
Costs and satisfaction in close relationships: The role of loss–gain framing

ANDREA R. BERGER AND RONNIE JANOFF-BULMAN
University of Massachusetts

Abstract

Two studies were conducted to clarify the pattern of mixed results found in past research regarding the association between costs and satisfaction in close relationships. Insights from Prospect Theory (D. Kahneman & A. Tversky, 1979, 2000) suggested the importance of gain–loss framing in understanding costs. When costs are attached to valued outcomes, they are perceived as gains or investments; otherwise they are perceived as losses. Appreciation by one’s partner for communal behaviors and family chores provided the basis for exploring costs as gains versus losses. We hypothesized that when costs were appreciated, the greater the costs, the greater the relationship satisfaction; whereas when they were not appreciated, the greater the costs, the lower the relationship satisfaction. Further, we expected appreciation to be associated with perceived motives for incurring the costs: positively with “want” perceptions and negatively with “should” perceptions. These hypotheses were supported in research with both dating couples and women in long-term marital or cohabiting relationships and using two types of communal behaviors: Partner Favors and more tedious Family Chores. In general, the greater the number of communal behaviors and family chores, the greater the relationship satisfaction when appreciated; the greater the number, the lower the satisfaction when relatively unappreciated.

Academics from economists to social philosophers have recently underscored the heightened competition between social obligations and self-interest, as the market economy and moral freedom have increasingly come to define the private realm (see, e.g., Folbre, 2001; Kuttner, 1997; Wolfe, 1989). Social obligations serve in part to bind us as social animals, and our close relationships in particular are defined in some measure by the costs—expenditures of effort, time, and/or resources—that we incur for the benefit of others. Given increasing societal tendencies to emphasize self-interest and the economic value of behavior and outcomes, conceiving of social obligations as costs might suggest that they are necessarily negatively associated with satisfaction and well-being. Thus, people may assume that the more rewards received and

the fewer costs incurred, the more satisfied they will be in their relationships. Yet, there are both theoretical and empirical reasons for questioning such an assumption. In fact, Clark and Grote (1998) addressed precisely this issue of the association between costs and relationship satisfaction in an important recent paper titled, “Why aren’t Indices of Relationship Costs Always Negatively Related to Indices of Relationship Quality?”

As noted by Clark and Grote (1998), the picture presented when reviewing the empirical relationship between costs and relationship satisfaction is quite murky. Past research has sometimes found a negative association (e.g., Bui, Peplau, & Hill, 1996; Duffy & Rusbult, 1986, for women; Rusbult, 1980), sometimes a positive association (e.g., Argyle & Furnham, 1983; Hays, 1985; Howard & Dawes, 1976), and sometimes no association (e.g., Duffy & Rusbult, for men; Rusbult, 1983; Rusbult, Johnson, & Morrow, 1986) between costs and relationship satisfaction. Clark and Grote surmised that much of the confusion might be

Correspondence should be addressed to Ronnie Janoff-Bulman, University of Massachusetts, Department of Psychology, Amherst, MA 01003, e-mail: janbul@psych.umass.edu.

attributable to the multiple meanings of costs in past studies. Thus, to clarify the situation, they decided to delimit their investigation and focus on what they regarded as “communal behaviors,” which involve the expenditure of time, effort, and/or resources to meet the needs of the other. These costs grow out of communal relationships in which individuals “have an obligation to be concerned about the other’s welfare. They give benefits in response to needs or to please the other” (Clark, Mills, & Powell, 1986, p. 333). In other words, these are the behaviors we define in terms of our social obligations to others we care about. Such behaviors are distinguishable from other conceptions of costs, such as disagreeable behaviors by one’s partner, intentional (e.g., insulting remarks) or unintentional.

Clark and Grote (1998) maintain that when communal behaviors are studied, “costs will not be negatively related to relationship quality and, indeed, may be positively related” (p. 4). Their rich discussion in fact makes such an outcome seem virtually overdetermined, given the multiple processes they suggest would contribute to greater satisfaction with increased communal behaviors. Thus, greater satisfaction might result from the signaling qualities of communal behaviors (i.e., that you care about your partner’s welfare); from an increase in partner’s happiness in response to your behaviors; from dissonance reduction associated with the effort you have expended; from feeling good about living up to an ideal (by following a communal norm); and from a comforting sense that your own needs will be attended to in the future.

Clark and Grote’s communal behaviors, then, are essentially the costs we incur as participants in relationships. They are our own expenditures, which in part define our contributions to these relationships. What is the association between these costs, specifically defined in terms of communal behaviors, and relationship satisfaction? Clark and Grote conducted two studies, one of unmarried college students in dating relationships and the other of married nonstudents. In both cases, respondents completed an index of relationship quality and checked the number of communal behaviors they had recently engaged in (from a list of

such behaviors). For the student sample, communal behaviors were significantly positively associated (.23) with relationship satisfaction. However, for spouses, there was a nonsignificant negative relationship for men (−.13) and women (−.14).¹ The mixed picture of results, then, continues. Strong negative associations between communal behaviors and relationship satisfaction did not arise, but both positive and (nonsignificant) negative associations did. It appears that a focus on costs as communal behaviors is not sufficient for clarifying the association between costs and satisfaction in relationships. What might help further elucidate the mixed pattern of results?

Interestingly, helpful insights can be drawn from Kahneman and Tversky’s (1979, 2000) important work on Prospect Theory. A major contribution of this theory is the finding that people are loss averse and losses are not offset by equivalent gains. Kahneman and Tversky demonstrate that similar costs—costs that are formally equivalent in the problems presented to study participants—can differ a great deal psychologically; that is, subjective framing is more important than objective costs in determining people’s choices and felt outcomes. Further, expenditures are costs that can be conceived of as losses or as gains; when associated with a valued outcome, costs become worthwhile investments rather than losses.

Psychologists have productively applied Prospect Theory to the area of health, most specifically by examining the influence of loss versus gain message framing on health behaviors (see, e.g., Apanovitch, McCarthy, & Salovey, 2003; Rothman & Salovey, 1997; Wilson, Purdon, & Wallston, 1988). The further application of Prospect Theory to the realm of close relationships provides a promising avenue for understanding the relationship between satisfaction and costs, by implicating the role played by loss–gain framing. That is, for some people, communal behaviors are

1. Other types of costs—specifically those involving partners’ unpleasant or disagreeable behaviors—were uniformly significantly negatively associated with relationship satisfaction. These, however, are not the costs that define our social obligations and will not be discussed further.

costs that are perceived as losses, whereas for others, they are perceived as gains or investments. When applied to the association between costs and relationship satisfaction, it follows that when perceived as losses, the number of communal behaviors (or costs) will be negatively associated with relationship satisfaction, whereas when perceived as gains, or investments, their number will be positively associated with relationship satisfaction.

