 _{bcd} (1.03)	4.75 _a (0.71)	4.33 _{ab} (0.97)	3.91 _{abc} (1.07)	4.33 _{ab} (0.74)
Self-accommodation	5.19 _{ab} (1.02)	5.50 _a (0.89)	4.60 _{abcd} (1.04)	4.13 _{bcd} (1.20)	4.91 _{abc} (1.01)	3.44 _d (1.24)	3.91 _{cd} (1.02)	3.80 _{cd} (1.15)
Reluctant accommodation	3.71 _{ab} (1.06)	3.68 _b (1.19)	4.32 _{ab} (1.10)	4.50 _{ab} (1.13)	3.63 _b (1.14)	5.03 _d (1.22)	4.43 _{ab} (1.09)	4.55 _{ab} (1.41)
Role relations	6.36 _{ab} (0.63)	6.43 _a (0.62)	6.29 _{ab} (0.59)	6.00 _{ab} (0.91)	6.30 _{ab} (0.70)	5.35 _{bc} (1.17)	5.89 _{ab} (0.75)	4.79 _c (1.47)
Older adult accommodation	5.35 _{ab} (0.98)	5.43 _a (0.87)	5.07 _{ab} (0.78)	4.47 _{ab} (1.31)	4.81 _{ab} (1.11)	3.16 _{cd} (1.31)	4.18 _{bc} (1.08)	2.85 _d (1.07)
Older adult overaccommodation	2.73 _b (0.99)	2.48 _b (1.04)	3.22 _{bc} (1.29)	3.71 _{ab} (1.23)	3.13 _b (1.27)	4.84 _d (1.39)	3.81 _{ab} (1.24)	4.84 _d (1.49)
Older adult underaccommodation	2.97 _b (0.88)	2.75 _b (0.94)	3.65 _{ab} (1.25)	3.89 _{ab} (1.08)	3.92 _{ab} (1.20)	4.73 _d (1.34)	4.51 _d (1.08)	4.62 _d (1.15)
Positive	5.58 _a (0.88)	5.56 _a (0.76)	4.84 _{ab} (1.09)	4.44 _{bc} (0.87)	4.93 _{ab} (1.03)	3.58 _{cd} (1.06)	3.87 _{cd} (0.84)	3.02 _d (1.09)
Negative	1.99 _{cd} (0.86)	1.89 _{cd} (0.73)	2.84 _{bc} (1.07)	3.34 _{cd} (1.13)	2.85 _{cd} (1.11)	4.66 _{ab} (1.18)	3.80 _{bc} (1.05)	4.88 _b (1.14)
Communication satisfaction	5.65 _a (0.91)	5.59 _a (.98)	4.76 _b (1.18)	3.85 _c (1.23)	4.78 _b (1.18)	2.61 _d (1.28)	3.29 _d (.93)	2.70 _{cd} (1.19)

Note: Means that do not share subscripts across columns differ significantly

General Discussion

A systematic measure of cognitive and communicative variables of ICS expands the stage of stereotyped expectations in the CPA model in the following three ways. First, in contrast to beliefs about communication discussed in Hummert et al. (1998), which focuses mainly on older adults' communication needs and/or competency, ICS expectations refer to perceptions of both interlocutors. ICS communication expectations provide behavioral intentions that potentially link to the CPA model's modified speech behavior more directly than trait-based stereotypes. This extension may help us make more accurate predictions of how ICSs influence actual intergenerational communication. Second, according to the CPA model, contextual factors play a role in modifying people's speech behavior. The current project suggests that different types of contextual factors influence intergenerational communication processes at different stages, whether it is before the activation of schemas (Hummert, Garstka, Ryan, & Bonnesen, 2004), after a schema is activated (as discussed in the ICSs), or before actual behavior is implemented (as discussed in the CPA model).

