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Conflict and Collaboration in Middle-Aged and Older Couples: I: Age Differences in Agency and Communion during Marital Interaction

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Abstract

Prior theory and research regarding age differences in marital interaction suggest that older couples display and experience more positivity and less negativity than middle-aged couples. However, studies of overt behavior in older couples are relatively rare and have emphasized disagreement, neglecting other important contexts for older couples such as collaboration during everyday problem solving. Further, the affiliation or communion dimension of social interaction (i.e., warmth vs. hostility) is commonly assessed, but not the control or agency dimension (e.g., dominance vs. submissiveness). The present study examined affect, cognitive appraisals, and overt behavior during disagreement (i.e., discussing a current conflict) and collaboration (i.e., planning errands) in 300 middle-aged and older married couples. Older couples reported less negative affect during disagreement and rated spouses as warmer than did middle-aged couples. However, these effects were eliminated when older couples' greater marital satisfaction was controlled. For observed behavior, older couples displayed little evidence of greater positivity and reduced negativity – especially women. During collaboration, older couples displayed a unique blend of warmth and control, suggesting a greater focus on emotional and social concerns during problem solving.

Keywords

Marital conflict; agency; communion; Interpersonal Circumplex; Structural Analysis of Social Behavior; collaboration; everyday problem solving; demand-withdrawal

Marriage is the central personal relationship for many adults, and it influences health and well-being across the lifespan (Kiecolt-Glaser & Newton, 2001). Importantly, marital processes differ with age (Gagnon, Hersen, Kabacoff, & Van Hasselt, 1999). Compared to

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younger couples, older couples report greater marital satisfaction and less conflict (Henry et al., 2007; Levenson, Carstensen, & Gottman, 1993; Rook et al., 2007). They also report less emotional distress (Levenson, Carstensen, & Gottman, 1994) and display less overt hostility and greater affection during disagreements (Carstensen, Gottman, & Levenson, 1995).

However, there are limitations in the support for this positive view of aging and marital quality. Compared to studies of subjective experiences during marital interaction and self-reports of marital quality, observational studies are rare. Further, most research examines the affiliation or communion dimension of marriage, which contrasts warmth and affection with hostility and quarrelsomeness. Yet, some models of aging and social processes also highlight the agency, control, or instrumental dimension of motivation and behavior (Blanchard-Fields, 2007; Labouvie-Vief, 1994; McAdams & de St. Aubin, 1992), and age differences in this aspect of marital interactions are relatively unexplored. Further, the focus on behavior during disagreement in prior studies neglects other contexts that are salient for older couples. To address these issues, the present study examined subjective and overt behavioral indications of agency and communion during marital disagreements and collaboration in everyday problem solving.

Age Differences in the Communion and Agency Dimensions of Marriage

Socioemotional Selectivity Theory (SST) (Carstensen, Isaacowitz, & Charles, 1999; Carstensen & Mikels, 2005) suggests that with a shortened time horizon, older adults emphasize positive aspects of their experience and activities, and reduce negative aspects, including those in marriage. Prior evidence that older couples display more positive - and less negative - behavior during disagreements supports this view (Carstensen et al., 1995), as do studies of self-reported marital quality (Gagnon et al., 1999). Yet, many more studies of aging and marriage examine reported marital quality than direct observations of couple behavior. Further, older couples report less distress in response to conflict, but do not necessarily experience conflict less often (Akiyama, Antonucci, Takahashi, & Langfahl, 2003; Birditt, Fingerman, & Almeida, 2005). Also, more than younger couples, older couples interpret spouses' behavior more positively than is warranted on the basis of observers' ratings (Story, et al., 2007). Hence, additional studies utilizing multi-method marital assessments including affect, cognitive appraisals, and observed behavior (Snyder, Heyman, & Haynes, 2005) are needed to determine if the greater positivity and reduced negativity predicted by SST is evident in what older couples actually do during marital interaction, or instead only in their reports of related subjective experiences.

Appropriately, tests of SST emphasize the affiliation or communion dimension of relationships, as its poles (i.e., warmth vs. hostility) correspond to the key positive and negative interpersonal outcomes. Yet, aging also involves changes in a second major dimension of psychosocial functioning – agency, control, or instrumental actions (Bakan, 1966). Aging poses challenges to aspects of agency, such as independence and achievement. However, older persons place increased importance on communion and less on agency in their goals and self-concepts (Diehl, Owen, & Youngblade, 2004; Labouvie-Vief, 1994). For example, older persons report less assertion and more conciliatory coping when dealing with interpersonal problems (Birditt et al., 2005; Sorkin & Rook, 2006), and they often blend

instrumental problem solving with efforts to minimize emotional distress and interpersonal conflict (Blanchard-Fields, 2007; Rook, Sorkin, & Zettel, 2004). To capture these processes in marital interactions, behavioral assessments must include various manifestations of agency (e.g., assertiveness, dominance) and communion (e.g., warmth, hostility), and their various combinations (e.g., criticism, cooperation).

Aging, Collaborative Problem Solving, and Marriage

Most studies of age differences in marital interaction examine disagreements. Such conflicts are important for older adults (Krause & Rook, 2003), but perhaps less so than for younger couples (Levensen et al., 1993). Further, other marital contexts become more salient with age, such as collaborative problem solving where spouses work together on everyday tasks (Baltes & Staudinger, 1996; Berg, Johnson, Meegan, & Strough, 2003). Couples of all ages collaborate, but it is more frequent and important in later adulthood as couples work together to compensate for declining abilities, prefer to work together, or simply spend more time together in retirement (Berg et al., 2006; Gould, Kurzman, & Dixon, 1994; Strough et al., 2003). Further, performance in everyday problem solving has implications for health and well-being in older adults (Allaire & Marsiske, 2002; Marsiske & Margrett, 2006; Weatherbee & Allaire, 2008).

Older couples may also approach collaboration differently, as they combine instrumental problem solving with efforts to minimize distress or interpersonal strain (Blanchard-Fields, 2007). Further, the outcome of collaboration in everyday problem solving is influenced by both the agency and communion dimensions of couple behavior (Berg, et al., 2003; Berg, et al., 2007). Hence, collaboration is an important context in which to examine subjective experiences and overt behavior of older couples, and such assessments should include a broad range of behavior reflecting affiliation and instrumental efforts in problem solving.

Interpersonal Theory as an Integrative Framework

The interpersonal perspective in personality, social, and clinical psychology (Horowitz et al., 2006; Kiesler, 1996; Wiggins, 1996) is well-suited for these questions regarding age and marital interaction. The related structural model of social behavior – the Interpersonal Circumplex (IPC) (Figure 1) - provides a valuable assessment framework. The main IPC dimensions - affiliation and control - correspond to the broader domains of communion and agency, respectively (Wiggins, 1991). As noted previously, research on aging and marriage has emphasized emotions and behavior (e.g., affection, warmth vs. hostility, anger) located along the affiliation dimension. Affiliation is unquestionably important in marital adjustment (Snyder et al., 2005), but the IPC makes clear that social behavior and relationship quality also vary along a second dimension. Dominance or control is an important but understudied aspect of marriage (Gray-Little & Burks, 1983), as feeling controlled by one's spouse and conflicts about control are associated with marital distress (Baucom et al., 1996a; 1996b; Ehrensaft et al., 1999).

Prior research on age and overt behavior during marital interaction reveals little about the control dimension, but some research suggests its importance. As noted previously, older persons report using less assertion and more conciliatory responses to cope with

interpersonal problems (Birditt et al., 2005). Hence, assessment of perceptions of spouse dominance and actual controlling behavior could further clarify age differences during disagreement. Collaboration also involves directiveness and asserting control (i.e., dominance) as well as cooperation (i.e., submission) (Berg et al., 2007), underscoring the relevance of the IPC for this marital context.

The Present Study

In the present study we attempted to a) replicate prior research on SST in which older couples both reported and displayed more positivity and less negativity during disagreement than middle-aged couples, and b) extend prior research by examining a second major dimension of interpersonal behavior – *control* – and a second marital context that is important for older couples – *collaboration*. Toward this end, we examined affective (i.e., anger, anxiety), cognitive (i.e., appraisals of spouse affiliation, dominance), and behavioral responses of middle-aged and older couples during disagreement and collaborative problem solving. We expected that older couples would report less negative affect and more positive appraisals of spouses during disagreement, and display more friendly and less hostile behavior. We also expected that compared to middle-aged couples, older couples would display less assertiveness and control during disagreement and be more likely to combine affiliation and control during collaboration.

Method

Participants

The Utah Health and Aging Study enrolled 300 middle-aged and older couples during 2001 – 2005. The protocol was approved by the University of Utah Institutional Review Board; all participants gave informed consent. Couples from the Salt Lake City metropolitan area were recruited through a polling firm, advertisements in newspapers and newsletters, and community programs (e.g., “elder fairs”). Screening criteria included: 1) at least one member between 40 and 50 years old (middle-aged group) or between 60 and 70 years old (older group), 2) no more than 10 year age difference between members, 3) no history of cardiovascular disease (CVD), and 4) not taking cardiovascular medications (i.e., beta-blockers, calcium-blockers, anti-anginals). The health requirements related to the larger study focus on cardiovascular health (Smith et al., 2007). Age requirements followed Carstensen et al. (1995). For 146 middle-aged couples, wives’ mean age was 43.9 (SD = 3.8, range = 32–54 years); husbands’ mean was 45.8 (SD = 4.0, range = 37–59). For 154 older couples, wives mean age was 62.2 (SD = 4.5, range = 50–71); husbands’ mean was 64.7 (SD = 4.3, range = 52–76). Length of marriage was shorter for middle-aged couples (18.4 years; SD = 6.2, range = 5 – 31) than older couples (36.4 years; SD = 10.2, range = 5 – 53), $F(1, 299) = 338.29, p < .001, \eta^2 = .53$. Median household income was \$50,000 – 75,000 per year. Additional demographic information is presented in Table 1.