Given that the perception of costs as gains rather than losses hinges on whether the costs are attached to positive valued outcomes, in this research, we chose to focus on one means—perhaps one very potent means—of facilitating the attachment of costs to value in the context of close relationships. We focused on appreciation, specifically people's perceptions of being appreciated by their partner, as a means of clarifying the relationship between costs and relationship satisfaction. Feeling appreciated is highly valued in close relationships (e.g., Blair & Johnson, 1992; Hawkins, Marshall, & Meiners, 1995; Hochschild, 1989; Murray, Bellavia, Rose, & Griffin, 2003; Singer, 1994). If we feel appreciated for our communal behaviors, we should be able to view our costs as gains or positive investments; when we do not feel appreciated, the costs are more apt to be perceived as losses.

These differences associated with loss-gain framing are consistent with communal relationship theory (e.g., Clark & Grote, 1998; Clark & Mills, 1979), for when partners feel appreciated, they are more apt to feel that their needs are being met; thus, communal costs may be more likely to be regarded as gains and predictive of relationship satisfaction. Further, appreciation may be particularly worth exploring in light of Clark and Grote's findings with married couples, for these researchers suggest that in established intimate relationships, partners' communal behaviors may be taken for granted; they thereby hint at the importance of appreciation, or its absence. It is possible that partners may not be worrying about whether their needs are met (i.e., they are in very secure communal relationships), but it is also very conceivable that their communal behaviors are not appreciated, despite a need for felt appreciation.

If appreciation by a partner influences how we frame our communal behaviors in relationships, its effects will be evident in our motivation to incur these costs, or engage in these behaviors. In the absence of appreciation—when presumably framed as losses—our communal behaviors are likely to be regarded as “shoulds,” activities we feel obligated to perform. According to self-determination theory (e.g., Deci & Ryan, 1985, 1991), such loss framing would reflect a controlled motive, involving external pressures that may or may not be internalized. Similarly, based on Higgins' (e.g., 1996, 1998) model of regulatory focus, such “shoulds” would represent a prevention focus, costs incurred to avoid negative outcomes. In contrast, when framed as gains, our communal behaviors are more likely to be regarded as “wants,” reflecting autonomous motives (e.g., Deci & Ryan, 1985, 1991) and a promotion focus (e.g., Higgins, 1996, 1998).

The transformative impact of appreciation on motivation was recently found in a study by Berg, Janoff-Bulman, and Cotter (2001, see study 4), which focused on the role of appreciation in the perception of “wants” and “shoulds”. Respondents in the condition of primary interest were asked to interpret a series of goal conflicts (i.e., obligations pitted against pleasurable activities) so that they would feel appreciation (vs. resentment in a second condition and no instructions in a third). When appreciation was felt, respondents were more likely to regard obligations as “wants” rather than simply as “shoulds.” This study involved the manipulation of appreciation felt for others, rather than one's sense of being appreciated by others, but the reciprocal nature of appreciation as well as the valued nature of being appreciated suggest that similar reframing would occur in these instances as well.

The rationale for conducting this research, then, was to clarify and extend past research on costs and relationship satisfaction by exploring the role of perceived appreciation as a proxy for understanding participants' implicit gain-loss framing. We also wanted to expand participants' costs to include a broader range of communal behaviors than those included in studies by Clark and Grote (1998), in particular, more burdensome household tasks. Two

studies were conducted to test our assertion that felt appreciation would moderate the association between number of communal behaviors and relationship satisfaction. More specifically, we hypothesized a positive correlation between costs and relationship satisfaction for those who felt appreciated and a negative correlation for those who did not feel appreciated. Further, we expected to find appreciation positively associated with the perception of costs as “wants” and negatively associated with their perception as “shoulds”. Study 1 was a preliminary study that explored these relationships in a population of dating college students, and costs were defined as Clark and Grote’s communal behaviors. In Study 2, the relationship costs of married and cohabiting respondents were explored, and costs were investigated through both Clark and Grote’s communal behaviors and more mundane, tedious household chores.

Study 1: Costs and Appreciation in Dating Participants

This first study was intended as a preliminary, exploratory investigation of the appreciation-based hypotheses regarding relationship costs. We hoped to find support for the loss-versus-gain-based interpretation of Clark and Grote’s (1998) communal behaviors, which would then provide a justification for conducting a more fine-tuned study of respondents in long-term relationships, using a broader range of communal behaviors. Largely replicating these researchers’ methodology, participants completed a questionnaire that assessed the relationship satisfaction, the number of communal behaviors they had recently performed, and some basic background information. We additionally collected information about perceived appreciation and motivation (“shoulds” and “wants”) for each communal behavior checked.

Method

Participants

Undergraduate students, recruited from introductory psychology classes, received extra

credit for their participation. Participants were asked to sign up only if they were “currently involved in a romantic relationship.” A total of 81 students, 68 females and 13 males, participated in the study; all were involved in a heterosexual romantic relationship, and none were married. Participants’ average age was 20.1 years ($SD = 2.2$), and their partners’ average age was 21.0 years ($SD = 2.8$). On average, the relationships had lasted 21.3 months ($SD = 16.1$).

Materials

Relationship satisfaction. Relationship satisfaction was measured using the Quality of Marriage Index (Norton, 1983). Clark and Grote (1998) used this 6-item scale to measure respondents’ satisfaction with their dating relationships by substituting the term *relationship* for *marriage*; we did the same. Sample items included: “My relationship with my partner makes me happy” and “Our relationship is strong.” Five of the six answers were provided on 5-point scales, with endpoints “strongly disagree” and “strongly agree.” The final item—“To what extent are you happy, everything considered, with your romantic relationship?”—was rated on a 5-point scale, with endpoints “not much” and “very much.”

Costs—communal behaviors. Participants read a list of costs that reflected communal behaviors; these were the same 11 items used by Clark and Grote (1998) to assess communal behaviors in their dating couples. Sample behaviors were: “I listened carefully to my partner when he or she had a problem even though I had other things to get done,” “I drove my partner someplace,” “I went shopping with my partner,” “I gave up an opportunity to go to a social event I wanted to attend because of a commitment I had with my partner,” “I cleaned up a mess of some sort [e.g., laundry, dirty dishes, made bed] for my partner,” and “I bought and gave a gift to my partner.” As in the Clark and Grote study, respondents checked the behaviors they engaged in for their partners in the previous two weeks.

