

5

SOCIAL EXCHANGE THEORY

Social exchange theory emerged within family sciences in the latter part of the twentieth century, first being considered in a meaningful way in the early 1960s. It arose out of the philosophical traditions of utilitarianism, behaviorism, and neoclassical economics. Early social exchange theory applications in family science arose out of the work of sociologists (Blau, 1964; Homans, 1961; Thibaut & Kelley, 1959) who focused on the rational assessment of self-interest in human social relationships. At its most basic, social exchange theory may be viewed as providing an economic metaphor to social relationships. The theory's fundamental principle is that humans in social situations choose behaviors that maximize their likelihood of meeting self-interests in those situations.

In taking such a view of human social interactions, social exchange theory includes a number of key assumptions. First, social exchange theory operates on the assumption that individuals are generally rational and engage in calculations of costs and benefits in social exchanges. In this respect, they exist as both rational actors and reactors in social exchanges. This assumption reflects the perspective that social exchange theory largely attends to issues of decision making.

Second, social exchange theory builds on the assumption that those engaged in interactions are

rationally seeking to maximize the profits or benefits to be gained from those situations, especially in terms of meeting basic individual needs. In this respect, social exchange theory assumes social exchanges between or among two or more individuals are efforts by participants to fulfill basic needs.

Third, exchange processes that produce pay-offs or rewards for individuals lead to patterning of social interactions. These patterns of social interaction not only serve individuals' needs but also constrain individuals in how they may ultimately seek to meet those needs. Individuals may seek relationships and interactions that promote their needs but are also the recipients of behaviors from others that are motivated by *their* desires to meet their own needs.

Social exchange theory further assumes that individuals are goal-oriented in a freely competitive social system. Because of the competitive nature of social systems, exchange processes lead to differentiation of power and privilege in social groups. As in any competitive situation, power in social exchanges lies with those individuals who possess greater resources that provide an advantage in the social exchange. As a result, exchange processes lead to differentiation of power and privilege in social groups. Those with more resources hold more power and, ultimately, are in a better position to benefit from the exchange.

138 • READINGS IN FAMILY THEORY

Tied into this concept of power in a social exchange is the principle of least interest. Those with less to gain in terms of meeting their basic needs through a social exchange tend to hold more power in that exchange. In other words, power comes from less basic dependence on a social exchange. This can be seen in patterns of power that exist within family relationships. For example, in terms of basic structural benefits, a young child has more to gain from a parent-child relationship than a parent. The young child relies on the parent for provision of resources to meet her or his basic needs. Because relatively few of the parent's basic needs are met by the child, the parent has less personal interest in the relationship and, consequently, holds more power than the child in the relationship. As the child ages and eventually develops the capacity to meet his or her own basic needs, the power differential that exists in the parent-child relationship weakens. Parent and child now have similar personal interest in the relationship.

From a social exchange perspective, then, human behavior may be viewed as motivated by desire to seek rewards and avoid potential costs in social situations. Humans are viewed as rationally choosing more beneficial social behaviors as a result of rational reviews of all available information. Because all behavior is costly in that it requires an expenditure of energy on the part of the actor, only those behaviors that are rewarded or that produce the least cost tend to be repeated. Thus, social exchanges take on an air of consistency in that patterns of rewards often remain stable in social relationships.

At the heart of social exchange theory are the concepts of equity and reciprocity. Homans (1961) originally introduced the notion that individuals are most comfortable when they perceive they are receiving benefits from a relationship approximately equal to what they are putting into the relationship. The reality, though, is that family life is replete with relationships that promote perceptions of inequality. Relationships between siblings of different ages, parent and child relationships, and spouse relationships are seldom truly equal in all situations. No doubt

you can think back to your own childhood and remember times when you felt you were being treated unfairly. In all likelihood, this belief arose out of your own assessment that you were being asked to do more than others in the relationship (what child hasn't complained about doing household chores?), that you were being unfairly punished, or that you were not receiving a fair benefit or reward for something you had done for someone else in the family.

Social exchanges characterized by perceptions of equality imply the presence of reciprocity. Indeed, all social life requires a degree of reciprocity on the part of actors in social situations. Thus, when individuals perceive relatively balanced levels of reciprocity in a social exchange, they are more likely to be satisfied in that exchange. Social exchange theory suggests that individuals who perceive the presence of reciprocity in their social relationships are more likely to feel satisfied with and maintain those relationships.

Social exchange theory also includes other key concepts that serve to describe the character of social interactions. At the heart of its view of individuals as rational decision makers are the concepts of rewards and costs. Rewards are described as any benefits exchanged in personal relationships. They may be concrete or symbolic and particular to one individual or more universal. In all cases, though, the status of something as a reward is being perceived as rewarding by an individual in a social exchange. For example, receiving praise from a spouse may be a strong reward for one individual although it might mean relatively little to another individual. For the first person, the possibility of receiving praise from his or her spouse may be motivation to behave in a certain way, whereas, for the second person, the possibility of such praise would not significantly alter how he or she chooses to behave.

Generally speaking, social exchange theory proposes that individuals are motivated to gain rewards in social exchanges. In the absence of apparent rewards, individuals in social exchanges may be primarily motivated to avoid costs in those exchanges. Costs are either punishments or

forfeited rewards that result from social exchanges. Generally speaking, social exchanges carry three potential costs. Investment costs represent the energy and personal cognitive or emotional investment put into an exchange by the actors involved. Direct costs include time, financial resources, or other structural resources that are dedicated to the exchange. Finally, opportunity costs represent possible rewards that may be lost as a result of the relationship or social exchange. For example, a parent sacrifices considerable possible rewards or benefits in order to responsibly raise children.

To understand a person's behavior in social exchanges, it is important to understand the *comparison level* the person brings to the exchange. The comparison level is the threshold at which an outcome seems attractive to a person. For example, you might refuse to take a job that pays \$6.00 per hour but would be willing to accept that same job if it pays \$9.00 per hour. In this case, \$9.00 would be the threshold at which you would be willing to accept the job.

Evaluations of social exchanges also include a comparison level of alternatives. It is proposed that individuals assess the outcomes of their social exchanges in relation to other possible relationships or exchanges. As outcomes of relationships fall below the level of perceived outcomes from other relationship alternatives, individuals may choose to leave present relationships or social exchanges. For example, a wife may seek to end her marriage if she perceives being divorced from her husband as more advantageous than remaining married.

In families, a social exchange perspective argues that family relationships become interdependent, or interactional. In this respect, power becomes characteristic of the relationship dyad and understanding family relationships includes assessing the power that is held among the actors in those relationships. Family research from a social exchange perspective attends to norms of fairness and reciprocity, dynamics of attraction and dependence in relationships, distribution of power within families, and definitions of the rewards and costs associated with social exchanges in families.

THE READINGS

Two examples of research from a social exchange perspective are included here. Nomaguchi and Milkie (2003) explore the pattern of costs and rewards associated with becoming a parent for the first time. This research includes a comparison of new parents with those who remain childless and also explores the complex relationship between becoming a parent and a number of other factors in one's life.

Sprecher (2001) applies social exchange concepts to an exploration of satisfaction, commitment, and stability in dating relationships. This article explicitly attends to the issue of perceptions of equity in dating relationships and weighs the importance of equity to other social exchange variables. Sprecher, then, not only offers an example of research informed by social exchange theory, but also tests the relative predictive strength of a number of variables described within the theoretical perspective.

ISSUES FOR YOUR CONSIDERATION

1. Are costs and rewards associated with the relationships being examined and identified by each author? If so, what are they?
2. To what degree are family members portrayed as making rational assessments of costs and benefits of behaviors?
3. Is there evidence in either of these articles that those in dating relationships or who are new parents are motivated by a desire to achieve rewards or avoid costs in those relationships?

FURTHER READING

Blau (1964), Homans (1974), LaValle (1994), Lewis and Spanier (1982), Makoba (1993).

COSTS AND REWARDS OF CHILDREN: THE EFFECTS OF BECOMING A PARENT ON ADULTS' LIVES

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Abstract

How do new parents differ from their childless counterparts in social and psychological resources, daily strains, and psychological well-being? Using a nationally representative panel of 1,933 adults who were childless at the first interview, we compare 6 indicators of adults' lives for those who became parents and those remaining childless several years later, controlling for earlier states. Becoming a parent is both detrimental and rewarding. With the exception of social integration, which is greater for all groups of new parents compared with their childless counterparts, the effects of parental status on adults' lives vary markedly by gender and marital status. Unmarried parents report lower self-efficacy and higher depression than their childless counterparts. Married mothers' lives are marked by more housework and more marital conflict but less depression than their childless counterparts. Parental status has little influence on the lives of married men.