Third, the findings of the present study encourage us to rethink the CPA model in terms of not simply considering how negative stereotyped expectations reinforce negative stereotypes of older adults but also considering how these ICS patterns result in stereotypes of intergenerational communication, which in turn reinforce and/or change stereotypes of older people. For example, as discussed in the Taiwan study, a helping schema suggests positive communication satisfaction and positive emotions; however, this positive communication expectancy may be actually based on negative stereotypes of the older person (e.g., lonely and pitiful), and the results of intergenerational interactions are likely to strengthen negative stereotypes of old age. Harwood's (1998) study has already discussed the "disempowerment of older adults" (p. 19) that comes with a helping ICS. In some cases, older adults do appreciate and enjoy being helped by young adults. This study provided more evidence that a helping ICS, for instance, might be a prominent stereotype of intergenerational communication held by both young and older people. Researchers should expand the explanatory power of the CPA model that can delineate the complexity of intergenerational communication.

A fundamental assumption of a schema approach is that schemas should predict actual communicative behaviors and outcomes better than a trait approach. This assumption remains to be tested. However, these cognitive representations offer some benefits to researchers. Hajek and Giles' (2005) study on communication schemas of homosexuals described communication schemas as "stereotypes of conversation" (p. 163). An ICS may represent a habitual assembly of various components of stereotypes of intergenerational conversation. It may not accurately predict every scenario, but it does reflect a general tendency and an initial frame of reference. Individual differences, such as age identity and cognitive complexity and self-stereotyping, and contextual factors, such as setting and interlocutor relationship, all play a role in modifying

a schema. Examinations of these factors will enhance our understanding of the predictive power of ICSs. Moreover, this may provide further concrete evidence of the mechanism of cultural norms in regulating intergenerational communication. Knowledge resulting from this will help add to the comprehensiveness of the CPA model.

Another limitation may be the equivocal meaning of the helping orientation in the Taiwanese ICSs and the U.S. ICSs. From a young person's perspective, a helping orientation is an attempt to do things to make older adults happy (Harwood, 1998). It is evident that helping is a prominent and commonly shared experience for many young people across cultures (Harwood, 1998; Lin et al., 2004). We argue that the influence of helping varies across ICSs depending on the overall negativity or positivity of an ICS (see the discussion of the diagnostic effects). Consequently, although the meaning of *helping* is the same, its influence on an ICS differs. Future studies should seek empirical evidence to verify the diagnostic effects of *helping* in various ICSs.

Future work should also investigate more universal dimensions on which to make comparisons. There is value in engaging schemas in an emic fashion—uncovering detailed, locally relevant patterns in these cognitive organizations. However, for schemas to gain traction as a useful analytic and theoretical device, uncovering certain core schemas with currency beyond specific situations is essential. Alternatively, researchers need to understand more about the systematic ways in which schema content varies across situations (e.g., whether sociostructural variables such as status or demographic strength influence the repertoire of available schemas).

Communication schemas have helped to inform our understanding of intergroup conversations in settings organized by age (as in the current study) and sexuality (Hajek & Giles, 2005). Similar efforts could be made to examine communication between physicians and patients, parents and teenage children, superiors and subordinates, or instructors and students. These intergroup schemas may share many similar characteristics such as learning or helping but also reveal unique schematic characteristics. Communication schemas should help scholars understand intergroup relations and interactions across contexts and may ultimately help in the development of interventions and training programs to improve intergroup contact.

References

- Ashmore, R. D., & Del Boca, F. K. (1981). Conceptual approaches to stereotypes and stereotyping. In D. L. Hamilton (Ed.), *Cognitive processes in stereotyping and intergroup behavior* (pp. 1-35). Hillsdale, NJ: Lawrence Erlbaum.
- Baltes, M. M., Neumann, E.-M., & Zank, S. (1994). Maintenance and rehabilitation of independence in old age: An intervention program for staff. *Psychology and Aging, 9*, 179-188.
- Barker, V., & Giles, H. (2003). Integrating the communicative predicament and enhancement of aging models: The case of Native Americans. *Health Communication, 15*, 255-276.
- Bonnesen, J. L., & Hummert, M. L. (2002). Painful self-disclosures of older adults in relation to aging stereotypes and perceived motivations. *Journal of Language and Social Psychology, 21*, 275-301.