Participants responded to three additional items for each behavior that they checked. In

order to get some sense of subjective framing, two questions tapped perceptions of “want” and “should” associated with each communal behavior: “How much did you want to do this activity?” and “How much did you feel that you should have done this activity?” The final statement assessed perceptions of appreciation: “I felt that my partner appreciated what I did.” Participants responded on 7-point scales, with endpoints “not at all” (1) and “very much” (7). In order to use these variables in further analyses, the responses from each of the three items were averaged across the behaviors checked by each participant to create three separate scales: Want, Should, and Appreciation.

Results and Discussion

Before treating all participants as one sample, *t*-tests were performed on all variables using gender as the independent variable. Only one significant difference emerged. Women reported wanting to engage in the activities more than men, $t(79) = 10.4, p < .01, M = 5.3$ and $M = 4.9$, respectively. Correlation matrices were computed separately for men and women. The patterns were similar enough to warrant treating the group as one sample. Further, analyses conducted with men excluded yielded essentially identical findings to those reported below.

The Quality of Marriage Index (Norton, 1983; referred to as Relationship Satisfaction from this point on) was reliable for this dating sample ($\alpha = .89$), and respondents were generally very satisfied in their relationships ($M = 4.4$ out of 5; actual range: 2.5–5). Participants also reported relatively high levels of perceived appreciation for their behaviors ($M = 6.1$ out of 7; actual range: 3–7).

Respondents in this sample checked an average of 7.3 of the 11 behaviors (actual range: 4–11). The most common communal behaviors were listening when one’s partner had a problem ($n = 78$), buying a gift for one’s partner ($n = 75$), cleaning up a mess for one’s partner ($n = 74$), stopping one’s own homework to help one’s partner ($n = 69$), and spending time searching for something one’s partner had lost ($n = 69$).

The mean scores for Want and Should ratings were 5.3 and 5.1, respectively (actual ranges: 4.1–7 and 3.8–7), and Want and Should scores were uncorrelated ($r = -.15, ns$). As expected, appreciation was positively correlated with Want scores ($r = .47, p < .001$) and negatively correlated with Should scores ($r = -.20, p < .05$). The more the respondents felt appreciated, the more they wanted to engage in the communal behaviors and the less they felt obligated to do so. The greater the appreciation, the more they wanted to incur the costs of these behaviors for their partners, suggesting that the costs were more likely to be seen positively rather than negatively, as gains rather than losses.

A regression analysis was run with Relationship Satisfaction predicted by Appreciation, number of behaviors, and the interaction term. Only Appreciation predicted Relationship Satisfaction ($\beta = .263, b = .524, p < .05$). The lack of an association between number of behaviors and relationship satisfaction (i.e., number of behaviors did not predict relationship satisfaction; also, $r = -.01, p = ns$) was as expected, in that the association was likely to have been positive for some respondents and negative for others, depending on whether their costs were framed as losses or as investments. Given the exploratory nature of the study, we were interested in directly testing the interaction alone, in a kind of “planned” regression. When we did this, the interaction between number of behaviors and appreciation was significant ($\beta = .211, b = .009, p < .05$). Further, we explored our hypotheses regarding proposed differences in framing using a median split (at 6.1) to divide the sample into those who felt relatively more or less appreciated. As predicted, for those who felt more appreciated, the number of communal behaviors was positively correlated with relationship satisfaction ($r = .24, p < .05$), whereas for participants who felt less appreciated, the number of behaviors was negatively correlated with relationship satisfaction ($r = -.18, p < .08$). These two correlations were significantly different from each other ($z = 1.85, p < .05$).

The communal behaviors in this study involved expenditures of time, effort, and/or

resources for the sake of one's partner, and were therefore costs. In this sample, there was no association between costs (i.e., number of communal behaviors checked) and relationship satisfaction. However, exploratory analyses suggested that appreciation moderated the association between costs and relationship satisfaction. When the costs were associated with a valued outcome—appreciation—they were positively associated with relationship satisfaction. In contrast, for those who felt less appreciated for their effortful behaviors, number of behaviors was negatively associated with relationship satisfaction, suggesting that participants' perceptions of their costs were more akin to losses than to gains.

Study 2: Costs and Appreciation in Married or Cohabiting Couples

The purpose of Study 1 was largely to determine whether it was worth further investigating costs as gains and losses, via perceived appreciation, as a means to better understand past mixed results regarding the association between costs and relationship satisfaction. Given the encouragement received for this perspective in this first exploratory study with dating college students, we wanted to expand the scope of the research by studying responses of long-term cohabiting couples, who are more apt to be burdened with ongoing mundane, tedious tasks than dating college students. In addition to the communal behaviors investigated by Clark and Grote and Study 1, we wanted to sample less desirable, presumably more burdensome behaviors to determine whether the benefits of appreciation would still stand.

As noted by Clark and Grote (1998), compared with dating couples, long-term marital and cohabiting relationship partners are more apt to take each other's behaviors for granted. Although this may be attributable in part to greater relationship security, it may also reflect insufficient recognition and appreciation of the partner's contributions. Perceived appreciation, then, may be particularly important in distinguishing between satisfied and dissatisfied couples. The participants in this study were all female, representing a broad distribu-

tion in terms of age and socioeconomic status. It is generally acknowledged that the burden of household chores continues to fall disproportionately on women; thus, this initial study focused on a sample most likely to evidence the benefits and liabilities of engaging in numerous communal behaviors. The methodology was very similar to that of Study 1, although this version included a wider range of costs, or communal behaviors, as well as more fine-tuned questions regarded perceived shoulds and wants. A concerted effort was made to sample additional behaviors such as mundane household chores that participants were likely to engage in relatively often, yet which might be unappreciated by their partners.

Method

Participants

A sample of 123 cohabiting heterosexual women participated in this study; the overwhelming majority of the women were married (103 of 123). The sample was drawn from two populations: alumnae of a small, liberal arts women's college in New England (Wellesley) and nonfaculty staff at a large New England University (University of Massachusetts, Amherst). Wellesley women were recruited while attending their college reunion, and University of Massachusetts (UMass) staff members were solicited through a campus mailing. The aim was to have a more diverse sample, particularly socioeconomically, than would be represented by either of these populations alone.