Two convincing pictures of how children affect adults' lives can be painted: one with bright textures of joy, personal growth, and social benefits that children provide, and one with dark strokes that represent costs and problems they create (Bird, 1997; Umberson & Gove, 1989). Empirical studies have produced inconsistent findings. Some find

parents are less happy or satisfied with their lives and more distressed and angry than nonparents (Barnett & Baruch, 1985; Glenn & McLanahan, 1982; Ross & Van Willigen, 1996), some find that there are no effects of children on adults' psychological distress (Baruch, Barnett, & Rivers, 1983; Cleary & Mechanic, 1983; Gore & Mangione, 1983; Wethington & Kessler, 1989), and others argue that under some conditions, parents may be better off than nonparents in terms of mental health (Bird, 1997; Kandel, Davis, & Raceis, 1985; Ross & Huber, 1985).

Despite mixed evidence, reviews of studies on the effect of children on adults' lives tend to conclude rather bleakly that having children is more costly than rewarding for adults in terms of daily strains, social relationships, and psychological well-being, especially for women and the unmarried, even though authors themselves suggest that there are not necessarily clear-cut findings in the empirical studies (e.g., see McLanahan & Adams, 1987; Ross, Mirowsky, & Goldsteen, 1990; Umberson & Williams, 1999). This is for good reason: There has been little explicit theoretical or empirical analysis of how having children may enhance adults' lives.

This study addresses three challenges in the literature on the effects of parenting on adults' lives. First, we argue that a heavy emphasis on the costs experienced by parents obscures the benefits

children may produce. Benefits that may balance parents' lives have strong roots in theoretical work, yet are relatively ignored (but see Bird, 1997; Umberson & Gove, 1989; Voydanoff & Donnelly, 1989). Thus, this study examines indicators that may capture the possible costs *and* rewards of parenting. These include social resources (e.g., social integration), psychological resources (e.g., self-concept), daily strains (e.g., housework, disagreements with one's spouse), and psychological well-being (e.g., depression).

Second, although there have been many studies on the effects of children on adults' lives, few have analyzed longitudinal data using a nationally representative sample. Furthermore, studies have not typically employed comparison groups of nonparents in the same life stage (but see Kurdek, 1993; MacDermid, Huston, & McHale, 1990). It is difficult, however, to assess how parenting affects adults' lives without controlling for earlier states and without explicit recognition of those remaining childless. In this study, using a nationally representative sample of U.S. adults in their childbearing years, we compare social and psychological resources, daily strains, and psychological well-being of those who became parents and those who remained childless after 5 to 7 years, controlling for earlier states of these indicators.

Finally, we argue that how children affect adults' lives may be so dependent on the gender and marital status of those adults that it may not be meaningful to discuss *parents* as a social category (Umberson & Williams, 1999). Therefore, we pay explicit attention to how costs and rewards of becoming a parent are moderated by gender and marital status.

Previous Research: Three Challenges

The Effects of Becoming a Parent on Adults' Lives: The Costs and the Benefits

Research on the effects of parenthood on adults' lives has emphasized the costs of parenting and largely ignored positive aspects of parenting. In the literature, structural role strain

perspectives (Pearlin, 1989) have provided a rich array of approaches to examine how the parent role is related to an amplification of stressors in adults' daily lives such as overload and marital conflict. We argue, however, that the overemphasis on costs of parenting does not give us the whole picture of the effects of children on adults' lives. Becoming a parent fundamentally changes one's life, making it more complex—not only through increasing demands, conflict, and frustrations, but also by deepening joys, activating social ties, and enriching parents self-concepts. Although virtually all young adults have some family members such as spouses, siblings, or parents with whom they maintain contact, the birth or adoption of a first child creates a *new* family. The relationship with their child may increase adults' commitment to affection and enjoyable activities with the child and other family members (Hoffman & Manis, 1982). Moreover, having a child fulfills an expected adult role, one that fits with American cultural ideals that place a premium on having children. Thus, in addition to obligations, the new role contains rights and privileges and carries a sense of legitimacy (Sieber, 1974).

In this article, we examine indicators that capture both costs and rewards of childrearing when adults become parents. They include *social resources*, such as social integration; *psychological resources*, such as self-concept; *daily strains*, such as housework and disagreements with one's spouse; and *psychological well-being*, such as depression.

Social resources. Umberson and Gove (1989) called attention to the importance of social integration as a benefit that children create for adults, emphasizing parenting as a profound relationship that ties adults to others. Social integration refers to the existence or quantity of social ties or relationships (House, Umberson, & Landis, 1988). Whereas many studies emphasize that children constrain adults from social activities (Fischer & Olicker, 1983; Munch, McPherson, & Smith-Lovin, 1997), others find that children strengthen or broaden parents' social networks to a wide

142 • READINGS IN FAMILY THEORY

range of relatives and neighbors (Gallagher & Gerstel, 2001; Ishii-Kuntz & Seccombe, 1989). Children may give adults opportunities to interact with other people, including relatives, neighbors, friends, and those in community institutions such as schools and religious organizations. Although some may perceive ties to others as burdensome (e.g., see Gerstel & Gallagher, 1993; Lynch, 1998), given the theoretical emphasis and empirical evidence in the mental health literature that social relationships have a positive impact on mental health (House et al., 1988), we assume that greater levels of social integration are a benefit.

Psychological resources. Becoming a parent is a major life transition for adults in which former identities such as worker, student, or spouse shift in salience and are modified to make psychic room for this new commitment in one's life (Cowan & Cowan, 1992). Caring for others is a primary way in which adults grow psychologically or enhance their self-concept. In recent research on fatherhood, the concept of generativity—a commitment to guiding or nurturing others, especially those in the next generation (Erikson, 1950)—has gained attention as key to understanding the importance of caring for others for adult development (McKeering & Pakenham, 2000). The growth of self-esteem and self-efficacy may be a way in which the successful nurturance of others and other problem-solving roles enrich the self (Bandura, 1997; Hoffman & Manis, 1982).

Daily strains. Children create substantial new daily demands on parents' time, physical energy, and emotional energy. New parents spend much time taking care of children, which decreases leisure and downtime (LaRossa & LaRossa, 1981). Parents experience overload from combining family work with employment (Goldsteen & Ross, 1989; Kandel, Davis, & Raceis, 1985; Rosenfield, 1989), or face difficulty arranging child care (Ross & Mirowsky, 1988). One particularly important demand that children create, especially for women, is housework. The chores that children necessitate, such as cleaning,

laundry, and cooking (Sanchez & Thomson, 1997), are arguably repetitive and often onerous and tend to be related to higher levels of distress (Glass & Fujimoto, 1994).

A large literature focuses on increased strains in marital relationships among new parents. A traditional view is that becoming parents is a crisis for married couples, because the marital relationship faces tremendous changes when the first child arrives (LeMasters, 1957; for a review see Demo & Cox, 2000). LaRossa and LaRossa's qualitative study (1981) shows that during this period, husbands and wives tend to experience a lack of couple leisure activities as well as conflict with each other over the division of housework and child care. A more recent qualitative study of couples making the transition to parenthood, however, showed that they had many new strains in their lives, but that couples not making the transition were just as likely to break up and showed the same overall levels of distress (Cowan & Cowan, 1992). Indeed, quantitative studies have found inconsistent results about the effects of becoming a parent on marital relationships (Belsky, Lang, & Huston, 1986; Crohan, 1996; Kurdek, 1993; LaVee, Sharlin, & Katz, 1996; MacDermid, Huston, & McHale, 1990).

Psychological well-being. Reviews of research on the relationship between parental status and psychological well-being during the past few decades have emphasized that parents, especially those with young children, tend to report lower levels of mental health than nonparents (McLanahan & Adams, 1987; Ross, Mirowsky, & Goldsteen, 1990; Umberson & Williams, 1999). Empirical studies, however, have suggested inconsistent results (Barnett & Baruch, 1985; Bird, 1997; Gore & Mangione, 1983; Kandel et al., 1985; Wethington & Kessler, 1989). Stress researchers have provided a well-studied theoretical perspective, the stress process model (Aneshensel, 1992; Pearlin, Menaghan, Lieberman, & Mullan, 1981), which suggests that parenting per se may not relate to increased distress, but contextual factors associated with parenting such as an overload of demands from

child care and housework, economic hardship (Bird, 1997; Ross & Huber, 1985), and difficulty arranging child care (Ross & Mirowsky, 1988) may create distress. The stress process perspective also suggests that the link between parenthood and mental health may be modified by social relationships and psychological resources (Bird, 1997; Thompson, 1986).

In this study, we do not examine the *process* in which adults may be exposed to and buffered from stressors related to parental roles. We reexamine, instead, a more basic question regarding the link between parental status and various aspects of adult lives, including depression, while addressing a key methodological issue: the lack of adequate comparison groups.