- Brewer, M. B., Dull, V., & Lui, L. (1981). Perceptions of the elderly: Stereotypes as prototypes. *Journal of Personality and Social Psychology*, *41*, 656-670.
- Brewer, M. B., & Lui, L. (1984). Categorization of the elderly by the elderly. *Personality and Social Psychology Bulletin*, *10*, 585-595.
- Brown, P., & Levinson, S. C. (1987). *Politeness: Some universals in language usage*. Cambridge, UK: Cambridge University Press.
- Cantor, N., Mischel, W., & Schwartz, J. (1982). Social knowledge: Structure, content, use, and abuse. In A. H. Hastorf & A. M. Isen (Eds.), *Cognitive social psychology* (pp. 33-72). New York: Elsevier/North Holland.
- Carlston, D. E. (1994). Associated system theory: A systematic approach to cognitive representations of persons. In R. S. Wyer (Ed.), *Advances in social cognition*, Vol. 7, *Associated system theory: A systematic approach to cognitive representations of persons* (pp. 1-78). Hillsdale, NJ: Lawrence Erlbaum.
- Chen, Y., & King, B. E. (2002). Intra- and intergenerational communication satisfaction as a function of an individual's age and age stereotypes. *International Journal of Behavioral Development*, *26*, 562-570.
- Chinese Culture Connection. (1987). Chinese values and the search for culture-free dimensions of culture. *Journal of Cross-Cultural Psychology*, *16*, 107-131.
- Coupland, N., Coupland, J., & Giles, H. (1989). Telling age in later life: Identity and face implications. *Text*, *9*, 129-151.
- Fiske, S. T., & Taylor, S. E. (1991). *Social cognition* (2nd ed.). New York: McGraw-Hill.
- Fussell, S. R., & Krauss, R. M. (1992). Coordination of knowledge in communication: Effects of speakers' assumptions about what others know. *Journal of Personality and Social Psychology*, *62*, 378-391.
- Giles, H., Fox, S., & Smith, E. (1993). Patronizing the elderly: Intergenerational evaluations. *Research on Language and Social Interaction*, *26*, 129-149.
- Giles, H., Harwood, J., Pierson, H. D., Clément, R., & Fox, S. (1998). Stereotypes of the elderly and evaluations of patronizing speech: A cross-cultural foray. In R. K. Agnihotri, A. L., Khanna, & I. Sachdev (Eds.), *Social psychological study of language* (pp. 151-186). New Delhi, India: Sage.
- Giles, H., Liang, B., Noels, K. A., & McCann, R. M. (2001). Communicating across and within generations: Taiwanese, Chinese-Americans, and Euro-Americans perceptions of communication. *Journal of Asian Pacific Communication*, *11*, 161-179.
- Gudykunst, W. B., & Kim, Y. Y. (2003). *Communicating with strangers: An approach to intercultural communication* (4th ed.). New York: McGraw-Hill.
- Hajek, C., & Giles, H. (2005). Intergroup communication schemas: Cognitive representations of talk with gay men. *Language and Communication*, *25*, 161-181.
- Hamilton, D. L. (1981). *Cognitive processes in stereotyping and intergroup behavior*. Hillsdale, NJ: Lawrence Erlbaum.
- Harwood, J. (1998). Young adults' cognitive representations of intergenerational conversations. *Journal of Applied Communication Research*, *26*, 13-31.
- Harwood, J. (2000). Communicative predictors of solidarity in the grandparent-grandchild relationship. *Journal of Social and Personal Relationships*, *17*, 743-766.
- Harwood, J. (2007). *Understanding communication and aging*. Thousand Oaks, CA: Sage.
- Harwood, J., Giles, H., Ota, H., Pierson, H. D., Gallois, C., Ng, S.-H., et al. (1996). College students' trait ratings of three age groups around the Pacific Rim. *Journal of Cross-Cultural Gerontology*, *11*, 307-317.
- Harwood, J., McKee, J., & Lin, M.-C. (2000). Younger and older adults' schematic representations of intergenerational communication. *Communication Monographs*, *67*, 20-41.
- Harwood, J., & Williams, A. (1996). Expectations for communication with positive and negative subtypes of older adults. *International Journal of Aging and Human Development*, *47*, 11-33.
- Hecht, M. L. (1978). The conceptualization and measurement of interpersonal communication satisfaction. *Human Communication Research*, *4*, 253-264.
- Ho, D. (1976). On the concept of face. *American Journal of Sociology*, *81*, 867-884.