Procedure

Couples were scheduled for an initial laboratory session, and two subsequent sessions (i.e., cognitive testing and ambulatory blood pressure testing; assessment of CVD risk factors and

coronary artery calcification). Couples received consent forms and questionnaires to be completed independently before the first session, including the Marital Adjustment Test (MAT) (Locke & Wallace, 1959). During the first session couples participated in a disagreement discussion and collaborative problem solving in a counter-balanced order. Couples sat facing each other at a table, separated by a partition. They completed a 10-minute baseline procedure described elsewhere (Smith et al., 2008), used to quantify cardiovascular responses. After both baselines, participants completed state affect questionnaires. The partition was then removed and they received instructions for either the disagreement or collaboration task. After the task, the partition was replaced and participants underwent a second baseline and then the second task.

Disagreement Task—Prior to the first session couples completed an Areas of Disagreement Questionnaire (Fincham, 1985; Margolin, Talovic, & Weinstein, 1983), where each spouse rated the extent of disagreement on 13 topics (e.g., household responsibilities, money, etc.). Topics that received the greatest combined rating were suggested for discussion. Participants were asked to select a topic with the instruction that, “it needs to be something that is currently an issue rather than something that has been resolved.” They were also informed that the topic needed to be an issue that, “you can discuss for the full time period with both of you contributing to the discussion, and both of you need to feel comfortable discussing it here.” Once the topic was selected, couples were further informed that, “we are not expecting you to solve the particular issue right now; you can think of this as an opportunity to work toward making progress on the issue.” Similar procedures have been widely used (cf. Fincham & Beach, 1999; Snyder, et al., 2005). Participants began with a 6-minute unstructured conversation about the topic. After this initial discussion, audio-taped instructions led them through a 6-minute section in which spouses alternated speaking for 1-minute intervals. Speaking order (i.e., husband versus wife) was counterbalanced across couples. The turn-taking portion was followed by another 3-minute unstructured conversation. The structured turn-taking was used to control effects of speaking on physiological measurements, as described elsewhere (Smith et al., 2008). Following the discussion, participants completed an affect measure, indicating how they felt during the task, and a questionnaire assessing perceptions of their partner’s behavior during the interaction.

Collaborative Problem Solving Task—In the collaboration task (Radziszewska & Rogoff, 1988), previously with middle-aged and older adults (Berg et al., 2003; Margrett & Marsiske, 2002), couples planned a route and schedule for errands. They received a map of a fictitious community with locations for errand stops, and were instructed to devise a plan for completing the errands and to discuss decisions regarding purchases at some stops. They were to complete 12 errands by the shortest route and in a designated time period. This task simulates activities that couples frequently report doing together in their everyday lives (Berg et al., 2003). The task had the same structure as the disagreement task: 6 minutes of unstructured discussion, 6 minutes of turn-taking, and 3 additional minutes of unstructured discussion. Immediately following this task, participants completed another set of affect and partner perception questionnaires.

Measures

State affect and perceptions of spouse behavior—A 12-item measure of state anxiety and anger was adapted from the State-Trait Personality Inventory (Spielberger, 1980). In previous uses and in the present study, both subscales were reliable (Cronbach's $\alpha > .80$); the scales are also sensitive to experimental manipulations of marital interaction valence (Nealey-Moore et al., 2007). After both tasks, participants rated their spouses' behavior using the Impact Message Inventory (IMI-C; Kiesler, Schmidt, & Wagner, 1997). This 32-item measure consists of four-item subscales corresponding to IPC octants (Figure 1). Scores for affiliation and control are created through weighted combinations of the eight subscales. Dominance and affiliation scales demonstrated acceptable internal consistency in this sample (Cronbach's alphas $> .75$). The IMI-C has the predicted circumplex structure, and the dimension scores and display expected patterns of convergent and discriminant validity (e.g., Schmidt, Wagner, & Kiesler, 1999) and sensitivity to manipulations of marital interaction tone (e.g., Nealey et al., 2007).

Behavioral coding—Videotaped interactions were coded using the Structural Analysis of Social Behavior (SASB; Benjamin, 1974; Benjamin, Rothweiler, & Critchfield, 2006). SASB is a refinement of the IPC. Both models include the affiliation dimension, but differ regarding the control dimension. In SASB, the opposite of exerting dominance over others is granting autonomy to them. The opposite of submitting to others is asserting one's own autonomy or independence. Hence, dominance and submissiveness are not opposite ends of one continuum in SASB as they are in the IPC; they are complementary behaviors located on separate dimensions. In SASB coding, a behavior is given a transitivity code (i.e., focus on self or other) and dimensional scores for interdependence (e.g. controlling vs. autonomy granting, or submissive vs. autonomy asserting, depending on the focus) and affiliation (friendly vs. hostile, regardless of focus) (see Florsheim & Benjamin, 2001 for details). In describing overt behavior, these three dimensions form two circumplex structures, rather than the single IPC. Transitivity is coded as transitive (i.e., actions done to, for, or about the other person) or intransitive (i.e., actions done to, for, or about the self in reference or reaction to the other). The other-focus versus self-focus (i.e., transitivity) distinction corresponds to the two separate circumplex structures. The second dimension, *affiliation*, describes the degree of warmth versus hostility, and forms the horizontal dimension of both the transitive and intransitive circumplex structures in SASB, as in the IPC. The third dimension of the SASB model, *interdependence*, describes the degree of inter-connection versus differentiation or autonomy in the behavior. For transitive actions, inter-connection involves expressions of control or dominance toward another person, whereas differentiation involves granting the other person autonomy. For intransitive actions, inter-connection involves submitting to the other person, whereas separation involves asserting one's own autonomy. Each of these actions (i.e., controlling another person versus granting them autonomy; submitting to another versus asserting one's own autonomy) can occur with either friendliness, hostility, or a neutral level of affiliation.

The SASB model is depicted in Figure 2. Labels in bold indicate transitive codes, whereas underlined labels refer to intransitive codes. For both the transitive and intransitive surfaces, there are eight codes, reflecting various blends of affiliation and inter-connection. Appendix

A contains example codes for both tasks. Codes are specified first by identifying the transitive/other-focus surface (i.e., 1) or the intransitive/self-focus surface (i.e., 2), and then by the specific behavior on that surface. Hence, code 1-1 refers to transitive autonomy (i.e., emancipating or granting autonomy to the spouse), whereas 2-1 refers to intransitive autonomy (i.e., separating, asserting, or granting autonomy to oneself). Code 1-6 refers to transitive hostile control (i.e., blaming, belittling or criticizing), whereas SASB code 2-6 refers to intransitive hostile submission (i.e., sulking, or complying but with resentment).

We used the SASB-Composite Observational Coding Scheme (SASB-COMP; Florsheim & Benjamin, 2001), in which frequencies for each code for husbands and wives were recorded separately for each minute of the initial 6-minute task period. Videotaped tasks were rated by two teams of coders who received a minimum of 75 hours of training in SASB coding and an additional 20 hours of training with SASB-COMP. All coders attained a criterion level of reliability with both the original SASB scheme (Cohen's weighted kappa > 0.70) and SASB-COMP (intraclass correlation > .60). Twenty percent of tapes for each task were randomly selected for reliability coding and coders were blind to which tapes were reliability coded. (To ensure consistency across coding teams, 20% of reliability tapes were coded by members of both teams.) The threshold for acceptable inter-coder agreement was alpha = .60. Task segments for which coders achieved less than alpha = .60 were consensus coded and consensus codes used for analyses. Average inter-rater reliability (Shrout & Fleiss, 1979) for wives was .95 (cooperative task) and .88 (disagreement task), and for husbands was .94 (cooperative) and .89 (disagreement). Task totals for each code were calculated. To control differences in overall frequency of behavior, scores for each task were converted to proportions. Proportions were standardized to produce similar ranges and variances. Cardiovascular responses were recorded, as reported in the companion paper but not discussed further here (see Smith et al., 2008).