Methodological Issues: Longitudinal Data and Comparison Groups

A second difficulty in knowing how children affect adult lives is that prior studies have not typically employed longitudinal data nor used key comparison groups for parents. On one hand, most sociological quantitative studies on the costs and rewards of parenting use national, cross-sectional surveys. In those studies, parents, usually considered those who have children under 18 in their households, are sometimes compared with *nonparents*, including both older parents (even beyond age 60) who have already launched children and those who have remained childless into later life (see McLanahan & Adams, 1987, for a review). When parents with young children are compared with (usually older) nonparents, some of the “effects” thought to be from children might instead be a matter of life stage, because higher levels of distress are more common among younger adults (Kessler & Zhao, 1999).

On the other hand, psychologists and family studies researchers have conducted longitudinal studies using small samples of newly married couples, focusing on the effect of the arrival of a child on the marital relationship. Yet most studies only look at couples making the transition to parenthood and not other couples, making it

difficult to untangle the “natural” development of marital strain over a period of time from children’s independent effects. There have been a few small-scale longitudinal studies of changes in marital relations among newlyweds, comparing parents with those who remain childless (e.g., see Kurdek, 1993; MacDermid et al., 1990). Few researchers have used nationally representative panel data, however.

Gender and Marital Status Differences

The last issue we address in this article is the different life contexts in which people become parents. In particular, research suggests that the effect of children on adults’ social and psychological resources, daily strains, and psychological well-being may be vastly different depending on whether they are women or men, married or unmarried (Umberson & Williams, 1999).

Gender. Many scholars argue that women may experience more costs by having children than men: Mothers may be exposed to more daily strains, may face more constraints in broadening social resources, and may experience more distress than fathers. Some emphasize structural explanations or social role perspectives, arguing that women are more likely than men to be exposed to demands from the parental role because they are primary caretakers in childrearing (Aneshensel, Frerichs, & Clark, 1981; Gove & Geerken, 1977; Ross & Van Willigen, 1996). Others emphasize that the salience of the parental role is stronger for women than for men, and thus women are more sensitive to both the strains and rewards of parenting (Mulford & Salisbury, 1964). Although many studies have indicated that after controlling for social position, mothers are still more likely than fathers to report strains from parenting (Scott & Alwin, 1989; Simon, 1992), whether the parental role experience is more strongly related to mental health for women than for men is not clear. Cleary and Mechanic (1983) found that parental satisfaction is related to lower levels of distress among mothers. Simon found, however, that

whereas mothers are more likely to experience parental strains, if fathers have high levels of parental strains, they are more vulnerable in terms of psychological distress than mothers.

Despite the differences in emphasis, both structural and role salience explanations share a common assumption: Men and women experience the transition to parenthood and childrearing in different ways (Cowan et al., 1985; LaRossa & LaRossa, 1981). In most studies, fathers are compared with mothers. We argue, however, that comparisons with childless men and childless women, respectively, can be especially informative about how children affect women's versus men's lives.

Married versus unmarried. Many scholars agree that the stress of parenting depends on whether parents are married (Simon, 1998; Umberson & Williams, 1999). A common argument is that single mothers are more likely to report higher levels of distress than married mothers, because, given their disadvantaged social position, they have a greater chance of experiencing strains and have fewer coping resources (Avison, 1995; Pearlin & Johnson, 1977). Others emphasize selection processes, that is, single mothers are more likely than married mothers to have experienced a greater number of depressive episodes during childhood and adolescence, which is significantly related to their current higher levels of distress (Davies, Avison, & McAlpine, 1997).

Currently, it is difficult to disentangle the effects of parental status from that of marital status because in many studies single parents are the focus of study and are compared with married parents, but not with those who are single and remain childless. Additionally, there is little research for some groups, particularly never-married men. Furthermore, many individuals may experience changes in marital status around the period when they become parents. Changes in marital status, both getting married and ending a marriage, are important factors for understanding adult well-being (Marks & Lambert, 1998).

Research Questions and Hypotheses

In this study, we reexamine the costs and rewards of parenting, focusing on two questions: (a) How do parents differ from nonparents in social and psychological resources, daily strains, and psychological well-being? and (b) How do the effects of parental status on social and psychological resources, daily strains, and psychological well-being vary across gender and marital status groups? We focus on the parents of young children, comparing them with adults also in their childbearing years but who remained childless.

We hypothesize that parents' lives become structurally and emotionally complex as they move into a demanding but enriching new role. Thus, we expect that becoming a parent will be associated with both greater benefits in terms of social and psychological resources (i.e., more social integration, self-esteem, and self-efficacy) and greater costs in terms of daily strains and psychological well-being (i.e., more housework, increased marital conflict, and higher levels of depression).

We expect that the differences between nonparents and new parents, including costs *and* benefits, are greater among women than among men. We also expect that costs of becoming a parent are greater for unmarried men and women than for their married counterparts, and the rewards of having a child are fewer. We control for age, race, levels of education, employment status, household income, duration of marriage at Time 1, whether respondents were previously married at Time 1, and dependent measures at Time 1.

Method

Data

Data are drawn primarily from the second wave (1992–1994) of the National Survey of Families and Households (NSFH; Sweet & Bumpass, 1996). We also use a number of measures from the first wave (1987–1988) as controls for earlier states. The original sample in the first

survey (Time 1) is a U.S. national probability sample of 13,008 respondents with over samples of minorities and of nonmarried or recently married persons. Among them, 10,008 respondents were reinterviewed in the second survey (Time 2). Although the NSFH includes information from the spouse of the main respondents, information about social integration, self-esteem, self-efficacy, and depression at Time 1 is available only from the main respondent. Thus, we include only main respondents in our analysis. From reinterviewed respondents, we selected first those who were aged 18–44 at Time 1 ($n = 6,370$). Of these respondents, only those who had never had a child by the first survey were selected ($n = 2,165$). Fifteen respondents were excluded because they did not have information about changes in marital status between the two surveys or marital status at Time 2, and 99 respondents were excluded who changed their marital status more than once between the surveys because it is beyond the scope of this study to consider the effects of multiple marital status transitions and parental status on well-being. We also excluded the 107 respondents whose spouse had ever had a child at Time 1 ($n = 1,944$). Finally, we excluded those who have missing data on any control variables except income (see below), and thus $N = 1,933$.

Eligible respondents who dropped out of the Time 2 interview were more likely to be single, younger, non-White, less educated, and not employed, compared with those who remained in the sample used for this study. Differences on the outcome measures between the dropouts and those who remained in the study were minimal, however.

Measures

Dependent variables. Our analyses include six indicators of costs and rewards of parenting: social integration, self-esteem, self-efficacy, hours of housework, marital conflict (for the respondents continuously married from Time 1 to Time 2 only), and depression. For each variable, information at both Time 1 and Time 2 is available. These measures do not directly assess

parenting, because such questions would be meaningless to adults remaining childless (see Umberson & Gove, 1989).

Social integration is a sum of three items: “About how often do you get together socially with (a) relatives, (b) a neighbor, or (c) friends who live outside your neighborhood?” Each ranges from 0 = *never* to 4 = *several times a week*. This measure is similar to those used by Umberson and her colleagues (Umberson, Chen, House, Hopkins, & Slaten, 1996), called informal social integration, and those used by Ishii-Kuntz and Seccombe (1989). Cronbach’s alpha is .43 at Time 1 and .41 at Time 2.

Self-esteem is a summed measure of the following three questions available in both waves: (a) “On the whole, I am satisfied with myself,” (b) “I am able to do things as well as other people,” and (c) “I feel that I’m a person of worth, at least on an equal plane with others” (Rosenberg, 1986). Answers to each item range from 1 (*strongly agree*) to 5 (*strongly disagree*). The index is reversed and thus a higher value indicates a higher level of self-esteem (range 3 to 15). Cronbach’s alpha is .63 at Time 1 and .66 at Time 2.

Self-efficacy is measured by the statement, “I have always felt pretty sure my life would work out the way I wanted it to,” with responses ranging from 1 (*strongly agree*) to 5 (*strongly disagree*). This item is from an efficacy scale used in previous studies (Downey & Moen, 1987). A reversed code is used.

Hours of housework is a sum of hours spent on nine housework tasks per week. Respondents were asked to indicate “the approximate number of hours per week you normally spend doing the following things”: (a) preparing meals; (b) washing dishes and cleaning up after meals; (c) cleaning house; (d) outdoor and other household maintenance tasks (lawn and yard work, household repair, painting, etc.); (e) shopping for groceries and other household goods; (f) washing, ironing, mending; (g) paying bills and keeping financial records; (h) automobile maintenance and repair; and (i) driving other household members to work, school, or other activities. Respondents who answered *inapplicable* to an

146 • READINGS IN FAMILY THEORY

item were given a score of 0 and those who answered with extreme values were recoded to the 95th percentile by gender to avoid distortion caused by outliers. Because 27.3% of respondents failed to answer at least one housework item in either or both interviews, we tried two kinds of imputation methods. In the first method, respondents who answered six or fewer of the items are dropped from the analysis; those who answered seven or eight items are assigned the mean by gender for the missing item(s) (see South & Spitze, 1994). In the second method, we used a predicted value based on a regression using age, gender, marital status, education, race, and hours of paid work. Because the results were similar regardless of whether the missing data were imputed and regardless of which imputation method was used, we present the results using the first imputation method.

