

Long-Term Marriage: Age, Gender, and Satisfaction

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Long-term marriages ($N = 156$) varying in spouses' age (40-50 years or 60-70 years) and relative marital satisfaction (satisfied and dissatisfied) were studied. Spouses independently completed demographic, marital, and health questionnaires and then participated in a laboratory-based procedure focused on areas of conflict and sources of pleasure. Findings supported a positive view of older marriages. Compared with middle-aged marriages, older couples evidenced (a) reduced potential for conflict and greater potential for pleasure in several areas (including children), (b) equivalent levels of overall mental and physical health, and (c) lesser gender differences in sources of pleasure. The relation between marital satisfaction and health was stronger for women than for men. In satisfied marriages, wives' and husbands' health was equivalent; in dissatisfied marriages, wives reported more mental and physical health problems than did their husbands.

For many people, marriage is the most intimate and enduring of all close relationships. Despite the fact that many marriages last for decades, most of the marital research in psychology has focused on relatively young couples and has been more concerned with marriages that dissolve than with marriages that stay together. Our own previous marital research reflects these trends; we have studied couples who were primarily in the early stages of marriage (e.g., Gottman, 1979; Levenson & Gottman, 1983) and searched for factors that would predict their subsequent dissolution (e.g., Gottman & Levenson, 1992).

With estimates of divorce rates approaching two thirds of all new marriages (Martin & Bumpass, 1989), our research group has become increasingly interested in studying marriages that have managed to buck the odds and stay together over long periods of time, hoping to learn what these marriages are like and perhaps to discover some of the secrets to their longevity.

In this article, we describe the construction of a sample of couples in long-term marriages, recruited so as to represent a range of levels of marital satisfaction. These couples, some of whom are middle aged and others on the threshold of old age, have been married to each other for most of their adult lives. Our long-range plan is to follow these couples over time, studying them using methods we have developed with younger couples (i.e., direct observation of behavior in the laboratory and at home and assessment of emotion, problem solving, and physiology during marital interaction). In this initial article, we de-

scribe characteristics of these marriages derived from self-report data, contrasting husbands and wives, middle-aged and older couples, and relatively satisfied and dissatisfied marriages.

Theoretical Basis

The study of long-term marriages involves the study of people in middle and late life. Initially cross-sectionally, and eventually longitudinally, we plan to test tenets of theories that have considered life span changes in social and emotional behavior. In particular, we will be examining predictions derived from socioemotional selectivity theory (Carstensen, 1987, 1991, in press), which posits an increasingly important role for long-term relationships in later life. According to the theory, beginning in early adulthood and continuing through old age, people actively narrow their social environment and achieve increasing emotional closeness in significant relationships (Carstensen, 1992). Throughout this period, hedonic qualities of social contact become increasingly salient. Socioemotional selectivity theory is consistent with Baltes and Baltes's (1990) more general model of selective optimization with compensation, in which adaptive aging entails maximizing positive experience within an increasingly narrow band of activity. Socioemotional selectivity theory offers specific predictions about the type of and basis for such selections in the social realm.

In keeping with these theoretical models, we expect that, as other relationships diminish, intimate relationships become increasingly important sources of social contact in later life. Clearly, marriages in old age have the potential for providing emotional support and increasing affective positivity; however, they do not necessarily realize this potential. Some couples stay together despite considerable dissatisfaction with their relationship. If, as earlier research suggests, close relationships affect the quality of life in late adulthood in profound and pervasive ways (Antonucci & Jackson, 1987; Rook, 1984), long-term marriages proffer fertile ground for adding to our understanding of the effects of positive and negative intimate relationships during this period of life.

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Marriage in Middle Age and Old Age

Marital Satisfaction

Does marital satisfaction increase or decrease over the course of a marriage? Early cross-sectional surveys of marital satisfaction suggested that marital satisfaction declines steadily during the first 10 years of marriage (Blood & Wolfe, 1960; Dentler & Pineo, 1960; Pineo, 1961, 1969). Extrapolating from these findings, a continuing decline in marital satisfaction over the course of marriage might be expected. However, more recent surveys, which include marriages of longer duration, reveal a different picture. Marital satisfaction appears to follow a curvilinear path over the course of marriage (Anderson, Russell, & Schumm, 1983; Burr, 1970; Rollins & Cannon, 1974; Thurnher, 1976), starting high, dropping sharply after the birth of children, reaching an all-time low when children are adolescents, and then increasing as children leave home and couples retire (Dougherty & Jacobson, 1982). A cross-sectional study of three generations of families conducted by Guilford and Bengtson (1979) reveals additional complexities, finding that positive interaction follows this kind of curvilinear path (i.e., highest in the youngest couples, lowest in the middle-aged couples, and intermediate in the older couples); in contrast, an orthogonal quality, negative sentiment, decreases linearly with age.

Marital Qualities

What are later-life marriages like? How do couples function and interact? In terms of happiness, the evidence suggests considerable variability. Some researchers have found most long-term marriages to be happy (Stinnett, Carter, & Montgomery, 1972) and close (Parron, 1982). In contrast, others note evidence of widespread dissatisfaction, especially among wives (Peterson, 1973). Although many older couples describe their marriages as "marriages of lifelong mutual affection, supportiveness, understanding, companionship, and ever-increasing appreciation" (Erikson, Erikson, & Kivnick, 1986, p. 110), older marriages can also be a source of stress (Lowenthal, Thurnher, & Chiriboga, 1975).

Changes related to relocation, retirement, and declining health can also present new difficulties for older couples (Atchley & Miller, 1983). Among these, the impact of retirement on marriage is unclear, with some studies suggesting that retirement improves marital quality (e.g., Atchley, 1976; Gilford, 1984) and role egalitarianism (e.g., Dorfman & Heckert, 1988), others suggesting it has little effect (e.g., Ekerdt & Vinick, 1991; Matthews & Brown, 1987; Vinick & Ekerdt, 1991), and others suggesting minimal or slightly negative effects (e.g., Lee & Shehan, 1989). To avoid any possible confounding in the present study, all couples were selected so that they would not yet have retired.

Spousal Roles

Just as marriages change with age, so do spouses and the roles they play. Some authors have speculated that gender differences appear to lessen in late life (Gutmann, 1987; Hyde & Phillis, 1979; Keith & Brubaker, 1979). Although this convergence could reflect increasing harmony, it could also be problematic.

For example, Troll, Miller, and Atchley (1979) have contended that husbands may become more tender in old age, but wives sometimes view this increased tenderness as clinging. Similarly, wives may become more agentic in matters such as planning the use of leisure time, but husbands may resent this imposed structure (Keating & Cole, 1980).

Marriage, Gender, and Health

We find questions regarding the relations among marital satisfaction, gender, and health (both mental and physical) to be particularly intriguing. Regarding gender, there is substantial evidence that marriage disproportionately benefits men. At all ages, husbands report higher levels of marital satisfaction than do wives (Field & Weishaus, 1984; Skolnick, 1986; Sporakowski & Hughston, 1978). In addition, relative to single men, married men report greater life satisfaction. Interestingly, among women, the patterns reverse. Single women report greater life satisfaction than do married women (Steil, 1984).