Overview of Analyses

Mixed ANOVA was used for all analyses (SPSS version 14.0). To accommodate dependency between husbands and wives, Sex was a repeated factor (Kenny, 1995), as was Task (collaboration vs. disagreement); Age Group was a between subjects factor. For affect, task - baseline change scores were calculated. To follow-up significant interactions, mean comparisons used the appropriate ANOVA error term (Bernhardson, 1975). Effect sizes are reported as η^2 . For subjective responses to marital interactions, four dependent measures were analyzed: state anger and anxiety, and spouse ratings of affiliation and dominance.¹ Given a-priori predictions for these dependent measures, an unadjusted α of $p < .05$ was used. The multiple codes within SASB transitive (i.e., focus on the spouse) and intransitive (i.e., focus on the self, in response to the spouse) surfaces were treated as a repeated factor, as in profile analyses (Greenhouse & Geisser, 1959). In this approach, interactions of a factor (e.g., Task, Sex, Age) with the repeated factor for SASB codes indicates that the pattern of

¹Hierarchical linear modeling (HLM) is widely used to analyze data from couples (Campbell & Kashy; 2002; Raudenbush, Brennan, & Barnett, 1995), and could be used to test the nested sex and task effects in the present study, as well as the effects of age group and interactions among these factors. However, the mixed ANOVA approach is used because the current HLM procedures cannot accommodate the two nested factors and the multiple SASB codes concurrently, creating difficulties in managing the statistical tests for the individual SASB codes. Further, currently there is no readily available and widely-accepted method of quantifying effect sizes in this type of HLM analysis. Hence, although HLM are possible in the present study, the repeated ANOVA is preferable.

responses varies as a function of that factor. Individual SASB codes were then analyzed to explicate such interactions. To avoid ipsativity, transitive and intransitive codes were analyzed separately. This approach reduces Type I error rates by requiring significant interactions with the SASB code repeated factor as a prerequisite to analysis of individual codes. Pure hostile codes (1–7, 2–7) were rare and had zero or near-zero variability for some means; therefore, they were not included. Variations in denominator degrees of freedom reflect differing levels of missing data. Because couples were the unit of analysis, cases were missing if either member had missing values. For self-reported affect, appraisals of spouse behavior, and behavioral coding, 6.7%, 2.7%, and 6.7% of cases, respectively, were missing. Age groups did not differ in this regard.²

Results

Subjective Indications of Affect, Affiliation, and Control

Self-Reported Affect—Changes in anger and anxiety are presented in Figure 3. For anger, the 2 (Age Group) × 2 (Sex) × 2 (Task) mixed ANOVA indicated that participants reported more anger during disagreement (1.78, SE = .19) than collaboration (0.31, SE = .11), $F(1,277) = 52.96, p < .001, \eta^2 = .161$. Further, women reported more anger (1.30, SE = .16) than did men (0.79, SE = .13), $F(1,277) = 9.00, p < .005, \eta^2 = .031$. These effects were qualified by a Task × Age interaction, $F(1,277) = 5.84, p < .02, \eta^2 = .031$, and a Task × Sex interaction, $F(1,277) = 4.64, p < .04, \eta^2 = .016$. For the Task × Age interaction (see top panel of Figure 3), follow-up comparisons indicated that disagreement evoked more anger than collaboration for both middle-aged (2.08 vs. .11; SE = .28, .15) and older participants (1.48 vs. 0.50; SE = .27, .15), both $t(277) > 3.0, p < .01$, though more so for middle-aged than older couples. Middle-aged couples reported more anger during disagreement than older couples, $t(277) = 1.95, p < .05$, but not during collaboration, $t(277) = 1.26$. For the Task × Sex interaction, both men (1.35 vs. 0.22; SE = .21, .14) and women (2.21 vs. 0.39; SE = .25, .16) reported more anger during disagreement than collaboration, both $t(277) > 3.0, p < .01$. Men and women reported similar increases in anger during collaboration, but women reported more anger than men during disagreement, $t(277) = 3.86, p < .01$.

The three-way mixed ANOVA for anxiety (see bottom panel of Figure 3) indicated that participants reported more anxiety during disagreement (2.18, SE = .17) than collaboration (1.27, SE = .14), $F(1,277) = 21.26, p < .001, \eta^2 = .071$. In a significant Task × Age interaction, $F(1,277) = 4.54, p < .04, \eta^2 = .016$, disagreement evoked more anxiety than did collaboration for middle-aged couples (2.34 vs. 1.01; SE = .24, .20), $t(277) = 4.71, p < .001$, but not for older couples (2.02 vs. 1.53; SE = .23, .20), $t(277) = 1.75, p < .10$. Age groups did not differ in anxiety during either task. No other effects approached significance.

Overall, conflict evoked more negative affect – particularly anger – than collaboration, and women reported more anger during disagreement than did men. Older couples reported less anger than did middle-aged couples during disagreement. The three-way, Age X Sex X Task interaction did not approach significance for anger or anxiety. Hence, comparisons of

²Analysis of task order effects revealed some order main effects but no disordinal interactions or instances where effects reported here were significant for one order but not the other.

individual means in Figure 3 must be made cautiously. Yet, two effects are noteworthy. During disagreement, older husbands reported significantly less anxiety than did each of the other three groups. During collaboration, older wives reported more anxiety than did middle-aged wives.

Appraisals of Spouse Behavior—The 2 (Age) \times 2 (Sex) \times 2 (Task) mixed ANOVA of IMI-C ratings of spouse affiliation indicated that participants rated spouses as higher in affiliation during collaboration (3.89, SE = .07) than disagreement (3.09, SE = .11), $F(1, 289) = 86.38, p < .001, \eta^2 = .23$ (see Figure 4). Further, women rated spouses as less friendly (3.37, SE = .10) than did men (3.61, SE = .08), $F(1, 289) = 6.21, p < .02, \eta^2 = .021$. These effects were qualified by a Task \times Sex interaction, $F(1, 289) = 5.31, p < .03, \eta^2 = .018$. In follow-up comparisons, both men and women rated spouses as friendlier during collaboration than during disagreement, both $t(289) > 3.0, p < .01$. Further, men and women did not differ for collaboration (3.84 vs. 3.94; SE = .092, .081), but women rated their spouses as less friendly during disagreement (2.91, SE = .14) than did men (3.27, SE = .11), $t(289) > 4.0, p < .001$. Also, older participants rated spouses as friendlier overall (3.71, SE = .114) than did middle-aged participants (3.27, SE = .115), $F(1, 289) = 7.39, p < .01, \eta^2 = .025$.

In the mixed ANOVA of dominance ratings, participants rated spouses as more submissive (i.e., less controlling) during collaboration ($-.65, SE = .041$) than disagreement ($-.39, SE = .059$), $F(1, 289) = 24.17, p < .0001, \eta^2 = .077$. No other effects were significant. Hence, spouses rated each other as less friendly and more controlling during disagreement than collaboration. During disagreement women rated spouses as more hostile than did husbands. In both tasks, older participants rated their spouses as friendlier than did middle-aged participants.

Behavioral Coding of Overt Affiliation and Control during Tasks

To simplify presentation of the large number of behavioral findings, results are organized to address first those pertaining to simple task differences, then those referring to sex differences, and finally the primary differences involving age. As described above, these effects emerged from two overall analyses – a 2 (Age Group) \times 2 (Sex) \times 2 (Task) \times 7 (SASB code) mixed ANOVA for transitive behavior codes, and a similar ANOVA for intransitive behavior codes.

Task Differences—The 2 (Age Group) \times 2 (Sex) \times 2 (Task) \times 7 (SASB code) mixed ANOVA of standardized proportion scores for transitive behavior revealed a difference between tasks in profiles of SASB-coded behavior, $F(4.575, 1271.95) = 224.038, p < .001$, (Greenhouse-Geisser corrected) $\eta^2 = .446$. Means and effect sizes are presented in Panel A of Figure 5. Follow-up analyses indicated significant task differences for the following codes: affirming (1–2), $F(1, 279) = 262.37, p < .001$; active warmth or affection (1–3), $F(1, 279) = 18.84, p < .001$; warm control or leading (1–4), $F(1, 279) = 1412.14, p < .001$; neutral control (1–5), $F(1, 279) = 110.43, p < .001$; hostile control or belittling and blaming (1–6), $F(1, 279) = 88.06, p < .001$; and hostile separation or ignoring (1–8), $F(1, 279) = 5.69, p < .02$. The mixed ANOVA of standardized proportion scores for intransitive behavior also revealed a significant difference between tasks in the profile of SASB-codes, $F(4.536, 1260.98) =$

196.68, $p < .001$ (Greenhouse-Geisser corrected), $\eta^2 = .414$. Means and effect sizes are presented in Panel B of Figure 5. Follow-up analyses indicated differences for: asserting separateness or autonomy (2-1), $F(1,279) = 95.96$, $p < .001$; disclosing (2-2), $F(1,279) = 683.77$, $p < .001$; reactive warmth or affection (2-3), $F(1,279) = 42.49$, $p < .001$; warm submission or trust, follow (2-4), $F(1,279) = 765.17$, $p < .001$; submission (2-5), $F(1, 279) = 13.85$, $p < .001$; and hostile submission or sulking (2-6), $F(1,279) = 60.10$, $p < .001$.

As depicted in Figure 5, collaboration was primarily characterized by warm control (i.e., leading) and warm submission (i.e., following, cooperating), with lower levels of all other codes. In contrast, compared to collaboration disagreement was characterized by a broader range of behavior, including more affectively neutral control and submission, hostile control and submission (i.e., belittling and blaming, sulking), affectively neutral separation (i.e., assertion of autonomy) and also active and reactive warmth or affection. Each of these differences was also significant when analyzed as frequencies rather than standardized proportions.