Frequency of disagreements with spouse (for the continuously married only) is measured as "How often, if at all, in the last year have you had open disagreements about each of the following?" with respondents reporting about disagreements on household tasks, money, spending time together, and sex. The four items, ranging from 1 (*never*) to 6 (*almost every day*), were made into an index (range 4 to 24). Cronbach's alpha is .76 at Time 1 and .74 at Time 2.

Depression is measured by the 12-item version of the Center for Epidemiological Studies Depression scale (CES-D; Radloff, 1977). Respondents were asked how many days in the previous week they (a) felt bothered by things that usually do not bother them, (b) did not feel like eating, (c) felt that they could not shake off the blues even with help from their family or friends, (d) had trouble keeping their mind on what they were doing, (e) felt depressed, (f) felt that everything they did was an effort, (g) felt fearful, (h) slept restlessly, (i) talked less than usual, (j) felt lonely, (k) felt sad, and (l) felt not able to get going. Each item ranges from 0 to 7 days. The 12 items were averaged. Cronbach's alpha is .93 at Time 1 and .92 at Time 2.

Independent variables. Parental status is a dichotomous variable; those who became a

parent over the 5- to 7-year interval are assigned a 1. We examined the effect of the number of children in the household in the model instead of the dichotomous variable of parental status. The results were similar and thus we chose to use the measure of *parental status* rather than the number of children because using the dichotomous variable makes our analysis of variations by gender and marital status groups easier to interpret. *Gender* is a dichotomous variable, with women coded as 1. *Marital status* is coded as a series of dummy variables for the following four groups: (a) continuously married from Time 1 to Time 2 (18.4%), (b) newly married between Time 1 and Time 2 (29.2%), (c) continuously unmarried from Time 1 to Time 2 (49.0%), and (d) newly unmarried between Time 1 and Time 2 (3.4%, including those who became separated, divorced, and widowed). Table 5.1 presents percentage distributions of marital status by gender and parental status, for all respondents, women, and men.

Control variables. We include several control variables in the models based on their associations with our outcome measures assessing adults' lives. Basic demographic characteristics, such as age and race, and socioeconomic status, such as education, employment status, and household income, tend to be related to social integration, self-concept, and depression (see Aneshensel, 1992, for a review), and hours of housework (see Shelton & John, 1996, for a review). *Age* of respondents is coded in years. *Race* is a dichotomous variable in which 1 indicates *non-White*. *Education* is years of school completed. Respondents who have completed a high school diploma, an associate degree, a bachelor's degree, or a higher degree are, however, assigned 12, 14, 16, and 20, respectively, even if reporting fewer or more years. *Employment status* is measured as 1 = *non-employed*, 2 = *employed part time* (1–34 hours per week), 3 = *employed full-time* (35 or more hours per week). *Household income* is household income in the previous 12 months. Those who have missing income data were assigned a predicted value based on a regression using age,

Table 5.1 Weighted Percentage Distribution (Unweighted *N*s) of Marital Status at Time 2 by Parental Status at Time 2 for All Respondents, for Women, and for Men

<i>Marital Status</i>	<i>Total Sample</i>			<i>Women</i>			<i>Men</i>		
	<i>Total (N)</i>	<i>New Parents</i>	<i>Remain Childless</i>	<i>Total (N)</i>	<i>New Parents</i>	<i>Remain Childless</i>	<i>Total (N)</i>	<i>New Parents</i>	<i>Remain Childless</i>
Married Time 2									
Continuously married	18.4 (510)	36.7 (319)	10.6 (191)	20.6 (261)	38.0 (162)	12.4 (99)	16.9 (249)	35.6 (157)	9.5 (92)
Newly married ^a	29.2 (508)	43.1 (242)	23.3 (266)	28.0 (365)	39.2 (108)	22.7 (115)	30.1 (285)	46.3 (134)	23.7 (151)
Unmarried Time 2									
Newly unmarried ^b	3.4 (86)	4.4 (33)	3.0 (53)	4.4 (48)	5.0 (17)	4.1 (31)	2.7 (38)	3.9 (16)	2.2 (22)
Continuously unmarried	49.0 (829)	15.8 (94)	63.1 (735)	47.0 (223)	17.9 (51)	60.8 (314)	50.3 (464)	14.2 (43)	64.6 (421)
<i>Total</i>	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<i>n</i>	1,933 (100.0%)	688 (35.6%)	1,245 (64.4%)	897 (100.0%)	338 (37.7%)	559 (62.3%)	1,036 (100.0%)	350 (33.8%)	686 (66.2%)

a. Unmarried at Time 1 and married by Time 2.

b. Married at Time 1 but separated, divorced, or widowed by Time 2.

148 • READINGS IN FAMILY THEORY

gender, education, race, and hours of paid work, by marital status. To avoid distortion caused by extreme outliers, income is measured as the log of household income. *Missing income* is a dichotomous variable indicating household income is imputed.

Because recently married respondents were oversampled, we include *duration of marriage at Time 1*, measured as years of current marriage at Time 1 (0 = *not married at T1*, 1 = *married 12 months or less*, 2 = *13–24 months*, 3 = *25–36 months*, 4 = *37–48 months*, 5 = *49–60 months*, 6 = *61–120 months*, 7 = *over 120 months*). A dichotomous variable indicating if respondents had been *previously married at T1* (coded as 1) was included (see Marks & Lambert, 1998).

To diminish selection effects, we included Time 1 states as controls. Thus, in the regression analyses, each model includes the respondent's dependent measure 5 to 7 years earlier. Descriptive statistics for the variables used in the analysis are reported in Table 5.2.

Results

New Parents Versus Those Who Remain Childless

We first assess the relationship of becoming a parent with each outcome measure for all adults, conducting ordinary least squares regressions to examine the main effects of parental status (Model 1 of Table 5.3). The number of cases varies slightly across analyses because of missing data on the dependent variable.

For the first three indicators in Table 5.3 (integration, self-esteem, and self-efficacy) higher levels indicate positive states, and we expected these positive states to be higher for new parents compared with nonparents. New parents do show a higher level of social integration with relatives, friends, and neighbors ($p < .001$), controlling for social integration at Time 1. There are no differences between new parents and those who remain childless on self-esteem. Unexpectedly, new parents show a lower level of efficacy than nonparents ($p < .001$), controlling for earlier

efficacy. Although we expected that the new role of parent might provide adults with opportunities to grow psychologically from the experience of nurturing others, our findings appear to support the alternative argument that young children interfere with adults' freedom, which may decrease their sense of power to achieve their own goals.

For the last three indicators in Table 5.3 (housework, disagreements with one's spouse, and depression), higher levels indicate negative states, and we expected these negative states to be higher for new parents compared with nonparents. New parents report more hours of housework than those who remain childless, controlling for earlier hours of housework ($p < .001$). Among continuously married people, new parents show no statistically significant difference in strain in their marital relationship compared with nonparents, controlling for marital strain at Time 1. This finding is in line with studies using small-scale longitudinal data of newlywed couples showing that the marital satisfaction of both parents and nonparents declined overtime (Kurdek, 1993; MacDermid et al., 1990). Finally, contrary to the argument commonly cited, there are no differences between new parents and nonparents in depression, controlling for earlier depression.

In sum, we found a significant effect of becoming a parent on three aspects of adults' lives: social integration, self-efficacy, and hours of housework. Which of these aspects of adults' lives are most strongly affected by becoming a parent? To compare the size of the effect of parental status on these three outcome variables, we calculated partial correlation coefficients between parental status and social integration, self-efficacy, and hours of housework, that is, the correlation coefficients between parental status and each variable controlling for other variables in the model (see Neter, Kutner, Nachtsheim, & Wasserman, 1996, pp. 274–276). The partial correlation coefficients between parental status and social integration, self-efficacy, and hours of housework are $r = .09$, $.08$, and $.14$, respectively. This suggests that increased strains of housework may be the arena where new

(Text continued on page 157)