- Ho, D. Y. F. (1994). Filial piety: Authoritarian moralism and cognitive conversation in Chinese societies. *Genetic, Social and General Psychology Monographs, 120*, 347-365.
- Hummert, M. L. (1994). Stereotypes of the elderly and patronizing speech. In M. L. Hummert, J. M., Wiemann, & J. F. Nussbaum (Eds.), *Interpersonal communication in older adulthood: Interdisciplinary research* (pp. 162-184). Thousand Oaks, CA: Sage.
- Hummert, M. L., Garstka, T. A., Ryan, E. B., & Bonnesen, J. L. (2004). The role of age stereotypes in interpersonal communication. In J. F. Nussbaum & J. Coupland (Eds.), *Handbook of communication and aging research* (2nd ed.; pp. 91-115). Hillsdale, NJ: Lawrence Erlbaum.
- Hummert, M. L., Garstka, T. A., Shaner, J. L., & Strahm, S. (1994). Stereotypes of the elderly held by young, middle-aged, and elderly adults. *Journal of Gerontology: Psychological Sciences, 49*, 240-249.
- Hummert, M. L., & Shaner, J. L. (1994). Patronizing speech to the elderly as a function of stereotyping. *Communication Studies, 45*, 145-158.
- Hummert, M. L., Shaner, J. L., Garstka, T. A., & Henry, C. (1998). Communication with older adults: The influence of age stereotypes, context, and communicator age. *Human Communication Research, 25*, 124-151.
- Langer, E. J., & Rodin, J. (1976). The effects of choice and enhanced personal responsibility for the aged: A field experiment in an institutional setting. *Journal of Personality and Social Psychology, 34*, 191-198.
- Levy, B. (1996). Improving memory without awareness: Implicit self-stereotyping in old age. *Journal of Personality and Social Psychology, 71*, 1092-1107.
- Lin, M.-C., & Harwood, J. (2003). Accommodation predictors of grandparent-grandchild relational solidarity in Taiwan. *Journal of Social and Personal Relationships, 20*, 537-563.
- Lin, M.-C., Zhang, Y. B., & Harwood, J. (2004). Taiwanese young adults' intergenerational communication schemas. *Journal of Cross-Cultural Gerontology, 19*, 321-342.
- Ling, C. (2002). Perceptions of intercultural interaction and communication satisfaction: A study on initial encounters. *Communication Reports, 15*, 133-147.
- Noels, K., Giles, H., Gallois, C., & Ng, S. H. (2001). Intergenerational communication and psychological adjustment: A cross-cultural examination of Hong Kong and Australian adults. In M. L., Hummert & J. F. Nussbaum (Eds.), *Communication, aging, and health: Multidisciplinary perspective: Linking research and practice for successful aging* (pp. 249-278). Mahwah, NJ: Lawrence Erlbaum.
- Paolini, S., Hewstone, M., Voci, A., Harwood, J., & Cairns, E. (2006). Intergroup contact and the promotion of intergroup harmony: The influence of intergroup emotions. In R. Brown & D. Capozza (Eds.), *Social identities: Motivational, emotional, cultural influences* (pp. 209-238). Hove, UK: Psychology Press.
- Ryan, E. B. (1992). Beliefs about memory changes across the adult life span. *Journal of Gerontology: Psychological Sciences, 47*, 42-46.
- Ryan, E. B., Giles, H., Bartolucci, G., & Henwood, K. (1986). Psycholinguistic and social psychological components of communication by and with the elderly. *Language and Communication, 6*, 1-24.
- Ryan, E. B., Hamilton, J. M., & Kwong See, S. (1994). Patronizing the old: How do younger and older adults respond to baby talk in the nursing home? *International Journal of Aging and Human Development, 39*, 21-32.
- Shepard, C. A., Giles, H., & Le Poire, B. A. (2001). Communication accommodation theory. In W. P. Robinson, & H. Giles (Eds.), *The new handbook of language and social psychology* (pp. 33-56). Chichester, UK: Wiley.
- Skowronski, J. J., & Carlston, D. E. (1987). Social judgment and social memory: The role of cue diagnosticity in negativity, positivity, and extremity biases. *Journal of Personality and Social Psychology, 52*, 689-699.
- Streib, G. F. (1987). Old age in sociocultural context: China and the United States. *Journal of Aging Studies, 7*, 95-112.
- Ting-Toomey, S. (1988). Intercultural conflict styles: A face negotiation theory. In Y. Kim & W. Gudykunst (Eds.), *Theories in intercultural communication* (pp. 213- 235). Newbury, Park, CA: Sage.