Sex differences—The mixed ANOVA of transitive behavior codes revealed significant profile differences across Sex, $F(5.46, 1516.65) = 7.49$, $p < .001$ (Greenhouse-Geisser corrected), $\eta^2 = .026$. Further, this sex difference in transitive behavior codes differed across tasks, Sex \times Task \times SASB Profile interaction $F(5.43, 1510.58) = 4.627$, $p < .001$ (Greenhouse-Geisser corrected), $\eta^2 = .016$. To explicate this interaction, sex differences in transitive behavior profiles were examined separately for the two tasks. Results are presented in Table 2. Follow-up analyses indicated only one significant sex difference in transitive behavior during collaboration; men displayed more hostile separation or ignoring (code 1-8). Follow-up analyses for disagreement revealed several sex differences: women displayed lower levels of warm control or leading (code 1-4); higher levels of neutral control (code 1-5); and more hostile control or belittling and blaming (1-6); whereas men displayed higher levels of hostile separation or ignoring (1-8). These differences were also significant when analyzed as frequencies. The mixed ANOVA of intransitive behavior revealed no significant sex differences. Hence, as presented in Table 2, overall the sex differences were mostly limited to disagreement, where women displayed less warm control (i.e., leading) than men but also more neutral control and hostile control (i.e., belittling and blaming). Men displayed more hostile separation (i.e., ignoring) during disagreement than did women, a difference that also occurred in collaboration.

Age differences—The overall mixed ANOVA of transitive behavior indicated a significant difference in SASB profiles across age groups, $F(3.328, 925.09) = 3.66$, $p < .01$, Greenhouse – Geisser adjusted, $\eta^2 = .013$, qualified by a Sex \times Age \times Task \times SASB code interaction, $F(5.434, 1510.58) = 2.84$, $p < .02$, Greenhouse – Geisser adjusted, $\eta^2 = .011$. To explicate this effect, Sex \times Age mixed ANOVAs were conducted on individual transitive codes within the two tasks. Results are depicted in Tables 3 and 4. During collaboration, two age differences were significant; older couples displayed more warm control (1-4), and less neutral control (1-5) than did middle-aged couples (see Table 3).

During disagreement, analyses of transitive codes revealed three significant effects for Age, each in the form of Age \times Sex interactions (see Table 4). In an Age \times Sex interaction on

active warmth or affection (1–3), older women displayed less active warmth than both middle-aged women and older men, both $t(279) > 2.15, p < .05$; age groups did not differ for men. An interaction also emerged for hostile control or belittling and blaming (1–6). Among older participants, women displayed more hostile control than did men, $t(279) > 3.0, p < .01$. Age groups did not differ for men or women, and middle-aged men and women did not differ. Finally, in a Sex \times Age interaction on warm control or leading (1–4), older men displayed more warm control than older women and middle-age men, both $t(279) > 3.0, p < .01$. Middle-aged men and women did not differ, nor did middle-aged and older women. Each of these effects was also significant when frequencies of behavior were analyzed.

The overall mixed ANOVA of intransitive behavior indicated that the task difference in SASB profiles described above differed across age groups, Age \times Task \times SASB code interaction, $F(4.536, 1260.98) = 2.81, p < .02$, Greenhouse – Geisser adjusted, $\eta^2 = .01$. To explicate this effect, age differences were examined for each intransitive code within both tasks. During collaboration, only one age difference emerged; older couples displayed less reactive warmth or affection than did middle-aged couples (see Table 3). During disagreement, three age differences were significant (see Table 3): compared to middle-aged couples, older couples displayed less assertion of autonomy (2-1); less reactive warmth or affection (2–3); and less neutral submissiveness (2–5). These effects were significant when frequencies were analyzed.

Overall, during collaboration older spouses displayed fewer warm reactions to each other than did middle-aged couples. However, for older couples expressions of control included more warm control (i.e., leading) and less neutral control than was evident for middle-aged couples. During disagreement older couples displayed less warmth in reaction to their partner, and they asserted less autonomy. Neutral submissiveness was also less common among older couples than middle-aged couples. Other age differences were specific to men or women. Older men displayed more warm control (i.e., leading) during disagreement than the other three groups, and less hostile control (i.e., belittling and blaming) than older women. Older women, in contrast, displayed less active warmth than both middle-aged women and older men.

Distinguishing Age and Marital Adjustment as a Predictor of Interaction Responses

Consistent with previous analyses from this study (Henry et al., 2007), older couples reported greater total marital satisfaction than did middle-aged couples, point-biserial $r(300) = .28, p < .001$. Hence, age group differences in affect, appraisals, and behavior might reflect marital adjustment. To test this hypothesis, effects involving age group were evaluated again, using ANCOVAs controlling couples' total MAT scores. Couples reporting higher marital satisfaction also reported smaller increases in anger during the tasks, $F(1,276) = 39.97, p < .001, \eta^2 = .126$, and this inverse association was significantly stronger during disagreement than collaboration, MAT \times Task interaction, $F(1,276) = 10.13, p < .005, \eta^2 = .035$. When couple MAT scores were controlled, effects on anger involving Age Group were no longer significant. Couples reporting higher marital satisfaction also reported smaller increases in anxiety during the tasks, $F(1,276) = 19.77, p < .001, \eta^2 = .067$, and effects on anxiety involving Age Group became non-significant when couple MAT scores were

controlled. Couples with higher marital satisfaction also rated their spouses as displaying more warmth or less hostility during the tasks, $F(1,288) = 185.83, p < .001, \eta^2 = .392$, and Age Group was no longer related to spouse ratings of affiliation when MAT scores were controlled. For behavioral effects during disagreement, the Age Group main effect on asserting autonomy (2-1) was eliminated when MAT scores were controlled; marital satisfaction was inversely associated with this behavior, $F(1,290) = 10.89, p < .001, \eta^2 = .036$.³ The Age Group main effects for reactive warmth (2-3) and neutral submission (2-5) remained significant when MAT scores were controlled (both $p < .03$); marital satisfaction was not related to these behaviors. Of the three Age Group \times Sex interactions for disagreement behavior, effects for active warmth, warm control, and hostile control (1-3, 1-4, 1-6) remained significant when MAT scores were controlled, each $p < .05$, even though higher marital satisfaction was associated with greater warm control, $F(1,290) = 6.28, p < .02, \eta^2 = .023$, and lower hostile control, $F(1,290) = 29.97, p < .001, \eta^2 = .063$. Of three age group differences during collaboration, warm control, neutral control, and reactive warmth (1-4, 1-5, and 2-3) each remained significant when MAT scores were controlled, each $p < .01$. Marital satisfaction was unrelated to these behaviors.

Discussion

The present study examined age differences in affect, agency, and communion during marital disagreements and collaborative problem solving. Consistent with prior theory and research (Carstensen et al., 1995; 1999; Levenson et al., 1994) we expected that compared to middle-aged couples, older couples would report less negative affect and more positive appraisals of spouses during disagreement, and display more friendly and less hostile behavior. We also expected that compared to middle-aged couples, older couples would display less assertiveness and control during disagreement and be more likely to combine affiliation and control during collaboration (Birditt et al., 2005; Blanchard-Fields, 2007).

Before discussing the main results, it is important to note that across modalities these interaction contexts differed as expected. Couples reported more anger and anxiety during disagreement than collaboration, and spouses rated each other as less friendly and more controlling. For coded behavior, collaboration was characterized by friendly control and friendly submission, reflecting warm cooperation in which spouses led and followed each other. In contrast, disagreement was characterized by greater control, hostile control, submission, hostile submission, assertion, and hostile separation - a pattern that is consistent with behavioral research on marital conflict (Snyder et al., 2005). However, couples also displayed more warm autonomy (i.e., disclosing, affirming), as well as active and reactive warmth. These latter differences likely reflect the personal content of the disagreements, and many couples' efforts to address them constructively. Yet, the warm behavior did not offset hostile and controlling behavior in determining the subjective experience of disagreement. Thus, the tasks clearly resembled the marital contexts we intended to model. Although the extent to which responses to the tasks reflect those during naturally occurring conflict and

³It may seem unexpected that assertion of autonomy was inversely associated with marital satisfaction, as assertiveness is typically considered adaptive in the context of close relationships. Warm assertion of autonomy (i.e., disclosing, SASB code 2-2) was positively associated with couple MAT scores, $F(1,290) = 11.20, p < .001, \eta^2 = .037$. This SASB code may better represent the somewhat friendly assertiveness typically considered as adaptive in close relationships (see Appendix A).

collaboration is an important question for future research, the significant associations of marital adjustment with affective responses, appraisals of spouse affiliation, and overt behavior during disagreement provide further evidence of the validity of these assessment procedures (Snyder et al., 2005).

Age Differences in Response to Marital Interaction

On the basis of SST theory (Carstensen & Mikels, 2005) and related research (e.g., Carstensen et al., 1995; Levenson et al., 1994), we predicted that older adults would differ from their middle-aged counterparts during disagreement by reporting less distress and displaying more warmth and less hostility. Supporting this view, older couples reported less anger during disagreement than middle-aged couples, and rated their spouses as warmer across both tasks. Older husbands also reported less anxiety during disagreement. These findings are consistent with prior evidence that age is associated with less negative emotionality in general (Gross, Carstensen, Tsai, Skorpen, & Hsu, 1999) and in response to interpersonal stressors (Birditt & Fingerman, 2003). However, these age effects were eliminated when marital satisfaction was controlled. These results suggest that marriages in older adulthood are characterized by increased positivity in appraisal of spouses' behavior that occurs due to differences in marital satisfaction. That is, the age differences in subjective experience in the present findings apparently reflect age related differences in marital adjustment, rather than age, per se.