Table 5.2 Means (SE) for All Variables by Parental Status at Time 2

	Total Sample				Women			Men				
	Total	N	New Parents (35.6%)	Remain Childless (64.4%)	Total	N	New Parents (35.6%)	Remain Childless (64.4%)	Total	N	New Parents (33.8%)	Remain Childless (66.2%)
Dependent Variables												
Social and Psychological Resources												
Social integration Time 2	6.03	1,701	6.36	(1.97)	6.06	788	6.45	(1.86)	5.88	913	6.29	(2.28)
Social integration Time 1	5.75	1,701	6.01	(2.23)	5.79	788	6.11	(2.15)	5.64	913	5.92	(2.66)
Self-esteem Time 2	12.64	1,805	12.56	(1.50)	12.57	850	12.43	(1.66)	12.63	955	12.68	(1.86)
Self-esteem Time 1	12.46	1,805	12.40	(1.75)	12.61	850	12.51	(1.60)	12.66	955	12.30	(1.97)
Self-efficacy Time 2	3.68	1,834	3.66	(0.86)	3.69	866	3.65	(0.95)	3.70	968	3.66	(1.03)
Self-efficacy Time 1	3.61	1,834	3.68	(0.81)	3.60	866	3.68	(0.94)	3.56	968	3.68	(1.03)
Daily Strains												
Hours of housework Time 2	21.45	1,654	26.27	(13.20)	25.03	795	34.68	(14.63)	20.87	859	19.62	(11.63)
Hours of housework Time 1	19.43	1,654	21.30	(13.14)	22.71	795	26.52	(14.57)	21.07	859	17.18	(16.86)
Disagreements Time 2	8.24	456	8.64	(2.58)	8.40	232	9.05	(2.76)	7.44	224	8.28	(2.75)
Disagreements Time 1	9.14	456	9.36	(2.57)	9.01	232	9.16	(2.73)	8.77	224	9.54	(2.70)
Psychological Well-Being												
Depression (0-7) Time 2	1.02	1,802	1.04	(1.10)	1.17	847	1.08	(1.13)	1.21	955	1.00	(1.04)
Depression (0-7) Time 1	1.27	1,802	1.28	(1.34)	1.35	847	1.43	(1.27)	1.31	955	1.15	(1.47)

(Continued)

Table 5.2 (Continued)

	Total Sample			Women			Men					
	Total	N	New Parents (35.6%)	Remain Childless (64.4%)	Total	N	New Parents (35.6%)	Remain Childless (64.4%)	Total	N	New Parents (33.8%)	Remain Childless (66.2%)
Control Variables												
Age	31.56 (6.11)	1,933	30.70 (4.36)	31.92 (6.86)	31.44 (6.01)	897	29.99 (3.94)	32.13 (6.87)	31.64 (6.20)	1,036	31.27 (4.67)	31.79 (6.85)
Race (1 = non-White)	0.21 (0.41)	1,933	0.23 (0.39)	0.20 (0.42)	0.20 (0.38)	897	0.24 (0.37)	0.19 (0.38)	0.21 (0.43)	1,036	0.23 (0.41)	0.21 (0.44)
Education	13.90 (2.50)	1,933	13.46 (2.24)	14.09 (2.61)	14.13 (2.33)	897	13.37 (2.08)	14.49 (2.39)	13.74 (2.64)	1,036	13.53 (2.39)	13.82 (2.75)
Employment Status												
Not employed	0.14 (0.35)	1,933	0.20 (0.37)	0.12 (0.34)	0.19 (0.37)	897	0.35 (0.42)	0.12 (0.32)	0.11 (0.32)	1,036	0.08 (0.26)	0.12 (0.35)
Part time	0.11 (0.31)	1,933	0.09 (0.26)	0.12 (0.34)	0.17 (0.35)	897	0.17 (0.33)	0.16 (0.36)	0.07 (0.27)	1,036	0.02 (0.13)	0.09 (0.31)
Full time	0.75 (0.43)	1,933	0.72 (0.41)	0.76 (0.45)	0.64 (0.45)	897	0.48 (0.44)	0.72 (0.44)	0.82 (0.40)	1,036	0.91 (0.28)	0.79 (0.44)
Household income (logged)	10.33 (1.18)	1,933	10.42 (1.05)	10.30 (1.25)	10.33 (1.14)	897	10.31 (1.16)	10.34 (1.13)	10.34 (1.22)	1,036	10.51 (0.93)	10.27 (1.34)
Missing income (1 = missing)	0.18 (0.39)	1,933	0.07 (0.23)	0.24 (0.44)	0.15 (0.34)	897	0.06 (0.21)	0.20 (0.39)	0.21 (0.42)	1,036	0.07 (0.25)	0.26 (0.48)
Duration of marriage Time 1	0.82 (1.86)	1,933	1.27 (1.78)	0.63 (1.87)	0.93 (1.84)	897	1.28 (1.65)	0.76 (1.92)	0.74 (1.87)	1,036	1.26 (1.89)	0.54 (1.81)
Previously married Time 1	0.03 (0.16)	1,933	0.03 (0.14)	0.03 (0.16)	0.03 (0.17)	897	0.03 (0.15)	0.04 (0.18)	0.02 (0.14)	1,036	0.02 (0.14)	0.02 (0.15)

NOTE: Means are weighted; Ns are not weighted.

Table 5.3 Regression Coefficients and Standard Errors for the Effects of Parental Status on Social Integration, Self-Esteem, Self-Efficacy, Hours of Housework, Disagreement With Spouse, and Depression ($N = 1,933$)

	<i>Social and Psychological Resources</i>											
	<i>Social Integration</i>						<i>Self-Esteem</i>					
	<i>Model 1</i>			<i>Model 2</i>			<i>Model 1</i>			<i>Model 2</i>		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
New Parents	0.46***	0.12	0.10	0.30	0.26	0.07	-0.12	0.10	-0.03	0.03	0.21	0.01
Parents \times women				0.25	0.24	0.04				0.05	0.19	0.01
Parents \times marital status												
Continuously married \times new parents (reference)				—	—	—	—	—	—	—	—	—
Newly married ^a \times new parents				0.10	0.30	0.02				-0.29	0.23	-0.06
Newly married ^b \times new parents				0.32	0.59	0.02				-0.74	0.45	0.05
Continuously unmarried \times new				-0.11	0.34	-0.01				-0.08	0.27	-0.01
Gender \times marital status												
Continuously married \times women (reference)				—	—	—						
Newly married ^a \times women				-0.02	0.29	-0.003				0.33	0.22	0.06
Newly married ^b \times women				-0.64	0.59	-0.04				-0.02	0.45	-0.001
Continuously unmarried \times women				0.38	0.29	0.07				0.36	0.22	0.08
Women	0.03	0.10	0.01	0.20	0.26	-0.05	0.23**	0.08	-0.07	-0.52*	0.20	-0.15

(Continued)

Table 5.3 (Continued)

	Social and Psychological Resources											
	Social Integration						Self-Esteem					
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
Marital status												
Continuously married (reference)	—	—	—	—	—	—	—	—	—	—	—	—
Newly married ^a	0.10	0.24	0.02	0.03	0.34	0.01	0.36 [†]	0.19	0.10	0.40	11.27	0.11
Newly unmarried ^b	0.71*	0.29	0.06	0.96†	0.53	0.08	-0.20	0.23	-0.02	0.17	0.39	0.02
Continuously unmarried	0.25	0.25	0.06	0.06	0.33	0.01	0.09	0.20	0.03	0.06	0.26	0.02
Age	-0.01	0.01	-0.03	-0.01	0.01	-0.03	-0.03***	0.01	-0.12	-0.03***	0.01	-0.12
Non-White	-0.56***	0.12	-0.11	0.55***	0.12	-0.11	0.03	0.10	0.01	0.02	0.10	0.01
Education	-0.03	0.02	-0.04	-0.03	0.02	-0.04	0.09***	0.02	0.13	0.09***	0.02	0.12
Employment status												
Not employed (reference)	—	—	—	—	—	—	—	—	—	—	—	—
Part time	-0.24	0.20	-0.04	0.24	0.20	-0.04	0.01	0.15	0.002	0.02	0.15	0.004
Full time	-0.15	0.15	-0.03	-0.15	0.15	-0.03	0.14	0.12	0.04	0.13	0.12	0.03
Household income (log)	0.06	0.04	0.03	0.06	0.04	0.04	0.03	0.04	0.02	0.03	0.04	0.02
Missing income	0.14	0.15	0.03	0.15	0.15	0.03	-0.06	0.11	-0.01	-0.05	0.11	-0.01
Duration of marriage Time 1	-0.004	0.005	-0.004	-0.01	0.05	-0.01	0.06	0.04	0.06	0.07†	0.04	0.07
Previously married Time 1	-0.23	0.34	-0.02	-0.20	0.35	-0.01	0.22	0.25	0.02	0.21	0.25	0.02
Time 1 state	0.24***	0.02	0.28	0.24***	0.02	0.28	0.31***	0.02	0.32	0.31***	0.02	0.32
Intercept	4.65***	0.63	0	4.80***	0.66	0	8.14**	0.53	0	8.12***	0.56	0
Adjusted <i>R</i> ²	0.106***			0.106***			0.151***			0.151***		
<i>n</i>				1,701							1,805	