In the domains of mental and physical health, similar trends emerge: Married men have the lowest rates of mental health problems, whereas single women have the lowest rates of mental health problems (Radloff, 1975; Russo, 1985). Physical health benefits associated with marriage also appear to differ by gender, a difference that is underscored in studies of bereavement. In one study of widowhood, bereaved men had a lower survival rate than did still-married men at every follow-up conducted over a 10-year period. In contrast, bereavement had no effect on women's health (Helsing, 1981).

The picture for women is not entirely bleak. In a large-scale survey, Hess and Soldo (1985) found that women derived mental and physical health benefits from good marriages, whereas men benefited from marriage despite its quality. Thus, although it appears that both mental and physical health are related to marital status, the associations are not simple ones, and the direction of causality is not clear (i.e., dissatisfaction with marriage could contribute to lower spousal health; poor spousal health could contribute to lower marital satisfaction).

Problems and Gaps in Existing Research

As noted earlier, we do not know a great deal about the nature of marriage in middle and late life. Because much of the available research is cross-sectional, we cannot know whether findings of improvement of marital quality in later life mean that marriages become happier over time or simply that unhappily married couples divorce and are no longer represented in these studies (Huyck, 1982). By and large, studies have been plagued with sampling biases, relying heavily on convenience samples recruited through churches and senior centers (Sporakowski & Axelson, 1984). In many studies, individuals were recruited rather than couples, thus only one partner was represented (Sporakowski & Axelson, 1984). Finally, we are aware of no studies that have actively recruited both satisfied and dissatisfied couples in this age group. Because happily married couples are more likely to volunteer for research studies than are unhappily married couples, the resultant view of marriage can be quite skewed. There clearly are unhappy couples that stay together over the long term despite their difficulties; we know

far less about these troubled long-term marriages than about those that are happy.

Currently, a number of very basic questions concerning the nature of marriage in later life remain unanswered. Are marriages really happier in old age as compared with earlier periods? Are older marriages vibrant or devitalized? What types of problems present the greatest conflicts in long-term marriages? How do satisfied and dissatisfied marriages differ from one another in late life? Does the quality of the marriage affect women and men differently? If health is tied to supportive relationships, is there a toxic effect of unhappy marriages?

Present Study

We turn now to a consideration of the rationale, goals, and hypotheses for the present study.

Why Study These Particular Age Groups? Why Study Long-Term Marriages?

In our previous collaborative research on marriage, we have studied relatively young couples, with the mean age of spouses being 27 years in one sample (Levenson & Gottman, 1983) and 30 years in another (Gottman & Levenson, 1992). For the present study, we turn our attention to marriages in later life. Although many people remarry in middle age and old age, we wanted to study couples who had stayed together over long periods of time. These are couples who have lived together for most of their adult lives, whose marriages are likely to have encountered and endured typical marital stressors such as alterations in social networks, geographical relocations, the birth of children, the departure from home of children, and, possibly, health problems of at least one spouse. Trying to understand how and why these marriages managed to stay together, when so many others ended in dissolution, is for us one of the most intriguing aspects of this work.

The contemporary cohort of long-term marriages with spouses between the ages of 60–70 years is particularly interesting to us. These couples have lived together during a historical period that has seen dramatic changes, including a number of changes in which gender was central. They married at a younger age and, compared with later cohorts, were more likely to stay together. Social trends such as the women's movement, the entry of women into the work force, and the normative shift in expectations from instrumental to companionate and intimate marriages all exerted powerful influences on their lives and marriages. The comparison cohort that we selected, long-term marriages with spouses between the ages of 40–50 years, represents the generation of our older cohort's children. Projecting forward in our own careers, by choosing a 20-year age interval between the two cohorts, we preserved the possibility of being able to follow the middle-aged group until they reached the age of our older cohort and of following the older cohort into very old age.

Why Emphasize Marital Satisfaction?

There is a long tradition in the sociological and psychological literatures of using self-report measures of marital satisfaction in research on marriage. A number of psychometrically sound

measures of marital satisfaction exist (e.g., Burgess, Locke, & Thomes, 1971; Locke & Wallace, 1959; Spanier, 1976), most of which are highly correlated. Variables such as income, children, and personality have been implicated as playing an important role in determining marital satisfaction (Gottman, 1979). Our own reading of this literature and our own research has suggested that the most important determinant of marital satisfaction is the couples' ability to resolve conflict (Gottman & Levenson, 1988). Whatever its basis, and individuals undoubtedly apply their own weightings in deciding how satisfied they are with their own marriage, in our research with younger couples we have found self-report measures of marital satisfaction to be strongly related to features of marriage in domains such as emotional behavior, physiological arousal of spouses, physiological interrelatedness between spouses, and risk for dissolution (e.g., Gottman & Levenson, 1988, 1992; Levenson & Gottman, 1983, 1985). Consistent with socioemotional selectivity theory, we expect that older couples will manage conflict with less negativity than will younger couples.

Two caveats must be offered regarding the construct of marital satisfaction as embodied in the present research. First, marital satisfaction is relative, and not absolute. We follow the dominant tradition in marital research by establishing cutoffs for satisfied and dissatisfied couples and then treating marital satisfaction as a categorical variable. Nonetheless, we recognize that marital satisfaction exists on a continuum; thus, we conducted auxiliary analyses to ensure that our use of these categories did not distort relations between marital satisfaction and other variables. Second, at this juncture, we have only measured present levels of marital satisfaction and thus do not know whether couples who are currently high or low in satisfaction were always so.

Goals and Hypotheses

The goal of this initial phase of our work is primarily descriptive, characterizing long-term marriages at two different stages of the life cycle. On the basis of the theory and research presented earlier, we formulated four hypotheses: (a) There will be less conflict and more pleasure in older marriages than in middle-aged marriages, (b) the relations between health and marital satisfaction will be stronger for wives than for husbands, (c) children will be a greater source of conflict for middle-aged couples than for older couples, and (d) gender differences will be less pronounced in older couples than in middle-aged couples.

Method

*Sampling*¹

Our goal was to recruit a sample of old and middle-aged couples who were representative of the ethnic, economic, and religious makeup of the Berkeley, California, area. To minimize systematic biases, we constructed the experimental sample in a three-stage process. First, we employed a survey research company to conduct a random telephone survey to assess broadly the population characteristics of people living in the area. Second, we conducted an initial screening of prospective subjects by having them complete a questionnaire packet. Finally, from

¹ We acknowledge the invaluable and generous help of Linda K. George in the design of the sampling strategy.

this prospective subject pool, we recruited couples who met selection criteria that were established on the basis of the random survey.

Random telephone survey. We employed a survey research company (Illini Research Center) to conduct a telephone interview with women living in the area. Names were selected randomly from lists of all licensed drivers and registered voters. Random selection continued until telephone interviews were completed with 170 women who met the following requirements: (a) married and currently living with their husbands, (b) in one of the two groups defined on the basis of age and marital duration (either between the ages of 40 and 50 and married at least 15 years or between the ages of 60 and 70 and married at least 35 years), and (c) major wage earner in family had not retired. These criteria were selected so that (a) the two groups would differ by 20 years (approximately one generation) in age; (b) their lengths of marriage would also differ by 20 years, and they would have been married for most of their adult lives; and (c) we could preserve the possibility of studying these marriages before and after retirement.