- Williams, A., & Giles, H. (1996). Intergenerational conversations: Young adults' retrospective accounts. *Human Communication Research, 23*, 220-250.
- Williams, A., Ota, H., Giles, H., Pierson, H., Gallois, C., Ng, S. H., et al. (1997). Young people's beliefs about intergenerational communication: An initial cross-cultural comparison. *Communication Research, 24*, 370-393.
- Yang, K.-S. (1996). The psychological transformation of the Chinese people as a result of societal modernization. In M. H. Bond (Ed.), *The handbook of Chinese psychology* (pp. 75-97). New York: Oxford University Press.
- Young, L. W. L. (1994). *Crosstalk and culture in Sino-American communication*. Cambridge, UK: Cambridge University Press.
- Zhang, Y. B., Harwood, J., & Hummert, M. L. (2005). Perceptions of conflict management styles in Chinese intergenerational dyads. *Communication Monographs, 72*, 71-91.
- Zhang, Y. B., & Hummert, M. L. (2001). Harmonies and tensions in Chinese intergenerational relationships: Young and older adults' accounts. *Journal of Asian and Pacific Communication, 11*, 199-226.
- Zhang, Y. B., Hummert, M. L., & Garstka, T. (2002). Stereotype traits of older adults generated by young, middle-aged, and older Chinese participants. *The Hallym International Journal of Aging, 4*, 119-140.

Mei-Chen Lin (PhD, University of Kansas) is an assistant professor in the School of Communication Studies at Kent State University. Her research interests are older adults' age identity, older adults' use of internet, and intergenerational communication. Her recent publications have appeared in *Journal of Computer-Mediated Communication*, *Communication Research Reports*, and *Journal of Aging Studies*.

Jake Harwood (PhD, University of California–Santa Barbara) is a professor in the Department of Communication at the University of Arizona. He is author of *Understanding Communication and Aging* (2007, Sage) and coeditor of *Intergroup Communication: Multiple Perspectives* (Peter Lang, 2005). His recent publications have appeared in *Personality and Social Psychology Bulletin*, *Journal of Communication*, *Communication Monographs*, and *Human Communication Research*. He currently serves as the editor of *Human Communication Research*.

Mary Lee Hummert (PhD, University of Kansas) is vice provost for faculty development and professor of Communication Studies at the University of Kansas, where she has also served as associate vice provost for research and as graduate advisor for the interdisciplinary PhD program in gerontology. Her research interests are the social cognitive processes linking age stereotypes and communication, and her research has been supported with funding from the National Institute on Aging/National Institutes of Health.