Behavioral coding revealed more complex age differences. Contrary to predictions, during disagreement older couples were less warm in reaction to each other than were middle-aged couples. However, consistent with other research (Birditt et al., 2005), older couples were less likely to assert autonomy during disagreement, as when expressing an independent opinion. Yet, during disagreement neutral submissiveness was also less common among older couples than middle-aged couples. These age differences support suggestions that marital disagreements of older couples differ from their middle-aged counterparts (Gagnon et al., 1999), but do not support prior findings regarding overall greater warmth and less negativity in conflict behavior for older couples (Carstensen et al., 1995). It is possible that differences between our results and previous studies reflect specific measures employed; the SASB model emphasizes affiliation, control, submissiveness, and autonomy, whereas coding schemes used in prior studies of marriage and aging emphasize affective behavior (Carstensen et al., 1995).

Age differences in assertion and submissiveness illustrate the importance of dimensions of social behavior beyond the typical emphasis on affiliation, and support the view that older persons use such direct strategies (e.g., venting to the upsetting person) less frequently than do younger persons (Birditt & Fingerman, 2005; Blanchard-Fields, Stein, & Watson, 2004). However, the finding regarding reduced submissiveness among older couples does not support prior findings where older persons report being more conciliatory in dealing with interpersonal problems (Birditt et al., 2005), underscoring the need to compare findings obtained through self-reports of social responses with direct behavioral observations.

Other behavioral correlates of age during disagreement emerged in the form of sex differences. Older men displayed more warm control than their spouses and their middle-

aged counterparts, and they displayed the lowest levels of hostile control. Older women, in contrast, displayed the greatest level of hostile control and the lowest level of active warmth. Hence, our findings for older women clearly do not support previous findings of greater warmth and lower hostility among older couples (Carstensen et al., 1995), although our results for older men provide some support. Overall, these findings suggest that future research on aging and marriage should closely examine potential sex differences. Unlike age group differences in affect and appraisals which were eliminated when marital satisfaction was controlled, with only one exception (i.e., asserting autonomy) marital satisfaction did not account for age group differences in behavior during disagreement, even though marital satisfaction was associated with higher levels of warm control and lower levels of hostile control. Hence, the behavior of middle-aged and older couples differed in ways that could not be attributed to overall relationship quality.

As noted previously, collaboration represents an important context for older couples. Compared to middle-aged couples, older spouses generally displayed fewer warm reactions to each other during collaboration and less neutral control. However, older couples displayed more warmth when expressing control. This style suggests a greater blending of control and affiliation aspects of interaction in a form of agreeable cooperation for older couples. In contrast, for middle-aged couples affiliation and control aspects of collaboration were more distinct. Middle-aged couples were both more “business-like” (e.g., higher in neutral control) and specifically warmer during collaboration than were older couples, whereas the behavioral style of older couples was more one of “warm-business” in which they led and followed each other in a friendly manner. This could reflect older couples’ efforts to attend simultaneously to relationship quality, potential emotional distress, and the task at hand in what for them is a more common and important context (Blanchard-Fields, 2007; Gould, Kurzman, & Dixon, 1994). Importantly, these behavioral differences remained significant when marital adjustment was controlled.

Consistent with the view that collaboration contains threats to the quality of emotional experience that would encourage a balanced behavioral approach, compared to their middle-aged counterparts older wives reported a larger increase in anxiety during collaboration. This response is noteworthy in light of that fact that older couples reported less anger during disagreement than middle-aged couples in the present study, and previous research (Birditt & Fingerman, 2003; Levenson et al., 1994; Gross et al., 1999) suggesting that older adults generally experience less negative affect and less negative affect specifically in response to interpersonal stressors.

Sex Differences in Responses to Disagreement

Consistent with prior evidence that women find relationship stressors more upsetting than do men (Kiecolt-Glaser & Newton, 2001), women reported more anger during disagreement than did men and rated their spouses as less friendly. In terms of observed behavior, women displayed more neutral control and hostile control than men during disagreement, whereas men displayed more hostile separation or ignoring. This pattern is similar to the demand-withdraw pattern (Christensen & Heavey, 1990; Heavey, Layne, & Christensen, 1993) in which wives initiate and pursue disagreements while men respond with avoidance. By using

a different behavioral assessment, these results provide an important conceptual replication of prior studies of the demand-withdraw pattern. As noted above, other sex differences varied by age. For older couples only, men displayed more warmth and warm control than did women during disagreement. Further, the sex difference in which women displayed more hostile control than men was particularly evident among older couples. Hence, some sex differences in agency and communion during marital interaction may differ with age (c.f., Gutmann, 1994).

Limitations

Our cross-sectional design precludes attribution of age differences to aging, per se; cohort differences could be responsible, especially since previous research has demonstrated cohort effects on personality traits reflecting agency and communion (Twenge, 1997). Also, age differences we observed could reflect length of marriage. As noted by others (e.g., Carstensen et al., 1995), this alternative interpretation poses a difficult challenge, given the inherent confounding of age and marriage length. As married persons grow older their marriages grow longer, and among married couples those who are older tend to have had longer marriages. Attempts to separate statistically these inherently correlated temporal influences are ill-advised (Miller & Chapman, 2001). Hence, we cannot definitively distinguish them as sources of age differences.⁴ Selection confounds could also contribute to age group differences. For example, effects of divorce and separation over time could contribute to ascertainment of older couples that are more satisfied and stable than middle-aged couples; the middle-aged group is more likely to contain couples facing future separation and divorce (Glenn, 1990). Age differences in marital satisfaction such as those in this sample (Henry et al., 2007) could reflect this selection artifact, and age differences in subjective experiences (i.e., negative affect, appraisals of spouse warmth) were eliminated when controlling marital satisfaction. However, as noted above, using ANCOVA to control such naturally occurring confounds is potentially quite misleading (Miller & Chapman, 2001). Importantly, only one age group difference in behavior during disagreement (i.e., assertion of autonomy) and none of the differences during collaboration were eliminated when marital satisfaction was controlled. Hence, this possible selection artifact does not account for the primary behavioral effects. Our sample was predominantly White and middle and upper-middle class, and we studied heterosexual couples. Relationship functioning may be similar for gay, lesbian, and heterosexual couples (Gottman et al., 2003; Julien et al., 2003), but our findings should be generalized cautiously and future research should examine other demographic groups.

⁴When length of marriage (LOM), treated as a continuous variable, replaced age group in the design, LOM was not related to anger or anxiety response to the tasks, either as a main effect or in interaction with Task. LOM was also unrelated to ratings of spouse affiliation. Of the behavioral variables, LOM was related to warm control during collaboration (SASB code 1–4), as well as neutral control (SASB code 1–5) and reactive warmth (SASB code 2–3). However, these effects were somewhat weaker than those obtained with Age Group. Of the four Age Group main effects on SASB coded behavior during disagreement (2-1, 2-3, 2-4, 2-5), only one was significantly related to LOM (SASB code 2–5) but this effect was weaker than that obtained for Age Group. Of the three significant Age Group \times Sex interactions during disagreement (SASB codes 1–3, 1–4, 1–6), two (1–3, 1–4) were significant when LOM replaced Age group.

Summary, Conclusions and Future Directions

Consistent with prior theory and research (Carstensen et al., 1995; 1999), older couples experienced marital disagreement as less distressing than did middle-aged couples; they reported less anger and perceived their spouses as less hostile. However, these differences were eliminated when marital satisfaction was controlled, suggesting that these age differences derive from age differences in global marital satisfaction and cannot be attributed unambiguously to age, per se. Further, there was little evidence from behavioral analyses of overall age differences predicted by SST in which older couples would display more positivity and less negativity; older couples, in fact, displayed less warmth than did middle-aged couples on some behavioral measures. Hence, similar to previous analyses from this study (Story et al., 2007), the reduced negative affect and more positive spouse appraisals among older couples observed here and reported by others (Gagnon et al., 1999) are perhaps more accurately seen as positive sentiment override (e.g., Hawkins, Carrere, & Gottman, 2002) in which older and more satisfied couples discount their spouse's negative actions, rather than as indicative of objective differences during marital interactions.

Our results with a large sample and detailed multi-method assessments indicate that age differences in positivity and negativity during marital interaction predicted by SST are more evident in subjective experience than in overt behavior, and that those subjective experiences reflect age differences in global marital satisfaction rather than the effects specifically of aging and a shortened time horizon. SST is supported by an extensive set of findings beyond the specific context of marriage (Carstensen & Mikels, 2005). However, implications of SST for marital interaction require additional research, especially since few studies of aging and marital quality include observational coding of actual couple interactions. There were some age differences in marital behavior that varied by gender. In some instances the behavior of older men was consistent with the SST-based view that age is associated with greater emphasis on positivity in close relationships, but the behavior of older women clearly was not. These effects suggest the potential value of gender-specific models of aging and marriage (c.f., Gutmann, 1994). Further, gender differences in the tone of marital interactions among older couples are potentially quite important in light of the greater health benefits of marriage for men than for women (Kiecolt-Glaser & Newton, 2001).

Previous research on age and marital interaction has emphasized the context of disagreement. Collaboration is an additional common and important context for older couples (Berg et al., 2006), and in the present study older and middle-aged couples approached this activity differently. Older couples blended the warmth and control dimensions of interpersonal behavior, whereas for middle-aged couples these dimensions were more distinct. Blending instrumental or agentic aspects of collaboration with affiliative or communal concerns could reflect a larger goal to maximize positivity and minimize negativity (Carstensen et al., 1999). Alternatively, the "warm business" behavioral style of older couples during collaboration could reflect their efforts to balance agentic problem-solving task demands with attention to the communal aspects of the situation such as relationship quality (Blanchard-Fields, 2007; Rook et al., 2004). Older men also demonstrated this pattern of increased warm control during disagreement. These results are

noteworthy in that they provide behavioral evidence from actual social interactions in support of models of age-related differences in attention to relationship quality during everyday problem solving and coping. Most prior research has relied on self-reports of typical experiences or responses to hypothetical scenarios. Hence, although the present results provide little evidence of overall age differences in levels of positivity and negativity predicted by SST, they do support other perspectives that suggest older persons balance attention to interpersonal and emotional issues with other goals in problem solving.