The telephone interview consisted of oral administration of a measure of marital satisfaction (Locke & Wallace, 1959) and demographic questions relevant to ethnicity, religion, spouses' education, parents' education, and spouses' occupations. These interviews were conducted with wives because (a) we have found wives to be generally more willing to talk to researchers about their marriages than are husbands, and (b) Gottman and Krokoff (1989) found that Locke-Wallace scores obtained by telephone interviews from wives were highly correlated with their own and their husband's scores on the paper-and-pencil version of the test. The data obtained from this telephone survey were used to establish selection criteria (i.e., marital satisfaction, ethnicity, religion, and socioeconomic status) for the actual experimental sample.

Recruitment and initial screening. We recruited experimental subjects by way of newspaper advertisements, articles in general readership newspapers, articles in newsletters of organizations serving elderly populations, public service announcements on radio stations, notices in employee newsletters and church bulletins, fliers posted on bulletin boards, and advertising placards on city buses. Interested couples were asked to contact the laboratory by telephone.

A brief telephone screening was conducted with 960 respondents to determine whether couples met our criteria for age, duration of marriage, geographical location, and retirement status. Couples were told that the initial experiment would involve coming to our laboratory on three occasions, they would engage in conversations with each other on various topics of relevance to their marriages, we would videotape their conversations, and we would obtain both self-report and physiological measures. Interested subjects were sent a questionnaire package that included a general information questionnaire (demographic information, education, and marital history), a measure of alcohol consumption, a screening test for alcoholism (Michigan Alcoholism Screening Test [MAST]; Selzer, 1971), measures of psychological health (Symptom Checklist-90 [SCL-90]; Derogatis, Rickels, & Rock, 1976), physical health (Cornell Medical Index [CMI]; Brodman, Erdmann, & Wolff, 1974), and functional health (on the basis of Health Insurance Study [Brook et al., 1979] questionnaires), and two measures of marital satisfaction.

Each spouse was asked to complete a separate set of the questionnaires without consulting with the other spouse. Couples were paid \$20 for filling out this screening questionnaire, which was ultimately completed by 297 couples.

Selection of experimental sample. Couples were recruited for four experimental groups on the basis of age and relative marital satisfaction: (a) middle-aged satisfied, (b) middle-aged dissatisfied, (c) old satisfied, and (d) old dissatisfied. Criteria for age and duration of marriage in each group were the same as those used for the random telephone survey (old couples: older spouse between the ages of 60 and 70 and

married for at least 35 years; middle-aged couples: older spouse between the ages of 40 and 50 and married for at least 15 years). Initial assignments to the satisfied and dissatisfied groups were made on the basis of the wife's marital satisfaction score on the Locke-Wallace inventory (Locke & Wallace, 1959), using cutoffs that were based on the mean scores obtained in the telephone survey for middle-aged wives and for old wives. For middle-aged couples, the wife's marital satisfaction score had to be greater than 124 for the satisfied group and less than or equal to 124 for the dissatisfied group; for old couples, the cutoff was 127.

Couples in all groups had to meet the following additional criteria: (a) spouses' marital satisfaction scores had to be within 20 points of each other, (b) spouses' age difference could be no more than 5 years, (c) primary wage earner must not have retired, (d) couple had to live within a 10-mile radius of the University of California, Berkeley, (e) neither spouse could be alcoholic (as indicated by both spouses scoring 7 or lower on the MAST), and (f) English had to be the native language, or the language customarily spoken at home. Our rationale for the satisfaction and age criteria was to have couples who represented the modal, long-term marriage, in which couples are relatively close in marital satisfaction and age, and to avoid situations in which spouses would fall into different satisfaction or age groups.

Within each group, we attempted to recruit couples with the widest possible distribution of marital satisfaction scores. We also attempted to have the composition of each group match the demographic criteria established in the random telephone survey for socioeconomic status, religion, and ethnicity. For socioeconomic status, we used the U.S. Bureau of the Census's (1982) classified index of industries and occupations to classify each couple as being either blue collar (e.g., service, farming, forestry, fishing, precision production, craft, repair, operators, fabricators, and laborers), pink collar (e.g., technical, sales, and administrative support), or white collar (e.g., managerial and professional) on the basis of the major wage earner's job.

We were generally successful in meeting our recruitment goals for age, satisfaction, socioeconomic status, and religion. We were less successful in meeting our goals for ethnicity. As the recruitment progressed, we encountered considerable difficulties finding minority couples for some of our experimental groups (especially old satisfied couples). Rather than ending up with nonequivalent ethnic distributions in our four experimental groups, we decided to keep the ethnic composition of the groups equal. Rather than reducing the overall sample size (and thus decreasing the statistical power of the experiment), we decided to complete our recruitment by over sampling Caucasians (resulting in a 17% greater representation of Caucasians than had been our original target).

Final sample. The final sample for the laboratory experiment consisted of 156 couples. The age and length of marriage requirements made it unlikely that couples would have been previously married or that they would still be in the childbearing period. In fact, 155 of the couples were in first marriages. Childless couples were quite rare; 149 of the couples had children and only 1 middle-aged couple expected to have additional children (they were early in the course of an unplanned pregnancy). Thus, essentially all couples were beyond the family-building stage of the life cycle. For middle-aged couples, the mean age of their children was 16.8 years ($SD = 5.3$, range = 7–28). For old couples, the mean age of their children was 35.8 years ($SD = 3.89$, range = 27–46). Among the 76 middle-aged couples who had children, 67 still had children living at home. Thus, middle-aged couples in this sample were not likely to be experiencing the "empty-nest" syndrome. Among the 73 old couples who had children, only 12 still had children living at home.

We computed each couple's marital satisfaction by calculating the grand mean of both spouses' scores on two measures of marital satisfaction (i.e., the Locke-Wallace and the Locke-Williamson inventories; see

the description in the next section). For the entire sample, the mean for this aggregated score was 111.5 ($SD = 17.0$), and the median was 115.1 (range = 42.8–160.0). This median score was used to make the final assignments to experimental groups as follows: (a) middle-aged satisfied ($n = 35$), (b) middle-aged dissatisfied ($n = 47$), (c) old satisfied ($n = 43$), and (d) old dissatisfied ($n = 31$).

Measures

Marital history. Information was obtained on age at marriage, length of time couples knew each other before marriage, number of children, months of marriage counseling, serious consideration of separation, and serious consideration of divorce.

Marital satisfaction. Two well-established self-report measures of marital satisfaction were administered. The Locke-Williamson (Burgess et al., 1971) is a 22-item inventory (e.g., "Do you and your mate agree on handling family finances?"). The Locke-Wallace (Locke & Wallace, 1959) is a 15-item inventory (e.g., "Do you confide in your mate?"). These are the same satisfaction measures used in all of our previous studies of marriage (e.g., Gottman & Levenson, 1992; Levenson & Gottman, 1983, 1985).