	<i>Social and Psychological Resources (continued)</i>						<i>Daily Strains</i>					
	<i>Self-Efficacy</i>						<i>Hours of Housework</i>					
	<i>Model 1</i>			<i>Model 2</i>			<i>Model 1</i>			<i>Model 2</i>		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
New Parents	-0.19***	0.05	0.09	0.13	0.12	0.06	4.20***	0.75	0.14	1.55	1.57	0.05
Parents \times women				-0.02	0.11	-0.01				8.03**	1.42	0.20
Parents \times marital status												
Continuously married \times new parents (reference)												
Newly married ^a \times new parents				-0.34*	0.13	-0.12				-1.22	1.79	-0.03
Newly married ^b \times new parents				-0.25	0.26	-0.04				-0.71	3.45	-0.01
Continuously unmarried \times new parents				-0.56***	0.15	-0.12				-0.12	2.02	-0.002
Gender \times marital status												
Continuously married \times women (reference)												
Newly married ^a \times women				0.10	0.13	0.03				-0.29	1.72	-0.01
Newly married ^b \times women				-0.25	0.26	-0.03				-7.60*	3.34	-0.08
Continuously unmarried \times women				-0.07	0.13	-0.03				-4.43**	1.71	-0.13
Women	0.01	0.04	0.01	0.04	0.12	0.02	4.25***	0.61	0.16	4.71**	1.59	0.17

(Continued)

Table 5.3 (Continued)

	Social and Psychological Resources (continued)						Daily Strains					
	Self-Efficacy			Hours of Housework			Model 1			Model 2		
	<i>b</i>	SE	β	<i>b</i>	SE	β	<i>b</i>	SE	β	<i>b</i>	SE	β
Marital status												
Continuously married (reference)	—	—	—	—	—	—	—	—	—	—	—	—
Newly married ^a	-0.05	0.11	-0.03	0.19	0.15	0.09	—	—	—	-0.16	2.07	-0.01
Newly unmarried ^b	-0.48***	0.13	-0.09	-0.16	0.22	-0.03	—	—	—	4.99 [†]	2.83	0.07
Continuously unmarried	-0.27*	0.11	-0.14	0.05	0.15	0.02	0.13*	0.05	0.06	-0.47	2.02	-0.02
Age	-0.02***	0.004	-0.10	-0.01***	0.004	-0.09	—	—	—	0.17*	0.05	0.08
Non-White	-0.01	0.05	-0.004	0.01	0.05	0.002	—	—	—	1.48*	0.75	0.04
Education	0.03***	0.01	0.08	0.03**	0.01	0.07	—	—	—	-0.64***	0.12	-0.12
Employment status												
Not employed (reference)	—	—	—	—	—	—	—	—	—	—	—	—
Part time	-0.05	0.09	-0.02	-0.05	0.09	-0.02	-5.54***	1.17	-0.13	-4.86***	1.15	-0.12
Full time	0.05	0.07	0.02	0.07	0.07	0.03	-5.29***	0.91	-0.17	-3.80***	0.91	-0.12
Household income (log)	-0.003	0.02	0.004	-0.01	0.02	-0.01	-0.21	0.27	-0.02	-0.27	0.26	-0.02
Missing income	-0.04	0.06	-0.02	-0.05	0.06	-0.02	0.98	0.88	-0.03	-0.76	0.86	-0.02
Duration of marriage Time 1	0.01	0.02	0.01	0.03	0.02	0.05	-0.34	0.30	-0.05	-0.32	0.31	-0.04
Previously married Time 1	0.19	0.14	0.03	0.22	0.14	0.04	1.17	1.91	-0.01	-1.92	1.90	-0.02
Time 1 state	0.29***	0.02	0.29	0.29***	0.02	0.29	0.29***	0.02	0.29	0.28***	0.02	0.28
Intercept	2.89***	0.28	0	2.66***	0.30	0.129***	26.89***	3.65	0	23.9***	3.79	0
Adjusted <i>R</i> ²	0.1231***			0.129***			0.244***			0.274***		
<i>n</i>				1,834						1,654		

	<i>Daily Strains (continued)</i>						<i>Psychological Well-Being</i>					
	<i>Disagree With Spouse</i>						<i>Depression</i>					
	<i>Model 1</i>			<i>Model 2</i>			<i>Model 1</i>			<i>Model 2</i>		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
New parents	0.31	0.30	0.05	-0.22	0.37	-0.04	0.10	0.06	0.04	0.04	0.13	0.02
Parents \times women				1.27*	0.53	0.18					-0.52***	0.12
Parents \times marital status												-0.16
Continuously married \times new parents (reference)												
Newly married ^a \times new parents				n/a	n/a	n/a						
Newly unmarried ^b \times new parents				n/a	n/a	n/a						
Continuously unmarried \times new parents				n/a	n/a	n/a						
Gender \times marital status												
Continuously married \times women (reference)				n/a	n/a	n/a						
Newly married ^a \times women				n/a	n/a	n/a						
Newly unmarried ^b \times women				n/a	n/a	n/a						
Continuously unmarried \times women				n/a	n/a	n/a						
Women	0.39	0.29	0.06	-0.29	0.41	-0.05	0.19***	0.05	0.09	0.39**	0.13	0.18

(Continued)

Table 5.3 (Continued)

	Daily Strains (continued)						Psychological Well-Being					
	Disagree With Spouse			Depression			Model 1			Model 2		
	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β	<i>b</i>	<i>SE</i>	β
	Model 1			Model 2			Model 1			Model 2		
Marital status												
Continuously married (reference)	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Newly married ^a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Newly unmarried ^b	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Continuously unmarried	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Age	-0.02	0.03	-0.04	-0.01	0.03	-0.02	0.01*	0.01	0.05	0.01 [†]	0.01	0.05
Non-White	-0.04	0.39	0.004	-0.02	0.38	-0.002	0.28***	0.06	0.10	0.24*5*	0.06	0.09
Education	0.02	0.05	0.01	0.02	0.05	0.02	-0.03**	0.01	-0.06	-0.02*	0.01	-0.06
Employment status												
Not employed (reference)												
Part time	0.45	0.49	0.05	0.50	0.49	0.06	-0.11	0.10	-0.03	-0.12	0.10	-0.03
Full time	0.14	0.41	0.02	0.32	0.41	0.05	-0.19**	0.08	-0.08	-0.26***	0.10	-0.10
Household income (log)	-0.14	0.13	-0.05	-0.14	0.13	-0.05	-0.03	0.02	-0.03	-0.02	0.02	-0.03
Missing income	-0.77	1.23	-0.03	-0.68	1.22	-0.02	0.02	0.07	0.01	0.01	0.07	0.004
Duration of marriage Time 1	-0.14 [†]	0.08	-0.10	-0.16	0.08	-0.11	0.01	0.02	-0.01	-0.03	0.03	-0.05
Previously married Time 1	-0.91 [†]	0.51	-0.08	-0.87 [†]	0.50	-0.08	0.07	0.16	0.01	0.02	0.16	0.002
Time 1 state	0.45***	0.04	0.45	0.45***	0.04	0.45	0.25***	0.02	0.30	0.25***	0.02	0.30
Intercept	6.22***	1.74	0	6.04***	1.73	0	0.98**	0.30	0	1.20***	0.32	0.171***
Adjusted <i>R</i> ²	0.236***			0.244***			0.157***					
<i>n</i>				456							1,802	

a. Unmarried at time 1 and married by Time 2.

b. Married at Time 1 but separated, divorced, or widowed by Time 2.

parents likely differ from their childless counterparts the most. Next we assess whether the effects of becoming a parent on adult lives are the same for men and women, for married and unmarried adults.

Variations by Gender and Marital Status in Costs and Benefits of Children

The second question, whether the effect of parental status on adults' lives varies by gender and marital status, is examined in Model 2 of Table 5.3. We evaluated the following two-way interactions: parental status \times gender, parental status \times marital status, and gender \times marital status. We added these interaction terms to the main-effects models shown in Model 1.

The first two outcomes, social integration and self-esteem, are not moderated by gender or marital status. The effect of parental status on self-efficacy, however, depends on marital status. Although Model 1 showed that new parents report lower levels of self-efficacy than those who remained childless, Model 2 shows that there is a significant interaction effect between parental status and marital status. The coefficients for newly married \times new parents, newly unmarried \times new parents, and continuously unmarried \times new parents, are -0.34 ($p < .05$), -0.30 (*ns*), and -0.56 ($p < .001$), respectively, suggesting that those who are newly married and those who are unmarried are disadvantaged relative to those who are continuously married in terms of the effects of parental status on self-efficacy. The results of these interaction effects are shown in Figure 5.1, which presents differences in adjusted means for self-efficacy between new parents and nonparents by marital status (new parents' scores minus nonparents'). Those who have been continuously unmarried are most disadvantaged in terms of the effects of parental status on self-efficacy. Interestingly, the newly married, that is, those who got married and became parents during a relatively short period, are disadvantaged as well compared with those who have been continuously married in terms of the effects of parental status on self-efficacy.