The present results underscore the importance of conceptual and methodological issues – specifically, the need for assessment of multiple response channels (i.e., affect, appraisal, overt behavior) across multiple age-relevant interaction contexts - in efforts to understand age differences in marital processes. That is, a more complete understanding of age and marital quality will require additional multi-modal assessments of responses to multiple marital contexts that wax and wane in frequency and importance across adulthood. The present findings also illustrate the value of concepts and methods rooted in the interpersonal perspective in such efforts. Marital interactions and marital quality vary not only along the commonly-studied dimension of affiliation, but also in dominance or control (c.f., Nealey-Moore et al., 2007). Further, aging involves changes in multiple aspects of the broader dimensions of agency and communion (Diehl et al., 2004; Labouvie-Vief, 1994; McAdams & de St. Aubin, 1992), which correspond to the main dimensions of social processes depicted in the IPC. Hence, the IPC and related concepts and methods (e.g., SASB, IMI, etc.) in the interpersonal tradition (Horowitz et al., 2006) may prove useful in future efforts to understand close relationships and their changing role in health and well-being across the lifespan.

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Appendix

Appendix A

SASB coding examples

Disagreement

Transitive

1-1 *Emancipate, Grant Autonomy:*

You can manage the finances however you'd like.

1-2 *Affirm:*

You're a great housekeeper!

Yes, your idea is a good one.

1-3 *Active Love or Affection:*

I love you!

I'd like to kiss you right now!

1-4 *Protect, Lead:*

If we take time to listen to each other more it would help our communication.

Why don't we tackle this problem one step at a time.

1-5 *Control:*

You need to stop worrying about things so much.

Don't say that!

1-6 *Blame, Belittle:*

You're an idiot!

Our financial problems are *your* fault.

1-7 *Attack, Active Hostility:*

I hate you!!

Get out of my life for good!

1-8 *Ignore:*

Your opinion on this just doesn't matter.

Whatever!

Intransitive

2-1 *Separate, Assert Autonomy:*

I'm going to do it the way I want to.

I know how to communicate.

2-2 *Disclose:*

I like the way we have divided up the household chores.

2-3 *Reactive Love or Affection:*

I love you, too!

I'm so happy to be with you, too!

2-4 *Trust, Follow:*

Would you help me figure that out?

Yes, that makes more sense to me now.

2-5 *Submit:*

Yes, I'll go along with your plan about how to split up the chores.

O.k., I'll do what you said.

2-6 *Sulk:*

I guess I could do it that way if I really *have* to.

2-7 *Recoil, Withdraw:*

Please, please don't do this to me!

2-8 *Wall-off:*

I don't need your help.

I'm not going to talk about that!

Collaboration

Transitive

1-1 *Emancipate, Grant Autonomy:*

You can write down the errands any way you'd like. Sounds like you have an idea of how to do the route, so go ahead and write down your plan.

1-2 *Affirm:*

That's a great plan!

You did a great job on the map!

1-3 *Active Love or Affection:*

I love you!

Intransitive

2-1 *Separate, Assert Autonomy:*

I say we go to the luggage store first.

I want to read the list first.

2-2 *Disclose:*

I think this looks good.

I'm really happy with the way we are working through this task.

2-3 *Reactive Love or Affection:*

I love you, too!

Collaboration**Transitive**

You're the best!!

1-4 *Protect, Lead:*

It seems like a good idea to figure out where we have to go first before doing anything else.

Let's go to the drug store first.

1-5 *Control:*

Quickly, write down the list of errands.

You should be drawing on the map right now.

1-6 *Blame, Belittle:*

That's a stupid idea!

You're doing it wrong!

1-7 *Attack, Active Hostility:*

I hate you!

1-8 *Ignore:*

I'm not listening to your ideas anymore.

I'm ignoring your idea.

Intransitive

Oh, yes! I'd love to take a romantic vacation with you, too!

2-4 *Trust, Follow:*

Where do you think we should go?

That's a good suggestion - let's buy the luggage.

2-5 *Submit:*

Just tell me what you want me to do.

O.k., I'll do it your way.

2-6 *Sulk:*

Well - I'll do that, but then *I'm* doing the majority of this task.

I did *not* do it wrong (whining).

2-7 *Recoil, Withdraw:*

I just can't do this your way any more!

2-8 *Wall-off:*

I'm just going to finish this without you.

I'm doing this my way despite what you think!

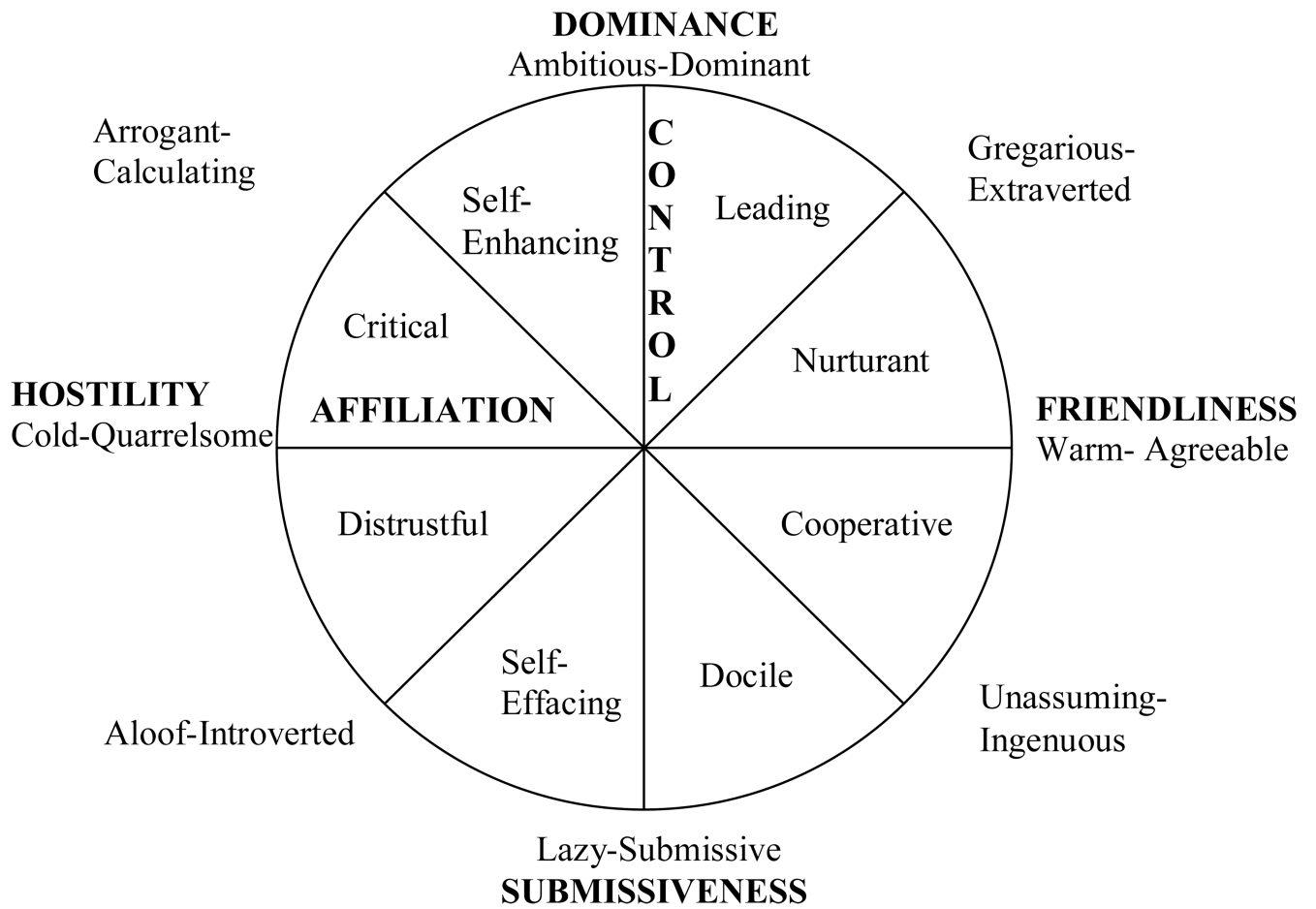


Figure 1.
The Interpersonal Circumplex.