Physical health: Cornell Medical Index. The CMI (Brodman, Erdmann, & Wolff, 1974) consists of 195 items tapping physical health (e.g., "Are you troubled by constant coughing?"). For each item, the respondent indicates whether the symptom is present or not and, if present, how much it interferes with usual activities (5-point scale). The inventory is scored for overall symptom severity and for 18 subscales (eyes and ears, respiratory system, cardiovascular system, digestive tract, musculoskeletal system, skin, nervous system, genitourinary system, fatigability, frequency of illness, miscellaneous diseases, habits, inadequacy, depression, anxiety, sensitivity, anger, and tension). Because it is a symptom checklist, lower scores on the CMI are associated with higher physical health.

Functional health. We developed a 29-item, self-report inventory, borrowing from the Health Insurance Study (Brook et al., 1979), that assessed limitations in exercise and functional activity (e.g., driving, walking, bending, and climbing stairs) using Likert-scale ratings. An example item is "When you travel around your community, does someone have to assist you because of your health?" If the person answers in the affirmative, they complete the follow-up question, "How long have you needed someone to assist you in traveling around your community?" The inventory is scored for overall functional health. Because it measures limitations, lower scores are associated with higher functional health.

Psychological health: SCL-90. This inventory (Derogatis et al., 1976) consists of 90 items tapping psychological health (e.g., "Temper outbursts that you could not control") on which respondents indicate how much they are distressed by the symptom (5-point scale). The inventory is scored for global severity and for nine subscales (somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism). Because it is a symptom checklist, lower scores on the SCL-90 are associated with higher psychological health.

Alcoholism. The MAST (Selzer, 1971) is a 25-item scale that is often used as a screening inventory for alcoholism in the alcohol literature. Respondents indicate "yes" or "no" to items such as "Have you ever lost a job because of drinking?"

Alcohol consumption. This inventory assesses the quantity and frequency of weekly consumption of beer, wine, and hard liquor. Respondents answer questions such as "During the last 30 days, about how much wine would you typically drink on a day when you drank wine?"

Sources of conflict. Each spouse separately rates the amount of disagreement in 10 areas of potential conflict by writing a number from 0 to 100. The areas of potential conflict are money, communication,

in-laws, sex, religion, recreation, friends, alcohol and drugs, children, and jealousy. This questionnaire was developed by Gottman, Markman, and Notarius (1977).

Sources of pleasure. Each spouse separately rates the amount of enjoyment they derive in 16 areas by writing a number from 0 to 100. The areas of potential pleasure are other people; casual and informal things; politics and current events; things to do around the house; things happening in town; silly and fun things; good times in the past; children or grandchildren; views on issues; accomplishments; family pets; things done together recently; dreams; plans for the future; television, radio, and reading; and vacations.

Procedure

Subjects completed the health, marriage, and alcohol questionnaires at home before being scheduled for laboratory sessions, which were based on a three-session protocol for studying emotion, behavior, and physiology during marital interaction that was developed by Levenson and Gottman (1983). In the first laboratory session, couples engaged in three 15-min conversational interactions: (a) a discussion of the events of the day, (b) a discussion of a problem area of continuing disagreement in their marriage, and (c) a discussion of a mutually agreed upon pleasant topic. Before the problem-area discussion, couples completed the questionnaire used to assess sources of conflict. Before the pleasant-topic discussion, they completed the questionnaire used to assess sources of pleasure. Couples were paid \$150 for participating in the study.

Results

Demographic Characteristics of the Sample

The final sample can be characterized as Caucasian, upper middle class, white collar, well educated, and Judeo-Christian, reflecting the demographics of the Berkeley environs. As mentioned earlier, because of recruitment difficulties, the proportion of Caucasians was higher than originally intended.

Sample specifics were (a) ethnicity—85.9% Caucasian, 5.8% African-American, 2.6% Hispanic, 2.6% Asian, and 2.2% in which spouses were of different ethnicities; (b) household income— $Mdn = \$50,000$ – $\$59,999$, range = below \$10,000–above \$100,000; (c) job status of major wage earner—68.6% white collar, 19.9% pink collar, and 11.5% blue collar; (d) education— $M = 16.0$ years, range = 8–20; and (e) religion—39.7% Protestant, 14.1% Catholic, 13.5% Jewish, 8.3% other religion, 12.2% no religion, and 12.2% in which spouses were of different religions.

Data Analysis and Presentation of Results

Major data analyses were conducted using a $2 \times 2 \times 2$ (Age \times Satisfaction \times Spouse) analyses of variance (ANOVA) with spouse treated as a within-subject factor. Results are presented for middle-aged and old couples, satisfied and dissatisfied couples, and husbands and wives; within each of these groupings the organization is by demographic variables, marital variables, health, sources of conflict, and sources of pleasure.

Middle-Aged and Old Couples

Demographic variables. Middle-aged and old couples did not differ in education or income.

Marital variables. Compared with old couples, middle-aged couples knew each other for a longer time before marriage—middle aged, $M = 2.9$ years, old, $M = 2.2$ years, $F(1, 152) = 4.35$, $p < .05$; and had fewer children—middle aged, $M = 2.2$, old, $M = 3.2$, $F(1, 152) = 43.80$, $p < .001$. Middle-aged and old couples did not differ in age at marriage, marital satisfaction, serious consideration of separation, months of marital counseling, or serious consideration of divorce.

Health variables. Compared with old couples, middle-aged couples had higher functional health—middle aged, $M = 1.05$, old, $M = 1.12$, $F(1, 152) = 4.89$, $p < .05$. Overall a main effect for age indicated that middle-aged couples had more signs of alcoholism than did old couples—middle aged, $M = 1.7$ signs, old, $M = .9$ signs, $F(1, 152) = 4.46$, $p < .05$. However, a significant Age \times Spouse interaction, $F(1, 151)$, $p < .01$, revealed that greater signs of alcoholism for middle-aged couples than for old couples was true for husbands—middle-aged husbands, $M = 2.35$ signs, old husbands, $M = .84$ signs, $t(151) = 3.19$, $p < .001$; but not for wives.

Middle-aged and old couples did not differ in amount of alcohol consumption, psychological health, or overall physical health. Physical health subscale scores, however, did reveal some age-related differences. Compared with middle-aged couples, old couples reported more eye and ear symptoms—middle age, $M = .38$, old, $M = .52$, $F(1, 152) = 9.10$, $p < .01$; more cardiovascular symptoms—middle age, $M = .15$, old, $M = .24$, $F(1, 152) = 4.80$, $p < .05$; and more miscellaneous diseases—middle age, $M = .19$, old, $M = .26$, $F(1, 152) = 6.22$, $p < .05$.

Sources of conflict. Couples rated the amount of disagreement in 10 areas of conflict. Table 1 presents these ratings in terms of age, satisfaction, and spouse. Age-related differences were found in four areas. Middle-aged couples disagreed more than did old couples about money, religion, recreation, and children.