Wellesley sample. To reach the Wellesley sample, boxes with survey materials were posted at the front desks of campus dorms and at a hotel affiliated with the reunion. The boxes displayed signs encouraging participation. Volunteers were instructed to complete the materials and return the survey to a collection box. Participants were also given the option of returning the survey by mail. All surveys were anonymous. A total of 63 Wellesley alumnae completed the survey: 48 did so at the reunion and 15 returned the survey in the mail. Three surveys were dropped because the women

were not living with a partner or were in a lesbian relationship. The final sample included 60 women; 54 were married and 6 were cohabiting. These women averaged 44.1 years of age ($SD = 10.5$), and their partners averaged 47.3 years ($SD = 12.8$). The average length of relationship was 217.5 months (about 18 years and 2 months, $SD = 134.9$), and they each had an average of 1.0 child ($SD = 1.0$). In addition, these women contributed an average of 38.4% to the total household income ($SD = 32.4$). Most of these women worked full time ($n = 33$) rather than part time ($n = 15$).

University of Massachusetts. Surveys were sent through campus mail to 300 women employed in nonfaculty staff positions at the University of Massachusetts, Amherst. A total of 69 women returned the survey, for a response rate of 23%. All responses were anonymous. Six surveys were not included in the analyses because the women were not in a cohabiting relationship or were in a lesbian relationship. Of the remaining 63 participants, 49 were married and 14 were cohabiting. The women averaged 42.4 years of age ($SD = 8.6$), and their partners averaged 44.9 years ($SD = 10.0$). The average length of the relationship was 202.9 months (about 16 years and 11 months, $SD = 125.9$), and they had an average of 1.2 children ($SD = 1.0$). In addition, these women contributed an average of 52.2% of their household income ($SD = 15.8$). Most of these women worked full time ($n = 55$) rather than part time ($n = 8$).

The primary means for gauging socioeconomic status was the occupational prestige ratings (OPR) developed by Nakao and Treas (1994). These ratings are based on over 500 detailed occupational categories in the census classification system. Two coders who were unaware of the sample (Wellesley or UMass) or the gender of the participant assigned a Nakao–Treas Prestige Score to the occupation of each woman and her partner. The two coders' scores were averaged and collapsed so that a score of 20–29 received a 2, 30–39 a 3, and so forth. Scores ranged from 2 to 8; thus, for example, a warehouse laborer received a score of 2, a librarian received a score of 5, and a physician received a score of 8. As

expected, the Wellesley alumnae had significantly higher OPR's than the women in the UMass sample, $M = 5.5$ and $M = 4.3$, respectively; $t(112) = 6.32$, $p < .001$. This difference also held for their partners' occupational ratings, $M = 6.1$ and $M = 4.2$, respectively; $t(106) = 7.62$, $p < .001$. Even the range of OPR differed between the groups. The Wellesley sample did not have any respondents with careers ranked lower than 3, and the range extended up to 8. The UMass sample did not have any respondents with careers rated higher than 6 for women and 7 for men, and the range extended down to 2. Together, the two samples therefore represented a broad range of occupational prestige levels.

Materials

Background information. Participants provided general biographical information, including information about their husbands or cohabiting partners and children. The items addressed length of the relationship, occupation, marital status, and other demographic data.

Relationship satisfaction. Relationship satisfaction was measured with the same scale used in Study 1—the Quality of Marriage Index (Norton, 1983).

List of behaviors. Although the general format of the survey was similar to Study 1, in this incarnation, the list was expanded to include behaviors regarded as particularly appropriate for married/cohabiting couples. In contrast to behaviors in dating relationships, many of the activities in a cohabiting relationship are mundane, tedious tasks performed in the service of the household or family rather than for the partner directly. Therefore, included in the final list of behaviors were two types of activities. The first type was equivalent to the communal behaviors assessed by Clark and Grote (1998). These were behaviors engaged in specifically for one's partner because one was in a close relationship. The second type involved activities that needed to be done by a member of the couple but were not necessarily done specifically for the other

person. These were mundane, often tedious tasks that would have to be done even if the person were not in a relationship (e.g., cleaning the bathroom, paying bills). They were costs (i.e., expenditures of time, effort, and/or resources) that would nevertheless be regarded as communal behaviors in that they benefited the relationship (in contrast to the intentional or unintentional costs involving a partner's unpleasant behaviors discussed by Clark & Grote). In order to distinguish between these two types of communal behaviors, we labeled the first type, done specifically for one's partner, "Partner Favors" and the more mundane household activities, "Family Chores."

The items comprising the final list were culled from a large survey of couples (Blumstein & Schwartz, 1983), from Clark and Grote's (1998) communal behaviors in their study of married couples, and from discussions with married partners. The final list included 10 Partner Favors and 10 Family Chores. The majority of the Partner Favors were those used by Clark and Grote, and none of their items was included in the Family Chores list of activities. Family Chores included domestic tasks common to most couples and several common, but less habitual, activities. A complete list of behaviors—both Partner Favors and Family Chores—can be found in Table 1. Again following Clark and Grote's methodology, respondents were asked to check any activity that they had engaged in during the previous 2 weeks.

For every behavior checked by participants, four additional items were completed about that behavior. Participants were instructed to think about the most recent time they engaged in the behavior and to answer the following questions about their motivation: "How much did you **want** to do this activity for your partner/family?"; "How much do you **like** to do this activity in general (i.e., if it were not for your partner/family)?"; "How much did you feel **obligated** to do this activity?" Respondents also responded to the following item: "I felt that my partner appreciated what I did." All responses were made on 7-point scales, with endpoints "not at all" (1) and "very much" (7). These items will be referred to as Want,

Like, Should, and Appreciated. In order to create scales, these items were averaged separately across the 10 behaviors in each behavior type, Partner Favors and Family Chores.

Results and Discussion

In spite of differences related to socioeconomic status, our aim was to combine the samples to test the predictions about costs, appreciation, and relationship satisfaction. *T*-tests were conducted to compare the UMass and Wellesley samples on all hypothesis-related scales. Only one significant difference emerged. The UMass group checked significantly more Family Chores than did the Wellesley group, $M = 7.2$ and $M = 6.3$, respectively; $t(121) = -2.37, p < .05$. Overall, despite the different means of recruitment and the different backgrounds, the two samples showed remarkable similarity. Because there was no theoretical reason for believing that the two populations would show different patterns of responses, the two groups were treated as one sample for all remaining analyses.