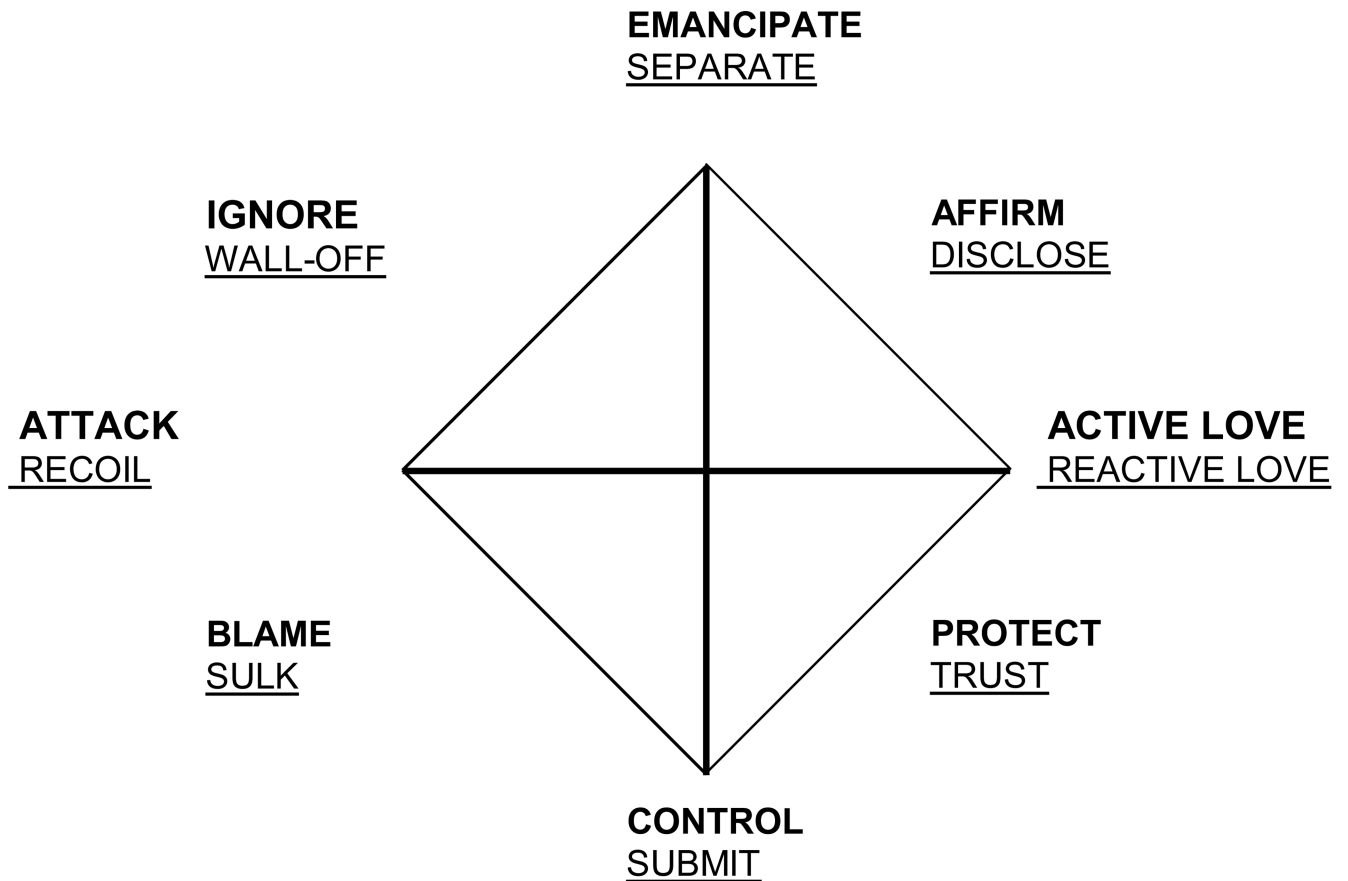


Figure 2. Structural Analysis of Social Behavior (The simplified SASB Cluster Model) From L.S. Benjamin (1996), *Interpersonal diagnosis and treatment of personality disorders* (2nd Ed.). New York: Guilford Press. Reprinted with permission.
 Bold labels are transitive behaviors (actions done to, for, or about the other person).
 Underlined labels are intransitive behaviors (actions done to, for, or about the self in reference or reaction to the other).

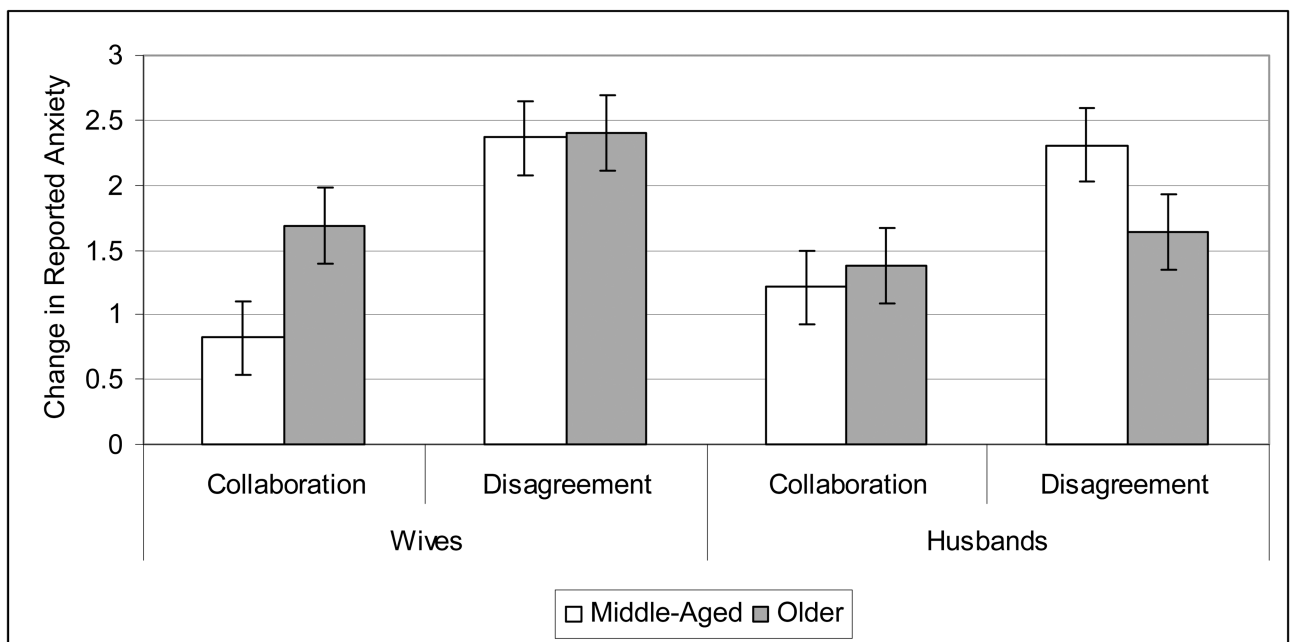
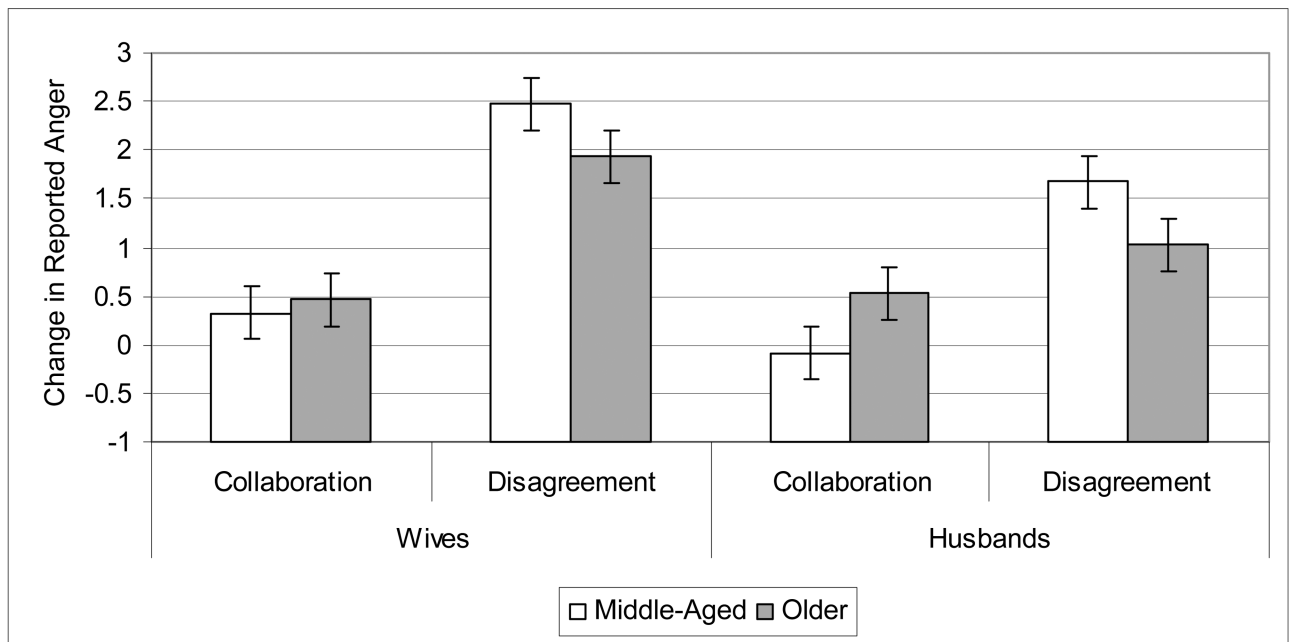


Figure 3. Changes (task – baseline) in self-reports of anger (top panel) and anxiety (bottom panel) during collaboration and disagreement tasks.