In Table 2, sources of conflict are arranged from the most highly rated to the least highly rated for middle-aged and old couples. Examination of the table reveals that only children changed rank by three positions between the two age groups; children were the largest area of disagreement for middle-aged couples but were only fourth in importance for old couples. Only communication and recreation changed by two positions

between the two groups, with both being relatively more important sources of conflict for old couples than for middle-aged couples.

Sources of pleasure. Couples rated the amount of enjoyment they derived in talking about 16 topics. Table 3 presents these ratings in terms of age, satisfaction, and spouse. Age-related differences were found for four topics. Old couples derived more enjoyment than did middle-aged couples from talking about children or grandchildren, things done together recently, dreams, and vacations.

Satisfied and Dissatisfied Couples

Demographic variables. Satisfied and dissatisfied couples did not differ in education or income.

Marital variables. Compared with dissatisfied couples, satisfied couples had higher marital satisfaction—satisfied, $M = 124.0$ (composite score), dissatisfied, $M = 98.9$, $F(1, 152) = 179.91$, $p < .001$; fewer months of marriage counseling—satisfied, $M = .63$ months, dissatisfied, $M = 3.10$ months, $F(1, 152) = 5.62$, $p < .05$; were less likely to have seriously considered separation—satisfied, $M = .06$ (separation index score), dissatisfied, $M = .33$, $F(1, 152) = 27.96$, $p < .001$; and were less likely to have seriously considered divorce—satisfied, $M = .04$ (divorce index score), dissatisfied, $M = .29$, $F(1, 152) = 29.30$, $p < .001$. Satisfied and dissatisfied couples did not differ in age at marriage, how long they knew each other before marriage, or number of children.

Health variables. Compared with dissatisfied couples, satisfied couples had higher physical health—satisfied, $M = .15$ (CMI), dissatisfied, $M = .22$, $F(1, 152) = 8.41$, $p < .005$; and higher psychological health—satisfied, $M = .15$ (SCL-90), dissatisfied, $M = .29$, $F(1, 152) = 21.33$, $p < .001$. Satisfied and dissatisfied couples did not differ in amount of alcohol consumption, signs of alcoholism, or functional health.

Sources of conflict. Satisfaction-related differences were found in all 10 areas. As would be expected, dissatisfied couples reported significantly greater disagreement than did satisfied couples in all areas.

This pattern of greater conflict in dissatisfied couples than in satisfied couples was consistent across the two age groups

Table 1
Sources of Conflict: Reported Levels of Disagreement (0–100 Scale)

Topic	Age			Satisfaction			Spouse		
	Middle	Old	F	Dissatisfied	Satisfied	F	Husband	Wife	F
Money	25.6	15.9	6.14*	29.8	12.2	31.88***	19.8	22.2	1.69
Communication	25.4	19.3	1.21	31.2	13.9	29.09***	21.4	23.7	1.07
In-laws	18.1	11.8	2.68	20.6	9.6	12.77***	15.3	15.0	< 1
Sex	19.8	13.1	1.49	26.7	6.5	44.73***	16.5	16.7	< 1
Religion	13.8	6.6	5.39*	13.8	6.9	3.96*	10.5	10.2	3.13
Recreation	24.8	16.3	5.55*	26.8	14.8	13.43***	21.1	20.6	< 1
Friends	14.6	10.9	1.07	16.5	9.1	7.45**	12.8	12.9	< 1
Alcohol and drugs	9.6	5.4	2.11	11.7	3.6	11.83**	6.8	8.4	1.62
Children	25.7	13.7	11.83**	27.4	12.5	20.06***	19.6	20.3	< 1
Jealousy	8.3	6.4	< 1	12.0	2.8	25.87**	7.6	7.3	< 1

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

Table 2
Ranks and Mean Levels of Sources of Conflict and Pleasure

Rank	Middle-aged couples		Old couples	
	Topic	M	Topic	M
Sources of conflict				
1	Children	25.7	Communication	19.3
2	Money	25.6	Recreation	16.3
3	Communication	25.4	Money	15.9
4	Recreation	24.8	Children	13.7
5	Sex	19.8	Sex	13.1
6	In-laws	18.1	In-laws	11.8
7	Friends	14.6	Friends	10.9
8	Religion	13.8	Religion	6.6
9	Alcohol and drugs	9.6	Jealousy	6.4
10	Jealousy	8.3	Alcohol and drugs	5.4
Sources of pleasure				
1	Good times in the past	75.5	Children or grandchildren	83.0
2	Other people	73.6	Good times in the past	79.9
3	Children or grandchildren	72.9	Vacations taken	79.3
4	Vacations taken	70.6	Things done together recently	78.5
5	Things done together recently	70.0	Other people	76.4
6	Silly and fun things	69.3	Plans for the future	74.8
7	Plans for the future	67.9	Television, radio, and reading	73.9
8	Television, radio, and reading	67.6	Casual and informal things	68.2
9	Casual and informal things	66.4	Silly and fun things	67.4
10	Accomplishments	60.4	Accomplishments	64.1
11	Views on issues	59.5	Politics and current events	63.2
12	Politics and current events	57.7	Views on issues	60.5
13	Things happening in town	46.0	Things happening in town	51.3
14	Family pets	45.3	Family pets	48.0
15	Things to do around the house	40.2	Things to do around the house	46.1
16	Dreams	36.6	Dreams	45.6

except for two areas in which this was limited to middle-aged couples. For disagreement about alcohol and drug use, a significant Age \times Satisfaction interaction, $F(1, 152) = 11.83$, $p < .01$, revealed that greater disagreement in dissatisfied than in satisfied couples was true for middle-aged couples—middle-aged dissatisfied, $M = 15.1$, middle-aged satisfied, $M = 2.2$, $t(152) = 4.27$, $p < .001$, but not for old couples. Similarly, for disagree about religion, a significant Age \times Satisfaction interaction, $F(1, 152) = 4.75$, $p < .05$, revealed that greater disagreement in dissatisfied than in satisfied couples was true for middle-aged couples—middle-aged dissatisfied, $M = 18.7$, middle-aged satisfied, $M = 7.2$, $t(152) = 2.96$, $p < .01$, but not for old couples.

Sources of pleasure. Satisfaction-related differences were found for 8 of 16 topics. Dissatisfied couples derived less enjoyment in talking about things to do around the house; good times in the past; views on issues; accomplishments; things done together recently; plans for the future; television, radio, and reading; and vacations. Differences between dissatisfied and satisfied couples in the pleasure derived from these topics were consistent across age groups; all Age \times Satisfaction interactions were nonsignificant.

Auxiliary correlational analysis. It could be argued that using the sample's median satisfaction score as the cutoff to establish satisfied and dissatisfied groups is somewhat arbitrary, and, thus, imposing these categories on what is essentially a continu-

ous variable could have distorted our findings. To evaluate this possibility, we conducted a set of correlational analyses between couples' actual marital satisfaction scores and the various demographic, marital history, health, conflict, and pleasure variables. Because such correlations do not have the protection against Type I error afforded by the overall F tests in ANOVAs, we adopted the .01 significance level.

The results of these correlational analyses were essentially the same as those derived from the ANOVAs that treated marital satisfaction as a categorical variable.