In contrast, Family Chores and Partner Behaviors were perceived differently by participants and were therefore treated as separate scales. Respondents checked significantly more Family Chores than Partner Favors, $M = 6.8$ and $M = 5.0$, respectively; $t(122) = 8.05, p < .001$. The four follow-up items were averaged across the 10 Chores and the 10 Favors, creating eight separate scales. Repeated measure *t*-tests found significant differences on all four items—Want, Like, Should, and Appreciated—based on behavior type. Participants rated Want, $t(119) = 5.86, p < .001, M = 5.0$ and $M = 4.4$; Like, $t(119) = 5.35, p < .001, M = 4.5$ and $M = 3.7$; and Appreciated, $t(119) = 8.05, p < .001, M = 5.2$ and $M = 4.7$, significantly higher for Partner Favors than for Family Chores. They rated Should significantly higher for Family Chores than for Partner Favors, $t(119) = -5.35, p < .001, M = 4.1$ and $M = 4.7$. More specifically, Partner Favors were perceived more positively than Family Chores; respondents wanted to

Table 1. Family Chores and Partner Favors in order of frequency of selection by respondents

	Respondents who checked item	
	%	<i>n</i>
Family Chores		
Did the dishes	90	111
Cooked the evening meal	89	109
Did the grocery shopping	84	103
Did the laundry	84	103
Paid the bills	68	84
Cleaned the bathroom	68	84
Took out the trash	67	82
Vacuumed the carpets	58	71
Repaired something around the house	46	56
Took on extra work to increase the household income	21	26
Partner Favors		
Made a social arrangement for my partner and myself for the weekend	73	90
Listened carefully to something my partner wanted	72	89
Made an effort to share in a hobby or leisure activity with my partner	69	85
Searched for something my partner had lost (e.g., keys, glasses)	62	76
Went out of my way on a busy day to do an errand for my partner	61	75
Waited for my partner to finish something, even though I was anxious to go somewhere or do something	52	64
Sent a card/gift to a relative for my partner	43	53
Packed a lunch for my partner to take to work	28	34
Handled an unpleasant confrontation with another person	24	29
Went to a business function associated with my partner's job in order to help	21	26

engage in Partner Favors more than in Family Chores but felt more obligated to engage in the latter. Also, Partner Favors were themselves more enjoyable activities (i.e., respondents liked the activities more, apart from their partner or family). Finally, participants felt more appreciated for engaging in Partner Favors than in Family Chores, as might be expected given the more mundane nature of household chores. Not only were these differences consistent with expectations regarding the less pleasant, obligatory nature of Family Chores compared with Partner Favors in long-term relationships, but the differences across all scales further served to justify treating the

two types of behaviors separately in subsequent analyses.

Costs, appreciation, and relationship satisfaction

The means, standard deviations, and intercorrelations for all study variables can be found in Table 2. The Quality of Marriage Index (Norton, 1983) had a high reliability ($\alpha = .94$), and the mean score for this sample was 4.2 out of 5 (actual range: 1.83–5). Perceived motives for behaviors once again supported appreciation-based differences in framing. In the case of Family Chores, appreciation was positively associated with Want scores ($r = .51, p < .05$)

Table 2. Means, standard deviations, and intercorrelations among major variables in Study 2

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1. Relationship satisfaction	4.2	0.8										
2. No. of PF	5.0	2.3	-.24									
3. No. of FC	6.8	2.0	-.20	.38								
4. Appreciation—PF	5.2	1.4	.69	-.21	-.14							
5. Appreciation—FC	4.7	1.6	.59	-.12	-.29	.77						
6. Want—PF	5.0	1.2	.61	-.35	-.16	.69	.50					
7. Want—FC	4.4	1.2	.33	-.18	-.23	.44	.51	.49				
8. Should—PF	4.1	1.5	-.18	.05	.03	-.06	-.19	-.08	-.02			
9. Should—FC	4.7	1.5	-.34	.17	.17	-.12	-.24	-.23	-.19	.65		
10. Like—PF	4.5	1.0	.29	-.34	-.11	.39	.19	.59	.34	.07	-.18	
11. Like—FC	3.7	1.2	.13	-.14	-.20	.27	.41	.30	.78	.13	.01	.31

FC, Family Chores; PF, Partner Favors.

and negatively associated with Should scores ($r = -.24, p < .05$); in addition, Want and Should scores were negatively correlated ($r = -.19, p < .05$). For Partner Favors, appreciation was again positively correlated with Want scores ($r = .69, p < .001$), although uncorrelated with Should scores ($r = .06, ns$), and Want and Should scores were uncorrelated ($r = -.08, ns$). When appreciated, respondents indicated a greater desire to engage in both Partner Favors and Family Chores, and less obligation to engage in Family Chores, which in general were regarded as more onerous than Partner Favors.

The correlation between number of behaviors and Relationship Satisfaction was significant and negative for both Partner Favors ($r = -.24, p < .01$) and Family Chores ($r = -.20, p < .05$). For both types of activities, the greater the number of behaviors respondents engaged in, the less satisfied they were in their relationships. Interestingly, this somewhat resembles Clark and Grote's (1998) findings with married couples. Although they found a significant positive association between behaviors and relationship satisfaction for dating couples (whereas we found essentially no association), Clark and Grote found a negative, though nonsignificant, correlation ($-.14$ for women and $-.13$ for men) for their married respondents. These negative associations presumably reflect the greater burden of costs (i.e., communal behaviors) in long-term rela-

tionships versus short-term relationships. As noted by Clark and Grote (1998), these are the relationships in which such behaviors are apt to be taken for granted. They are the relationships in which the weight of routine, common favors and chores may increasingly be felt by partners.

The most interesting finding from Study 1 was the role of appreciation in moderating the relationship between the number of behaviors and relationship satisfaction. The costs of communal behaviors seemed more akin to investments than to losses for those who felt appreciated and more like losses than investments for those who did not. Would perceived appreciation play a similar moderating role in this study of married or cohabiting respondents?

For both Family Chores and Partner Favors, there was a strong relationship between Relationship Satisfaction and Appreciation ($r = .58$ and $r = .68$, respectively, $p < .001$). Regression analyses were run for each behavior type, with Relationship Satisfaction predicted by Appreciation, number of behaviors, and the interaction term. In the Family Chores equation, number of behaviors and the interaction term (Appreciation \times Number of Behaviors) both significantly predicted Relationship Satisfaction (number of behaviors: $B = -.50, b = -.19, p < .05$; Appreciation \times Number of Behaviors: $B = .61, b = .04, p < .05$). In the Partner Favors equation, Appreciation ($B = .34,$

$b = .20, p < .05$), number of behaviors ($B = -.58, b = -.21, p < .05$), and the interaction term ($B = .54, b = .03, p < .05$) were all significant predictors of Relationship Satisfaction. Both of the above regression equations contained a significant interaction term, so we used Aiken and West's (1991) method to interpret and to graphically represent the interactions, which can be seen in Figure 1 (Family Chores) and Figure 2 (Partner Favors).