The effect of parental status on hours of housework depends on gender. In Model 2, the coefficient for new parent \times women is significant and positive (8.03 , $p < .001$). Using the coefficients from the regression analysis, we calculated adjusted means of housework for men and women by parental status. New mothers do 9.07 hours per week more housework than those who remain childless (31.1 hours per week for new mothers vs. 22.0 hours per week for women who remained childless). New fathers, however, spend only 1.04 hours per week more than non-fathers (21.0 hours per week for new fathers vs. 20.4 hours per week for men who remained childless), and the difference is not significant. This result is consistent with Sanchez and Thomson (1997).

The effect of parental status on marital strain also depends on gender. Although Model 1 shows that there was little effect of becoming a parent on marital disagreement, Model 2 shows that the coefficient for new parents \times women is significant and positive (1.27 , $p < .05$). This suggests that new mothers report more disagreements with their spouse compared with their childless counterparts, whereas this is not the case for new fathers.

Finally, although Model 1 showed that there was little difference between new parents and nonparents in levels of depression, the effect depends on both gender and marital status. For gender, the coefficient for the interaction for new parents \times women is -0.52 ($p < .001$), suggesting that there are gender differences in the relationship of parental status to depression. Contrary to arguments commonly cited, however, the negative sign indicates that new mothers are *less* vulnerable to depression than new fathers. For marital status, the coefficients for new parents \times continuously unmarried is 0.72 ($p < .001$), suggesting that continuously unmarried people who become parents are more depressed than continuously married adults who do so. The results of these interaction effects are presented in Figure 5.2. It appears that new parenthood is related to higher levels of depression, especially for continuously unmarried (i.e., never married) men.

158 • READINGS IN FAMILY THEORY

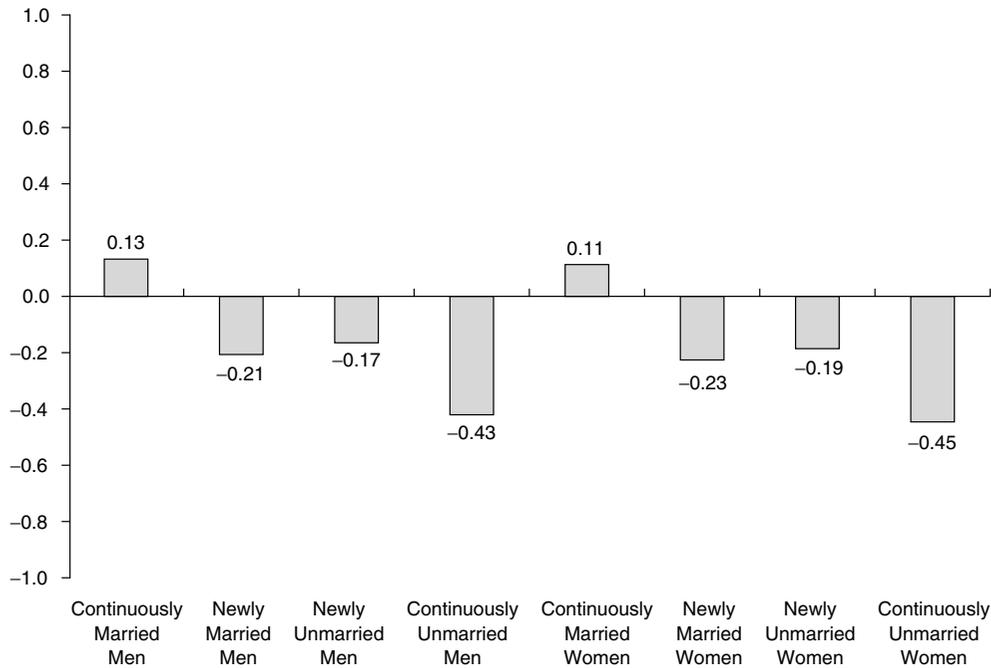


Figure 5.1 Differences in Self-Efficacy (Adjusted Means) Between New Parents and Nonparents (New Parents' Scores Minus Nonparents')

NOTE: Adjusted means were calculated by using unstandardized coefficients from the regression Model 2 of Table 5.3, which controls for age, race, education, employment status, household income, missing income, duration of marriage at Time 1, previously married at Time 1, and self-efficacy at Time 1.

Figure 5.2 also shows that among continuously married women, parents show lower levels of depression than nonparents. We examined separate regressions for subgroups by gender and marital status and found that the negative effect of parental status on depression for never-married men and the positive effect of parental status on married women were statistically significant (data not shown).

Summary

We found that the effect of becoming a parent on adults' lives is multifaceted, with effects dependent on other statuses such as gender and marital status. New parents, regardless of gender and marital status, report higher levels of social integration compared with their childless

counterparts and show no differences in self-esteem. For other indicators, the effects of becoming a parent vary by gender and marital status subgroups. Becoming a mother (not a father) means more hours of housework and more disagreements with spouses compared with their counterparts who remained childless. Upon becoming a parent, never-married men and women tend to experience lower self-efficacy. Upon the arrival of children, never-married men are the most disadvantaged in terms of depression; continuously married women are the most advantaged compared with their childless counterparts.

Table 5.4 presents a summary of our findings for the four marital status subgroups. Becoming a parent seems to affect married women by providing benefits (noted by a plus sign indicating

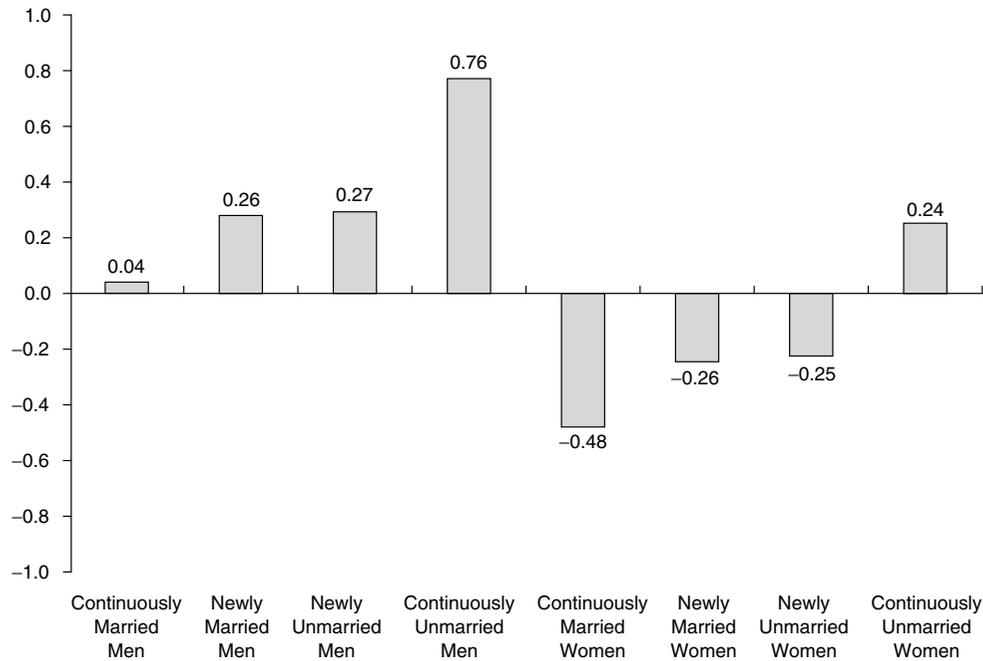


Figure 5.2 Differences in Depression (Adjusted Means) between New Parents and Nonparents (New Parents' Scores Minus Nonparents')

NOTE: Adjusted means were calculated by using unstandardized coefficients from the regression Model 2 of Table 5.3, which controls for age, race, education, employment status, household income, missing income, duration of marriage at Time 1, previously married at Time 1, and self-efficacy at Time 1

more of a positive state) and costs (noted by a minus sign indicating less of a positive state). Married women enjoy greater social integration and lower levels of depression but do more housework and have more disagreements with their spouse. The smallest effect of becoming a parent on well-being among the four subgroups occurs for married men; the only effect was that these new fathers report expanded contact with relatives, friends, and neighbors. For unmarried men and women, becoming a parent may bring more costs than benefits to their lives. Upon becoming parents, unmarried women show an increase in social integration but a decrease in self-efficacy and an increase in housework. Unmarried men also show an increase in social integration but have decreased self-efficacy and increased depression.

Discussion

The effect of parenthood on adults' lives has been of great interest among researchers. Whereas many studies have focused on costs of parenting, we have argued that being a parent with young children may provide benefits as well as costs to adults, including opportunities to broaden and activate social networks and to develop psychological resources such as self-esteem and self-efficacy. We have suggested that the strong focus on strains of childrearing might result in misleading interpretations of the effect of children on adults' lives. This is not to say, of course, that research on parental strains is unwarranted—indeed, it is important and necessary to uncover parental strain processes and the ways in which social policies can alleviate parents' burdens (Glass, 2000).