Husbands and Wives

Demographic variables. Overall, a main effect for spouse indicated that husbands had more education than wives—husbands, $M = 16.6$ years, wives, $M = 15.3$ years, $F(1, 152) = 29.81$, $p < .001$. However, a significant Age \times Spouse interaction revealed that greater education for husbands than for wives was true in old marriages—old husbands, $M = 16.74$ years, old wives, $M = 14.6$ years, $t(152) = 4.59$, $p < .001$; but not in middle-aged marriages.

Marital variables. Compared with wives, husbands were older at the time of marriage—husbands, $M = 23.2$ years, wives, $M = 22.0$ years, $F(1, 152) = 46.04$, $p < .001$. Husbands

Table 3
Sources of Pleasure: Reported Enjoyment (0-100 Scale)

Topic	Age			Satisfaction			Spouse		
	Middle	Old	F	Dissatisfied	Satisfied	F	Husband	Wife	F
Other people	73.6	76.4	< 1	72.4	77.5	2.56	70.2	79.7	17.32***
Casual and informal things	66.4	68.2	< 1	64.8	69.8	2.92	64.1	70.4	3.96*
Politics and current events	57.7	63.2	1.64	58.3	62.4	< 1	60.3	60.3	< 1
Things to do around house	40.2	46.1	1.51	38.6	47.4	4.38*	43.0	43.0	< 1
Things happening in town	46.0	51.3	2.19	48.9	48.1	< 1	47.8	49.2	< 1
Silly and fun things	69.3	67.4	< 1	66.5	70.3	1.72	65.9	70.9	2.61
Good times in the past	75.5	79.9	1.09	72.7	82.5	11.11**	75.9	79.2	1.02
Children or grandchildren	72.9	83.0	7.44**	75.8	79.7	< 1	75.2	80.3	5.09*
Views on issues	59.5	60.5	< 1	54.6	65.5	10.27**	56.6	63.3	5.16*
Accomplishments	60.4	64.1	< 1	56.9	67.5	8.06**	58.5	65.7	5.41*
Family pets	45.3	48.0	< 1	45.4	47.5		44.2	48.8	1.49
Things done together recently	70.0	78.5	5.38*	68.7	79.4	9.40**	72.0	76.1	2.05
Dreams	36.6	45.6	4.17*	38.1	43.7		37.4	44.2	4.37*
Plans for the future	67.9	74.8	1.96	64.3	78.2	13.84***	68.1	74.3	5.35*
Television, radio, and reading	67.6	73.9	3.33	66.6	74.6	5.97*	67.2	73.9	6.86**
Vacations taken	70.6	79.3	5.11*	69.7	79.8	7.94**	72.6	76.8	2.42

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

and wives did not differ in marital satisfaction or serious consideration of divorce.

For consideration of separation, a significant Age \times Spouse interaction, $F(1, 152) = 4.77$, $p < .05$, revealed that wives were more likely to have considered separation than were their husbands in old marriages—old wives, $M = 0.20$ (separation index score), old husbands, $M = 0.09$, $t(152) = 1.78$, $p < .05$; but not in middle-aged marriages.

Health variables. Compared with wives, husbands showed more signs of alcoholism—husbands, $M = 1.6$ signs, wives, $M = 1.0$ signs, $F(1, 151) = 4.07$, $p < .043$; and had higher functional health—husbands, $M = 1.0$ (item score), wives, $M = 1.1$, $F(1, 152) = 26.84$, $p < .001$.

Overall, a main effect for spouse indicated that husbands consumed more alcohol than their wives—husbands, $M = 3.8$ (weekly ounces), wives, $M = 2.4$, $F(1, 150) = 11.75$, $p < .001$. However, a significant Age \times Satisfaction \times Spouse interaction, $F(1, 150) = 4.12$, $p < .05$, revealed that greater alcohol consumption for husbands than for wives was true only in unhappy middle-aged marriages—husbands, $M = 4.9$ (weekly ounces) wives, $M = 1.67$, $t(150) = 3.02$, $p < .01$.

Overall, a main effect for spouse indicated that wives had lower physical health than their husbands—husbands, $M = .14$ (CMI), wives, $M = .23$, $F(1, 152) = 15.24$, $p < .001$. However, a significant Satisfaction \times Spouse interaction, $F(1, 152) = 5.28$, $p < .05$, revealed that lower physical health for wives than for husbands was true in dissatisfied marriages—dissatisfied husbands, $M = .15$ (CMI), dissatisfied wives, $M = .30$, $t(152) = 4.38$, $p < .001$, but not in satisfied marriages.

Similarly, a main effect for spouse indicated that wives had lower psychological health than their husbands—husbands, $M = .18$ (SCL-90), wives, $M = .25$, $F(1, 152) = 5.93$, $p < 0.05$. Again, a significant Satisfaction \times Spouse interaction, $F(1, 152) = 5.36$, $p < .05$, revealed that lower psychological health for wives than for husbands was true in dissatisfied marriages—dissatisfied husbands, $M = .22$ (SCL-90), dissatis-

fied wives, $M = .36$, $t(152) = 3.35$, $p < .01$; but not in satisfied marriages.

Sources of conflict. Overall, husbands and wives did not differ in the extent to which they rated disagreement in the 10 areas (i.e., nonsignificant main effects for spouse). However, a significant Satisfaction \times Spouse interaction, $F(1, 151) = 6.49$, $p < .050$, revealed that wives reported greater disagreement than did husbands over money in dissatisfied marriages—dissatisfied husbands, $M = 26.3$, dissatisfied wives, $M = 33.4$, $t(151) = -2.12$, $p < .05$; but not in satisfied marriages.

Sources of pleasure. Spouse-related differences were found for 8 of 16 topics. Wives derived more enjoyment than did husbands in talking about other people; casual and informal things; children or grandchildren; views on issues; accomplishments; dreams; plans for the future; and television, radio, and reading.

A number of significant interactions with age revealed that in some areas, greater enjoyment for wives than for husbands was found for middle-aged couples (i.e., for casual and informal things, good times in the past, accomplishment, dreams, and plans for the future), but not for old couples. Several significant interactions with satisfaction revealed that in some areas, greater enjoyment for wives than for husbands was found for satisfied couples (i.e., good times in the past and accomplishment), but not for dissatisfied couples. Means and statistical tests of these interactions are presented in Tables 4 and 5.

Discussion

Middle-Aged and Old Couples

In this research, we are studying two cohorts that differ by a generation, one in middle age and one on the threshold of old age. These two cohorts came to maturity and marriage in very different times. Our old couples were the children of the great depression, growing up in times of poverty, marrying toward

Table 4
Sources of Pleasure: Significant Age \times Spouse Interactions

Topic	Age \times Spouse F	Middle aged		Old	
		Husbands	Wives	Husbands	Wives
Casual and informal things	5.87*	59.9**	72.6**	68.5	67.9
Good times in the past	4.94*	71.6*	79.2*	80.5	79.2
Accomplishments	3.87*	54.5**	66.0**	62.8	65.4
Dreams	4.52*	30.6*	42.4*	45.0	46.2
Plans for the future	11.89**	61.2**	74.4**	75.5	74.2

Note. Means with common superscripts significantly differ.
* $p < .05$. ** $p < .01$.

the end of World War II, and building their families during the Eisenhower years, which are often viewed as a period of relative political and social stability. Our middle-aged couples were the beginning of the baby-boom generation, growing up in times of relative economic prosperity, marrying, and building their families during the political and social upheaval of the late 1960's and 1970's.