The Aiken and West's (1991) interpretations of the interactions, represented by the different slopes in Figures 1 and 2, were essentially replicated in the correlations calculated between number of chores and relationship satisfaction for different levels of appreciation. There was considerable range in Appreciation scores in this study (actual range: 1–7, the full possible range of the scale). To afford a fine-grained picture, and to be consistent with the Aiken and West's tripartite division, Appreciation scales were divided into three groups (low, medium, and high appreciation), with similar numbers of participants in each category. The breakdown into three groups was the same for Family Chores and Partner Favors (see Table 3): Those who felt least appreciated scored from 0 to 4.2 on the Appreciation scale, those in the middle group scored from 4.3 to 5.8, and those who felt most appreciated scored from 5.9 to 7.0. When the correlations

between number of Family Chores and Relationship Satisfaction were examined, the importance of appreciation in interpreting costs once again emerged. For respondents who felt least appreciated, this correlation was negative, $r = -.29, p < .05$, whereas for those who felt most appreciated, it was positive, $r = .36, p < .01$ (difference: $z = -2.83, p < .01$); for those in the medium appreciation group, the correlation was close to 0, specifically $r = -.04, ns$ (difference between medium and high appreciation groups: $z = -1.65, p < .05$; difference between medium and low appreciation groups: $z = -1.14, ns$). In the case of Partner Favors, the correlation for respondents who felt least appreciated was negative, $r = -.42, p < .01$, whereas for those who felt most appreciated, it was close to 0, specifically $r = -.02, ns$; for those in the medium appreciation group, the correlation was also weak, $r = -.10, ns$ (see Table 2). The correlations for the high and low appreciation groups were again significantly different ($z = -1.83, p < .05$). The correlations for the medium and high appreciation groups did not differ significantly, and the difference in correlations between the medium and low appreciation groups was marginal, $z = 1.49, p < .08$.

For those who felt appreciated, it appears that the more Family Chores they engaged in, the more satisfied they were in their relationship;

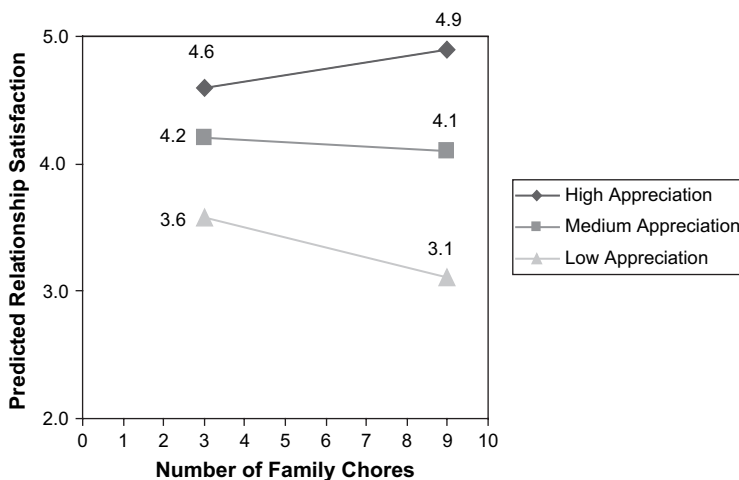


Figure 1. Representation of the interaction between number of Family Chores and relationship satisfaction.

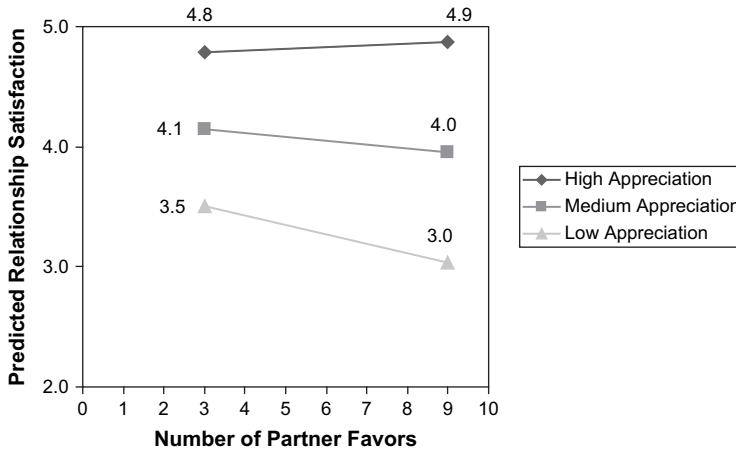


Figure 2. Representation of the interaction between number of Partner Favors and relationship satisfaction.

this association reversed for those who felt least appreciated. The behaviors included as Family Chores were clearly costs, activities that respondents did not like a great deal and saw as more obligatory than desirable. Yet, when appreciated, these costs were not losses, as they were in the absence of appreciation, for they were associated with greater relationship satisfaction.

Partner Favors in this study were, on their face, less burdensome than Family Chores. Respondents wanted to do them more than they felt obligated to do them, and they were activities that were somewhat likeable. In this case, it appears that it was not feeling appreciated that turned costs into investments but it

was feeling unappreciated that turned costs into losses. It is as if there was an expectation that these relatively positive behaviors, done specifically for one’s partner, would be appreciated, and if they were not, their number would have a negative impact on relationship satisfaction. When participants felt appreciation was lacking, regardless of the behavior type, the more that they did, the less satisfied they were with the relationship. This negative association disappeared for those who felt appreciated for Partner Favors but reversed and turned positive for those who felt appreciated for Family Chores. This latter pattern parallels that found for communal behaviors in Study 1, in which the behaviors more closely

Table 3. Correlations between number of behaviors and relationship satisfaction for Family Chores and Partner Favors at three levels of appreciation

	Level of appreciation		
	Low	Medium	High
Family Chores	0–4.2 <i>n</i> = 45 <i>r</i> = $-.29^*$	4.3–5.8 <i>n</i> = 40 <i>r</i> = $-.04$	5.9–7.0 <i>n</i> = 30 <i>r</i> = $.36^{**}$
Partner Favors	0–4.2 <i>n</i> = 40 <i>r</i> = $-.42^{**}$	4.3–5.8 <i>n</i> = 40 <i>r</i> = $-.10$	5.9–7.0 <i>n</i> = 39 <i>r</i> = $-.02$

p* < .05. *p* < .01.

resembled Partner Favors than mundane chores.