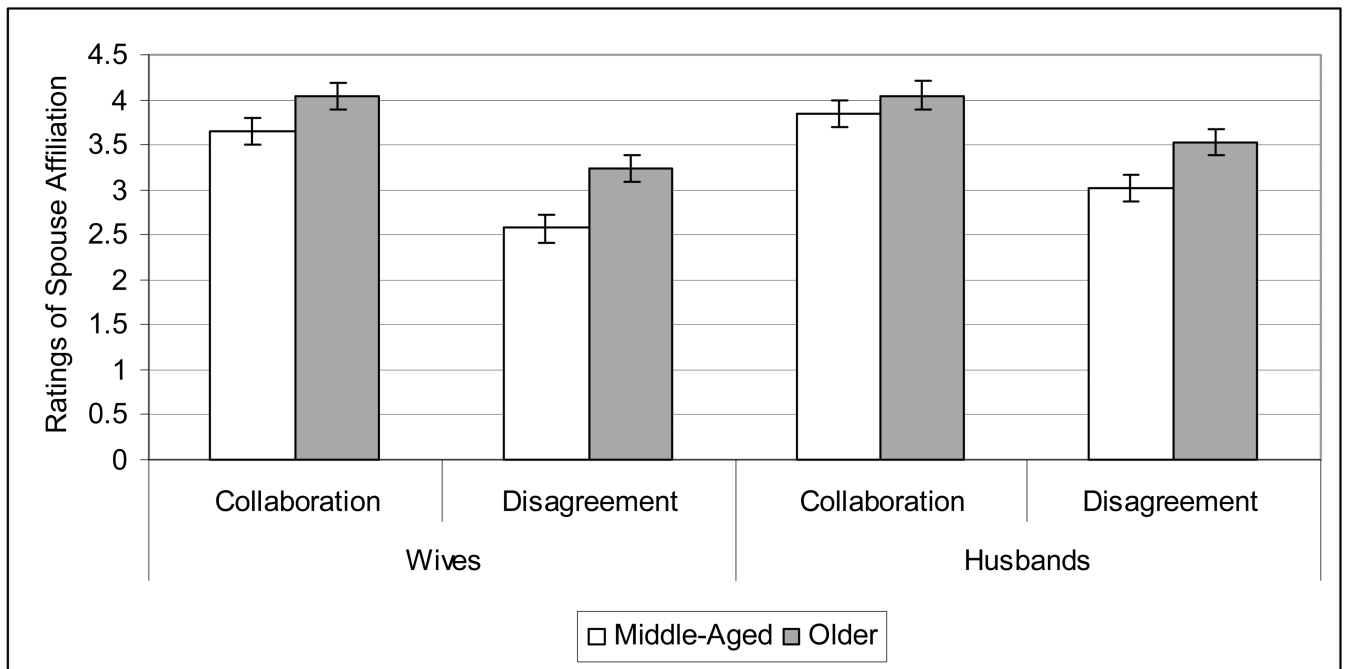
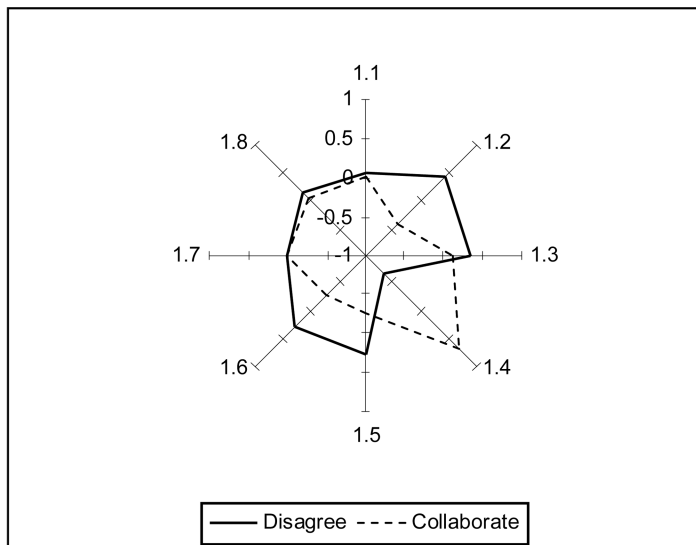
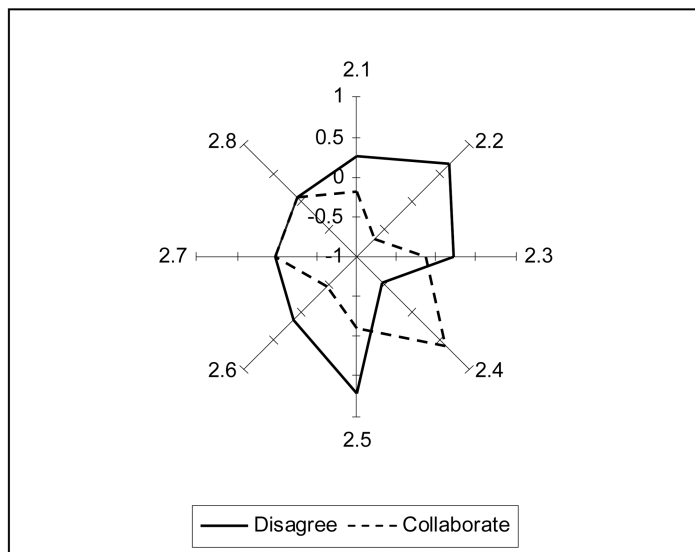


Figure 4.
Ratings of spouse affiliation for collaboration and disagreement tasks.



A
Transitive Behavior
(actions done to, for, or about spouse)

- 1.1 Grant Autonomy, Emancipate
- 1.2 Affirm (.45)
- 1.3 Active Love or Affection (.06)
- 1.4 Protect or Lead (.84)
- 1.5 Control (.28)
- 1.6 Blame, Belittle (.24)
- 1.7 Attack or Active Hostility
- 1.8 Ignore (.02)



B
Intransitive Behavior
(actions done to, for, or about the self
in reference or reaction to the spouse)

- 2.1 Separate, Assert Autonomy (.26)
- 2.2 Disclose (.71)
- 2.3 Reactive Love or Affection (.13)
- 2.4 Trust, Follow (.73)
- 2.5 Submit (.05)
- 2.6 Sulk (.18)
- 2.7 Recoil, Withdraw
- 2.8 Wall-off

Figure 5. Mean standardized proportions for coded behavior during the disagreement and collaboration tasks: Panel A - Transitive, Panel B – Intransitive (significant effect sizes in parentheses, as η^2).

Table 1

Demographic Characteristics

	Women		Men	
	Middle-Aged Older	Middle-Aged Older	Middle-Aged Older	Middle-Aged Older
First Marriage %	78.8	76.0	84.4	76.0
Ethnicity %				
White	92.6	92.2	94.6	94.8
Hispanic	2.7	2.6	2.0	2.6
Asian/Pacific Islander	1.4	2.0	2.0	2.0
Native American	2.1	3.3	0	0.7
African American	1.4	0	0.7	0
Employment %				
Employed	74.8	46.6	93.2	45.5
Retired	1.4	37.8	1.4	51.3
Unemployed*	23.8	15.6	5.5	3.2
Self-Rated Health %				
Excellent	24.5	20.5	23.3	29.9
Very Good	45.6	40.4	46.6	40.9
Good	25.9	34.4	26.7	23.4
Fair/Poor	4.1	4.7	3.1	5.8

* Unemployed also includes participants not seeking employment outside the home who are not retired.

Table 2

Significant Sex Main Effects on Task Behavior: Mean Standardized Proportion Scores

Behavior	Women		Men	
	Mean (SE)	Mean (SE)	<i>F</i> (1,292)	η^2
Collaboration				
1–8 Ignore	.01 (.01)	.10 (.03)	6.93*	.024
Disagreement				
1–4 Leading	–.75 (.04)	–.59 (.05)	12.28**	.040
1–5 Control	.35 (.07)	.19 (.07)	7.09*	.024
1–6 Belittle, Blame	.47 (.09)	.11 (.06)	17.22**	.056
1–8 Ignore	.02 (.01)	.27 (.07)	11.54**	.038

*
 $p < .05$,**
 $p < .001$

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Table 3

Significant Age Main Effects on Task Behavior: Mean Standardized Proportion Scores

Middle-Aged Older				
Behavior	Mean (SE)	Mean (SE)	<i>F</i>(1,292)	η^2
Collaboration				
1–4 Leading	.56 (.04)	.83 (.04)	20.53**	.068
1–5 Neutral Control	–.16 (.05)	–.39 (.05)	10.04*	.034
2–3 Reactive Warmth	–.04 (.05)	–.25 (.05)	10.52*	.035
Disagreement				
2-1 Assert Autonomy	.38 (.08)	.13 (.08)	4.84*	.016
2–3 Reactive Warmth	.31 (.08)	.11 (.07)	4.12*	.014
2–5 Neutral Submit	.28 (.11)	–.06 (.10)	8.33*	.028

*
 $p < .05$,**
 $p < .001$

Table 4
Mean Standardized Proportions of Behavior during Disagreement for Age \times Sex Interactions

Behavior	Women		Men		F(1,292)	η^2
	Middle-Aged Older		Middle-Aged Older			
	Mean (SE)	Mean (SE)	Mean (SE)	Mean (SE)		
1-3 Active Warmth	.40 (.07)	.21 (.07)	.31 (.08)	.41 (.08)	4.74*	.016
1-4 Leading	-.79 (.06)	-.71 (.06)	-.72 (.06)	-.46 (.06)	4.40*	.015
1-6 Belittle, Blame	.41 (.13)	.55 (.13)	.22(.08)	.01 (.08)	4.19*	.014

* $p < .05$