Demographic and marital variables. Given the considerable differences in views about the nature of marriage and family that typify these eras, it is interesting to note that, in terms of marital histories, these two cohorts were alike in a number of ways. Middle-aged and old-marriage couples did not differ in age at time of marriage, in the amount of marital counseling they had obtained, in serious consideration of separation, or in serious consideration of divorce. Of course, some of these similarities could simply result from different lengths of marriage. Twenty years from now, when our middle-aged couples will have been married for as long as our old couples are now, their consideration of separation and divorce and their amount of marital counseling may well exceed that of our old couples.

Age-group differences were found in spouses' education, in the time that couples knew each other before marriage, and in the number of children. The finding that husbands were more highly educated than were wives in old couples, but not in middle-aged couples, likely results from lesser encouragement and opportunity for women to obtain higher education during the period in which the older cohort was obtaining their education. The finding that middle-aged couples knew each other longer before marriage than did old couples may reflect an extended courtship resulting from middle-aged couples being more likely to live together before marriage. Given that all but one of

our middle-aged couples were not planning to have additional children, their having fewer children likely represents a true generational difference, with baby boomers having fewer children than did their parents.

Health. Middle-aged and old couples did not differ in overall physical health on the CMI or overall psychological health on the SCL-90. Of course, our experimental procedure, which required multiple laboratory sessions of several hours duration, undoubtedly selected a sample that was in relatively good physical health. The only age-related health difference that was found was as expected: Old couples reported lower functional health than did middle-age couples on a measure that emphasizes limitations in exercise and functional activities.

Sources of conflict. Middle-aged and old couples differed in relation to sources of conflict. In 4 of the 10 areas that we assessed, old couples reported lower amounts of disagreement than did middle-aged couples (money, religion, recreation, and children). To the extent that disagreement in these areas can be construed as predictive of actual marital conflict, these data suggest a reduced potential for conflict in old marriages.

Looking at the rankings of the various conflict areas, it appears that the major age-related difference is that children become a relatively less important source of disagreement in old couples as compared with middle-aged couples. This finding is consistent with the fact that, for almost all of our couples in the 60-70 age range, their children have grown up and left home and thus represent a much less immediate source of conflict. In the 40-50 age range of our middle-aged couples, children have only recently left home or are still at home and thus are more salient as sources of disagreement and conflict. Children are clearly a dual-edged sword in marriage. In the Sporkowski and

Table 5
Sources of Pleasure: Significant Satisfaction \times Spouse Interactions

Topic	Satisfaction \times Spouse F	Dissatisfied		Satisfied	
		Husbands	Wives	Husbands	Wives
Good times in the past	5.66*	73.4	72.0	78.5*	86.4*
Accomplishments	4.55*	55.6	58.0	61.4**	73.4**

Note. Means with common superscripts significantly differ.
* $p < .05$. ** $p < .01$.

Hughston (1978) study of marriages that had lasted over 50 years, childbearing years were rated as both among the most satisfying and the least satisfying periods of the marriage.

The other noteworthy shifts in relative rankings that were found in our data were the increasing importance of communication and recreation as sources of conflict in old age. With children away from home and social networks possibly beginning to shrink, the prominence of spousal communication for old couples is easy to understand. Similarly, with careers beginning to wind down and reduced parental responsibilities leading to increased leisure time, the increased importance afforded recreation as a source of conflict for old couples is not surprising.

Sources of pleasure. Middle-aged and old couples also differed in relation to sources of pleasure: In 4 of 16 areas assessed, age-related differences were found. Old couples derived more enjoyment than did middle-aged couples in talking about children or grandchildren, things done together recently, dreams, and vacations. Thus, in a set of activities encompassing offspring, communal activities, and intimate psychological experiences, the potential for pleasure was greater in old couples than in middle-aged couples.

Looking at the relative rankings of the 16 areas, discussions about children and grandchildren were the only topics that had noteworthy increases in relative importance for old couples. This would be consistent with their children reaching adulthood, a time when many families report some of their most rewarding interactions. A relative decline in the importance of other people and of silly and fun things for old people is consistent with a reduction in the size of social networks and with a lower value placed on superficial activities. The lessened importance of other people and increased attention to family members contributes to a growing body of literature suggesting that, across the life course, people become increasingly focused on a narrowing set of emotionally meaningful relationships (Carstensen, 1991, 1992).

Satisfied and Dissatisfied Couples

Demographic and marital variables. A number of possible candidates for inclusion in the recipe for a satisfied marriage were evaluated. Five likely candidates—income, education, age at marriage, time knowing each other before marriage, and number of children—were all found to fail to distinguish satisfied and dissatisfied couples in this sample.

As might be expected, dissatisfied couples were more likely to have considered separation, to have considered divorce, and to have sought marital counseling than were satisfied couples. These findings underline the utility of measures of marital satisfaction for indexing processes relevant to the possible dissolution of marriages. In our work with younger couples (Gottman & Levenson, 1992), measures of marital satisfaction have also predicted subsequent dissolution. In the present study, with measures of marital satisfaction and dissolution obtained contemporaneously, there is no way of knowing whether low marital satisfaction will prove to be predictive of changes in marital stability. Given that rates of divorce in old age are relatively low, it may be that marital dissatisfaction in old age does not predict actual marital dissolution. If that is true, and our currently dis-

satisfied couples remain dissatisfied, it will be informative to determine how such couples manage to stay together over time.

Health. Satisfied couples reported being in better physical and psychological health than did dissatisfied couples. On the surface, this finding would suggest that happier marriages are healthier marriages; however, closer analysis revealed that these relations were different for husbands and wives. We discuss these spousal differences in greater detail in the section entitled *Husbands and Wives*.

It is worth noting that the relation between health and marital satisfaction found in this sample cannot readily be discounted as merely reflecting a response set (e.g., complaining about everything), given that marital satisfaction was found to be unrelated to another self-report health measure of functional health.

Sources of conflict and pleasure. Marital satisfaction was strongly related to the amount of disagreement couples reported. In all 10 areas that we assessed (money, communication, in-laws, sex, religion, recreation, friends, alcohol and drugs, children, and jealousy), dissatisfied couples reported greater disagreement than did satisfied couples. Disagreement over such a broad range of topics provides a highly fertile ground for the development of full-fledged marital conflict. Although others may afford a more important role to such factors as love, commitment, pleasure, and compatibility, a central tenet of our research on marriage has been the intimate relation between conflict, marital happiness, and the ultimate stability of the relationship. We believe the cumulative effects of unsatisfactory resolution of important issues play a major role in the erosion of marital stability over time.