General Discussion

It appears that in close relationships, our satisfaction depends in part on how we frame the costs we incur for our partners and/or family. Our expenditures of time, effort, and resources are not intrinsically positive or negative. Costs are not uniformly bad, as might be assumed by attending to our outputs, nor uniformly good, as might be concluded by dissonance theorists; contrary to a popular phrase derived from dissonance, we do not always come to love what we suffer for. Rather, as suggested by Prospect Theory (Kahneman & Tversky, 1979, 2000), costs are a function of how we frame them. The very same outputs can be gains or losses, and it is by attaching our costs to valued outcomes that we transform them from losses to gains. In these studies, such value was assessed via respondents' perceptions of appreciation for their communal behaviors. In general, the greater the costs, the greater the participants' satisfaction when their efforts and expenditures were appreciated. When they were not appreciated, costs were associated with relationship satisfaction and thereby seemed to reflect losses rather than gains.

Study 1, which explored costs and satisfaction in dating relationships, provided support for the two faces of costs. When communal behaviors were appreciated, they were more apt to be regarded as wants rather than shoulds, and the greater the costs, the greater the satisfaction. Study 2 focused on married or cohabiting women in heterosexual relationships and again found support for the framing effects of costs. In this case, two types of expenditures were investigated: Partner Favors, which resembled favors done specifically for one's partner (and echoed the communal behaviors investigated in Study 1), and Family Chores, the more unpleasant, mundane tasks of family living (e.g., cooking, cleaning, paying bills).

In the case of Partner Favors, the absence of appreciation for an increasing number of communal behaviors was more predictive of relationship dissatisfaction than its presence was predictive of satisfaction. These Partner

Favors were regarded as less obligatory and more pleasant than the Family Chores; they were also less routine and mundane, and they were done specifically for one's partner. As such, the respondents may have been more likely to expect some appreciation for their efforts. Appreciation was strongly associated with wanting to engage in the behaviors; when it was not forthcoming, the loss frame seemed particularly powerful, in that in the absence of appreciation the greater the number of Partner Favors, the greater the relationship dissatisfaction. When there was some or a great deal of appreciation, the association between numbers of behaviors and satisfaction was more attenuated and close to 0.

Yet, even the most routine, effortful tasks—Family Chores—became positive investments in the context of appreciation. In fact, appreciation seemed to matter most when tasks were seen as obligatory and tedious. In the participants' long-term relationships, the absence of appreciation for such behaviors provided a loss frame for interpreting these activities, and the greater the number of behaviors, the greater the relationship dissatisfaction. On the other hand, appreciation of these chores promised greater relationship satisfaction as the number of activities engaged in increased. Apparently, a partner's appreciation of these relatively unpleasant, obligatory tasks provided a basis for regarding these behaviors not as onerous tasks but as investments or inputs into a close relationship worth preserving. The greater the appreciation perceived by respondents, the more they wanted to engage in the chores, and the less the tasks felt obligatory.

The study's findings are presented in terms of the impact of cost framing on relationship satisfaction, so as to be consistent with past work on costs and satisfaction. As such, the relationship between appreciation and satisfaction is discussed in terms of the former impacting the latter. Yet, the cross-sectional nature of the research clearly does not preclude other interpretations. In particular, it seems likely that the relationships studied are actually bidirectional; that is, relationships in which there is more felt appreciation are apt to be more satisfying and more satisfying

relationships are also apt to produce more felt appreciation. However, the bidirectionality of these associations does not negate the importance of cost framing in relationships, and, in particular, its significance regarding the amount of time and effort expended in a relationship. It is not that greater satisfaction leads to greater expenditures or vice versa. Dissonance theory suggests that partners would rationalize and justify their efforts; thus, the greater the number of behaviors, the greater the relationship satisfaction. This was clearly not the pattern of results found in these studies. In Study 1, costs and relationship satisfaction were uncorrelated, and in Study 2, in fact, they were negatively correlated.

Apparently satisfied partners do not do more, nor does doing more relate to greater satisfaction. Rather, when appreciated, tasks and chores are framed as desirable gains and are associated with greater satisfaction; or alternatively, greater satisfaction produces greater felt appreciation, which is again associated with gain rather than loss framing. In either case, it is not costs per se but how costs are framed that underlies their association with satisfaction and accounts for the relationship between amount expended and satisfaction.

The encouraging picture that emerges from these findings is that satisfaction in relationships is not specifically associated with doing less—with giving up communal behaviors and somewhat burdensome chores—but rather with embedding them in a relationship context that maximizes appreciation for such activities. Consistent with such a conclusion is Hochschild's (1989) finding that the happiest couples are those who are good at appreciating each others' efforts, at saying thank you in one way or another for the many tasks engaged in for the family. Further, research by Hawkins et al. (1995) and Blair and Johnson (1992) found that women's sense of fairness in their marriages was best predicted by their feelings of being appreciated.

Interestingly, a fairly consistent finding in the literature on household labor is that women do more of these family tasks than men, yet in general are not more dissatisfied than men with the division of labor (see Thompson, 1991, for a review). This seeming paradox

has often been explained in terms of women's social comparisons. Thus, women who compare their household responsibilities with other women (rather than with husbands) or with their own previous marriages appear more satisfied (e.g., Major, 1994; Pyke & Coltrane, 1996). Yet, the role of appreciation in framing partners' perceptions of household labor—as losses or as investments—may provide an additional avenue for understanding this paradox. As the findings of the above studies suggest, if women feel that they are appreciated, the greater the number of household tasks they engage in, the more satisfied they are with their relationships.

Clearly, a cynical view could be applied to these findings regarding costs and relationship satisfaction. If household labor is associated with a valued outcome such as appreciation, and is thereby interpreted as an investment, women might be far more apt to happily engage in such behaviors, thereby "excusing" an inequitable distribution of household labor. This view cannot be readily dismissed, given the current societal distribution of family chores. The current findings certainly do not argue for such inequities but may nevertheless provide one means of understanding their perpetuation. Of course, far more palatable would be close relationships defined by shared household labor, with appreciation understood and expressed by both partners.

This research extended Clark and Grote's (1998) important work on costs and relationship satisfaction by testing the moderating effects of appreciation and expanding the range of communal behaviors from less onerous partner favors to more burdensome family chores. The findings are encouraging in demonstrating the importance of felt appreciation in the interpretation of costs, particularly for tedious, effortful family chores, but the two studies clearly have limitations. The Study 2 sample was not only a convenience sample but was also all-female sample, and the Study 1 sample was predominantly female. Women continue to bear the burdens of household tasks; thus, it seemed important to first explore costs and relationship satisfaction in this group. Whether the findings will generalize to other samples, and particularly to male samples,

remains an open question for future research. In addition to the need for replication, other important questions for future research include the role of perceived inputs by one's partner and whether there are limits to the positive impact of felt appreciation; in other words, do the benefits of construing costs as investments peak at some point? Additional studies will hopefully provide answers that will allow researchers to develop a more complex, complete picture of the relationship between costs and relationship satisfaction.

Although household tasks and social obligations are an unavoidable part of close relationships, they need not be onerous. When attached to positive value, such as partner's appreciation, they become the basis for satisfaction in dating and long-term relationships. Our knowledge of relationship satisfaction would benefit not only from a closer look at appreciation per se but also from efforts to identify and to explore other possibilities for attaching value to our costs and expenditures. Future research on the nature of loss-gain framing will no doubt provide a far more complete picture of the cognitive and social processes that enable costs to become a basis for strong commitments and satisfying relationships.

References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage.
- Apanovitch, A. M., McCarthy, D., & Salovey, P. (2003). Using message framing to motivate HIV testing among low-income, ethnic minority women. *Health Psychology, 22*, 60–67.
- Argyle, M., & Furnham, A. (1983). Sources of satisfaction and conflict in long-term relationships. *Journal of Marriage and the Family, 43*, 481–493.
- Berg, M., Janoff-Bulman, R., & Cotter, J. (2001). Perceiving value in obligations and goals: Wanting to do what should be done. *Personality and Social Psychology Bulletin, 27*, 982–995.
- Blair, S. L., & Johnson, M. P. (1992). Wives' perception of the fairness of the division of household labor: The intersection of housework and ideology. *Journal of Marriage and the Family, 54*, 570–581.
- Blumstein, P., & Schwartz, P. (1983). *American couples: Money, work, sex*. New York: Pocket Books.
- Bui, K. T., Peplau, L. A., & Hill, C. T. (1996). Testing the Rusbult model of relationship commitment and stability in a 15-year study of heterosexual couples. *Personality and Social Psychology Bulletin, 22*, 1244–1257.
- Clark, M. S., & Grote, N. K. (1998). Why aren't indices of relationship costs always negatively related to indices of relationship quality? *Personality and Social Psychology Review, 2*, 2–17.
- Clark, M. S., & Mills, J. (1979). Interpersonal attraction in exchange and communal relationships. *Journal of Personality and Social Psychology, 37*, 12–24.
- Clark, M. S., Mills, J., & Powell, M. C. (1986). Keeping track of needs in communal and exchange relationships. *Journal of Personality and Social Psychology, 51*, 333–338.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.
- Deci, E. L., & Ryan, R. M. (1991). A motivational approach to self: Integration in personality. In R. Dienstbier (Ed.), *Nebraska symposium on motivation* (Vol. 38, pp. 237–288). Lincoln, University of Nebraska.
- Duffy, S. M., & Rusbult, C. E. (1986). Satisfaction and commitment in homosexual and heterosexual relationships. *Journal of Homosexuality, 12*, 1–23.
- Folbre, N. (2001). *The invisible heart: Economics and family values*. New York: The New Press.
- Hawkins, A. J., Marshall, C. M., & Meiners, K. M. (1995). Exploring wives' sense of fairness about family work. *Journal of Family Issues, 16*, 693–721.
- Hays, R. B. (1985). A longitudinal study of friendship development. *Journal of Personality and Social Psychology, 48*, 909–924.
- Higgins, E. T. (1996). The “self-digest”: Self-knowledge serving self-regulatory functions. *Journal of Personality and Social Psychology, 71*, 1062–1083.
- Higgins, E. T. (1998). Promotion and prevention: Regulatory focus as a motivational principle. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (pp. 1–46). New York: Academic Press.
- Hochschild, A. (1989). *The second shift*. New York: Avon Books.
- Howard, J. W., & Dawes, R. M. (1976). Linear prediction of marital happiness. *Personality and Social Psychology Bulletin, 2*, 478–480.
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica, 47*, 263–291.
- Kahneman, D., & Tversky, A. (Eds.). (2000). *Choices, values, and frames*. New York: Cambridge University Press.
- Kuttner, R. (1997). *Everything for sale: The virtues and limits of markets*. New York: Alfred A. Knopf.
- Major, B. (1994). From social inequality to personal entitlement: The role of social comparison, legitimacy appraisals, and group membership. *Advances in Experimental Social Psychology, 26*, 293–355.
- Murray, S. L., Bellavia, G. M., Rose, P., & Griffin, D. W. (2003). Once hurt, twice hurtful: How perceived regard regulates daily marital interactions. *Journal of Personality and Social Psychology, 84*, 126–147.
- Nakao, K., & Treas, J. (1994). Updating occupational prestige and socioeconomic scores: How the new measures measure up. *Sociological Methodology, 24*, 1–72.
- Norton, R. (1983). Measuring marital quality: A critical look at the dependent variable. *Journal of Marriage and the Family, 45*, 141–152.

- Pyke, K., & Coltrane, S. (1996). Entitlement, obligation, and gratitude in family work. *Journal of Family Issues, 17*, 60–82.
- Rothman, A. J., & Salovey, P. (1997). Shaping perceptions to motivate healthy behavior: The role of message framing. *Psychological Bulletin, 121*, 3–19.
- Rusbult, C. E. (1980). Commitment and satisfaction in romantic associations: A test of the investment model. *Journal of Experimental Social Psychology, 16*, 172–186.
- Rusbult, C. E. (1983). A longitudinal test of the investment model: The development (and deterioration) of satisfaction and commitment in heterosexual involvements. *Journal of Personality and Social Psychology, 45*, 101–117.
- Rusbult, C. E., Johnson, D. J., & Morrow, G. D. (1986). Predicting satisfaction and commitment in adult romantic involvements: An assessment of the generalizability of the investment model. *Social Psychology Quarterly, 49*, 81–89.
- Singer, I. (1994). *The pursuit of love*. Baltimore: The Johns Hopkins University Press.
- Thompson, L. (1991). Family work: Women's sense of fairness. *Journal of Family Issues, 12*, 181–196.
- Wilson, D. K., Purdon, S. E., & Wallston, K. A. (1988). Compliance to health recommendations: A theoretical overview of message framing. *Health Education Research: Theory and Practice, 2*, 161–171.
- Wolfe, A. (1989). *Whose keeper? Social science and moral obligation*. Berkeley: University of California Press.