Of course, in long-term dissatisfied marriages such as those included in the present study, it is quite possible that the capacity of unresolved conflict to produce marital dissolution could weaken, perhaps by processes of habituation and increasing tolerance (as in the conflict habituated couples described in Cuber & Harroff's, 1965, marital typology). Only longitudinal follow-up of the dissatisfied marriages in this sample will enable us to determine whether that is the case.

Consistent with this view that marital satisfaction is more closely related to conflict than to pleasure, for areas of enjoyment, dissatisfied and satisfied couples differed in only 8 of 16 measured areas. Dissatisfied couples reported deriving less pleasure than did satisfied couples in things to do around the house; good times in the past; views on issues; accomplishments; things done together recently; plans for the future; television, radio, and reading; and vacations. No differences were found for other people, casual and informal things, politics and current events, things happening in town, silly and fun things, children or grandchildren, family pets, and dreams.

Husbands and Wives

We have long been interested in exploring the nature and basis of gender differences in marriage (e.g., Gottman & Levenson, 1988). The present study found differences between spouses in several areas.

Health. One clear finding that emerged in our sample was that wives reported greater signs of distress in a number of different areas. Compared with husbands, wives indicated that

they had more severe physical, psychological, and functional health problems. The finding that women report more psychological symptoms than do men is not very surprising because women are more likely than men to focus on their emotions (Nolen-Hoeksema, 1987). The finding of lower functional health in women is also not surprising, given the emphasis in these kinds of questions on physical strength.

Of particular interest were the results from the CMI and the SCL-90, which indicated that both the physical and psychological health of wives were closely tied to their marital satisfaction. On both measures, it was only in dissatisfied marriages that wives reported more symptomatology than did husbands. Although the causal direction of this relation cannot be determined from these data, it is interesting to consider two alternative models: (a) When wives are unhealthy, marital satisfaction declines; and (b) when marriages are dissatisfied, wives become ill. The first model is certainly plausible; perhaps the well-being of a marriage requires a healthy wife, or perhaps marriages are better able to cope with illness on the part of husbands than of wives. However, we think the second model is more likely and would hypothesize that the health cost exacted from staying in a dissatisfied marriage is paid primarily by wives. This model would be consistent with evidence reviewed earlier that, in terms of mental and physical health, marriage disproportionately benefits men (e.g., Helsing, 1981; Radloff, 1975; Russo, 1985; Steil, 1984).

To draw out the implications of this hypothesized causal relation, we must ask why the health toll in a long-term dissatisfied marriage should fall primarily on wives? In an ongoing longitudinal study being conducted with younger couples, we (Gottman & Levenson, 1992) found that, in marriages at high risk for dissolution, wives were more autonomically aroused than were men when trying to resolve a marital conflict and, 4 years later, reported greater health problems. We believe that, in our culture, confronting marital conflict and attempting to heal an ailing marriage has become primarily the responsibility of wives. The cost that wives incur in taking on the emotional and physical work associated with this responsibility is extracted from their mental and physical health reserves. Husbands, in contrast, buffer themselves from this process by withdrawing from conflictive interactions. This withdrawal may function to protect husbands' health (Gottman & Levenson, 1988), but it adds significantly to the burden placed on wives.

Sources of conflict and pleasure. The rated severity of disagreement was the same for husbands and wives in 9 of 10 areas we measured. In areas of pleasure, however, men reported deriving less pleasure than did wives in 8 of 16 measured areas, covering a wide range of topics. To help understand this finding, it should be noted that, in their social relationships, men have often been found to prefer doing things to talking about things (e.g., Gottman & Parker, 1986). Given that conversation was the focus of these ratings, the lesser pleasure reported by husbands is consistent with these previous findings. It will be important to determine in future studies whether these spousal differences extend to nonconversational sources of pleasure as well.

Sampling and Design Limitations

Our own previous studies, as well as most other laboratory studies of marriage, have used convenience samples. For the

present study, we adopted a more rigorous three-stage sampling procedure in which a random telephone survey was used to establish goals for the recruitment of subjects (e.g., a certain percentage of Caucasian, blue collar, old, dissatisfied couples). An experimental sample so constructed could be said to be representative of the original random sample. With the exception of oversampling Caucasian couples, we were able to meet our original recruitment goals.

Nonetheless, there are a number of characteristics of our sample that might limit the generalizability of our findings. Our sample consisted solely of long-term marriages; thus, our findings may not readily generalize to marriages that end in early dissolution or to marriages that are initiated in later life. Our sample was restricted to a geographical region located near Berkeley, California. The average couple in this sample was Caucasian, upper middle class, and well-educated, living in an area known to be politically and socially liberal and progressive. The nature of the experimental procedure, which involved traveling to our laboratory for multiple sessions and having marital behavior observed by others, no doubt brought additional selection factors to bear on the makeup of the final experimental sample. Our requirements that couples be within 5 years of each other's age and within 20 points of each other's marital satisfaction further narrowed the sample.

A major limiting factor is that all of our reported findings are based on cross-sectional comparisons, which could certainly account for some of our findings. For example, the finding that old marriages reported lower disagreement and greater pleasure in a number of areas than did middle-aged marriages could be due to couples who have relatively high disagreement and relatively low pleasure being more likely to divorce earlier. Only longitudinal follow-up will enable us to determine whether disagreement actually decreases and pleasure actually increases as couples in long-term marriages approach old age.

Summary of Findings: Research Hypotheses

In general, our four research hypotheses were supported by these findings. Hypothesis 1 (there will be less conflict and more pleasure in old marriages than in middle-aged marriages): This was found for four areas of conflict and four areas of pleasure. Hypothesis 2 (relations between health and marital satisfaction will be stronger for women than for men): This was found for both mental and physical health measures. Hypothesis 3 (children will be a greater source of conflict for middle-aged couples than for old couples): This was found in the amount and relative ranking of disagreement over children. Hypothesis 4 (gender differences will be less pronounced in old couples than in middle-aged couples): This was supported by five areas of pleasure in which differences were found between husbands and wives in middle-aged couples, but not in old couples.

Marriage in Old Age: A Preliminary Picture

On the basis of the self-report data obtained from the present sample, several conclusions can be drawn. Compared with an equivalent group of middle-aged marriages, old marriages have reduced potential for conflict and greater potential for pleasure

in a number of areas. For old couples, the role of children (many of whom have left home) has shifted to be much less a source of conflict and more a source of pleasure than for middle-aged couples (many of whom still have children living at home). Although old couples in our sample reported lower physical capacity for activities such as climbing stairs and doing housework, they were enjoying levels of overall physical health and mental health that were not significantly different from that of middle-aged couples. Older husbands also evidenced fewer signs of alcoholism than did middle-aged husbands.

Overall, this preliminary snapshot of the nature of marriage on the threshold of old age is a positive one. Only longitudinal data will enable us to know whether marriages that stay intact into old age are those that have always had these positive characteristics or whether we are seeing the results of a process in which old wars are diminished and marital bonds are strengthened. In either case, the positive state of these marriages could provide a firm foundation for the increasing interdependencies that spouses will experience in later years as the size of their external social networks decreases and as they face the future challenges of retirement and changing health.

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