160 • READINGS IN FAMILY THEORY

Table 5.4 Summary of Findings on the Effects of Becoming a Parent on Adults' Lives by Marital Status at Time 2 and Gender of Respondents

	<i>Married Women</i>	<i>Married Men</i>	<i>Unmarried Women</i>	<i>Unmarried Men</i>
Social and psychological resources				
Social integration	+	+	+	+
Self-esteem				
Self-efficacy			—	—
Daily strains				
Housework	—	—	—	
Disagreements with spouse	—		n/a	n/a
Psychological well-being				
Depression	+			—

NOTE: + = better states; — = worse states; n/a = not applicable.

Using longitudinal data gathered from a national representative sample, and comparison groups carefully chosen in terms of parents' and nonparents' stage in the life course, this study suggests that some rethinking is needed about conclusions that overall, the effect of children on adults lives is detrimental. The findings generally show that becoming a parent can entail both greater costs and higher levels of benefits compared with those who remain childless, depending on the adult's social position.

We find that the costs and rewards of becoming a parent vary greatly by marital status and gender subgroups. Our findings suggest that if researchers continue to examine the lives of parents without considering differences among fathers and mothers, or among married and unmarried parents, they will fail to capture the complex nature of the parental role and its effect on adults' lives. Our findings indicate that for married women, although becoming a mother is associated with greater costs in terms of more housework and more disagreements with spouse, it is also associated with better mental health in terms of depression. Married men who become fathers show few changes in terms of costs and benefits. Our findings also indicate that generally, costs of becoming a parent accrue to those who have never been married, especially to

never-married men. Even after selection effects are minimized, among the four subgroups, unmarried men are the most vulnerable to distress when they become parents. Unmarried fathers (particularly the never married) have received little attention in parental research. Although the predominant image of unmarried fathers may be that they are "bad dads"—irresponsible, absent fathers who do not fulfill their child support obligations (Furstenberg, 1988), they may be as vulnerable as unmarried mothers to hardships in their parental roles (for example, see Simon, 1998; Umberson & Williams, 1993). The majority of the continuously unmarried fathers in this study probably never shared a coresidential relationship with their child. Nonetheless, they are more depressed than their married counterparts after becoming a parent and may feel a strong psychological loss, perhaps by not having much contact with their new offspring. Further research on this group is warranted.

The choice of indicators to assess the effect of parenthood on adults' lives is challenging. Because our dependent variables do not include indicators that directly assess parental experiences, such as hours of child care, disagreements with spouse about the child, and joys and satisfaction with and concerns about childrearing, our

results may underestimate both the positive and negative effects of parental status on adults' lives. For example, the increase in housework hours for women who become mothers is probably an underestimate because we do not have a measure of child-care hours, which is likely fairly high for mothers compared with nonmothers. Child care itself, moreover, is both rewarding and frustrating, exemplifying the increase in both joys and burdens accruing to adults who become parents.

We are cautious about our findings because of potential problems regarding sample attrition that may have affected our results. For example, our findings on the effect of becoming a parent on self-efficacy or depression may be underestimated if those who became parents after the first interview and who were highly distressed by having a child were more likely to drop out of the sample. Another possible bias is that although we use marital status as one of our primary independent variables, changes in marital status between the two interviews may not be independent from the presence of children. It is possible that those who experienced greater marital conflict upon becoming parents may have split up before the second interview. The question on the effect of the presence of children on marital dissolution is still debatable (e.g., see Ono, 1998; Sayer & Bianchi, 2000; South & Spitze, 1986) and is beyond the scope of this paper.

Whereas our analysis showed statistically significant effects of parental status on adults' lives, the explained variance of the models is relatively small, and the mean differences between new parents and those remaining childless are minimal. This is surprising, given that reviews of previous studies and some qualitative research emphasize costs and struggles during the transition to parenthood. On one hand, the small effects may be because of limitations of our outcome measures. One of the outcome measures, self-efficacy, was a one-item assessment rather than an index, making it less reliable and perhaps more difficult to discern the effects of parental status. Also, as we discussed earlier, we do not examine outcome variables directly related to

parental roles such as child care. On the other hand, our findings of the small effect of parental status on six indicators of adults' lives are similar to findings from other quantitative studies.

Future research should consider how the types and degree of costs and benefits of parenting change as children grow. In data not shown, we examined the effects of the duration of parenthood rather than parental status on each indicator of adults' lives assessed in this study. The results were similar; however, the data provide insight into only a relatively small window of parenting through the preschool years. One avenue for future research that seems warranted, then, is to compare parents of older children with nonparents at a similar life stage (perhaps middle age). For parents with preschool children, strains may include demands of daily care of the children, but for parents of older children, trouble in the parent-child relationship may constitute a burden of parenting (Umberson, 1989; Umberson et al., 1996). Benefits may change as well: Those with older children, for example, are shown to be even more integrated than those with younger or no children (Gallagher & Gerstel, 2001).

In conclusion, from the day children are born, they become a source of joy and a source of burden for their parents. Men and women becoming parents take on a profound status for the rest of their lives. Explicit examination of the processes through which costs and benefits ebb and flow in parents' and nonparents' lives, and perhaps lead to different levels of well-being, will provide us with a deeper understanding of how parenting does—and does not—affect adults.

Note

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162 • READINGS IN FAMILY THEORY

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164 • READINGS IN FAMILY THEORY

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EQUITY AND SOCIAL EXCHANGE IN DATING COUPLES: ASSOCIATIONS WITH SATISFACTION, COMMITMENT, AND STABILITY

SUSAN SPRECHER

Abstract

A longitudinal study with romantic couples was conducted to examine the importance of equity relative to other social exchange variables (i.e., rewards, investments, and alternatives) in predicting relationship satisfaction, commitment, and stability. Underbenefiting inequity (but not overbenefiting inequity) was associated with a lower level of satisfaction and commitment and a greater likelihood of breakup. However, little evidence was found that equity at one time predicted change in satisfaction and commitment. Slightly more evidence was found for a reverse causal direction: Satisfaction and commitment contributed to a decrease in under benefiting inequity, although these results were not consistent across time. Women's commitment was the strongest predictor of relationship stability. In addition, women's under benefiting inequity and alternatives and men's alternatives were associated with breakups in some of the analyses, and women's rewards and satisfaction and men's satisfaction were associated with relationship stability in some of the analyses. Because of the multiple waves and the extended length of the longitudinal study, the findings make a unique

contribution to the literature on equity and exchange.

Some relationships develop, are maintained, and last a lifetime. Other relationships become dissatisfying to one or both partners and are terminated. Considerable prior research has focused on identifying the factors associated with relationship satisfaction and success. Among the factors considered have been social exchange elements of the relationship, which include two categories of theoretical variables. One set of variables refers to the distributive justice norms, particularly equity (e.g., Walster [Hatfield], Walster, & Berscheid, 1978). The second set derives from Thibaut and Kelley's interdependence theory (Kelley & Thibaut, 1978; Thibaut & Kelley, 1959) and more recently has been represented in Rusbult's (1980, 1983) investment model. The central focus of the present research is on the importance of equity in predicting relationship satisfaction, commitment, and stability, but its importance is assessed relative to other social exchange variables (rewards, investments, and comparison level for alternatives). These associations are examined with a longitudinal sample of couples, all of whom were dating at the first wave of the study.

Theoretical Background

Equity refers to the perceived balance in the partner's contributions and outcomes. An individual is underbenefited in a relationship if he or she contributes more but receives less than his or her partner. The state of overbenefit occurs when one is contributing less but receiving more than one's partner. (The two partners may not agree in their perceptions of equity.) Equity theorists (e.g., Hatfield, Utne, & Traupmann, 1979; Walster et al., 1978) predict that both underbenefiting inequity and overbenefiting inequity cause distress, but that underbenefiting inequity is more distressing. The theory further predicts that the distress is likely to strain the relationship and decrease overall satisfaction and commitment. This distress leads an individual to seek to restore equity by either changing his or her own contributions, convincing the partner to change his or hers, or convincing him or herself that the inequity does not exist (i.e., change perceptions and expectations of each partner's contributions and outcomes). If these attempts fail, the relationship is likely to end.

The variables included in investment theory (e.g., Rusbult, 1980, 1983; Rusbult & Buunk, 1993; Rusbult, Drigotas, & Verette, 1994) are rewards, costs, comparison level (general expectations of what one deserves), comparison level for alternatives (expectations of rewards one could obtain elsewhere), and investments (what one gives to the relationship that cannot be retrieved if the relationship were to end). This framework distinguishes between predictors of satisfaction or positive affect experienced in the relationship and commitment, or the intent to maintain and feel psychologically attached to the relationship. The investment model predicts that satisfaction will be greater the higher the rewards and the lower the costs, both as compared to the individual's comparison level. A person's commitment to the relationship is predicted to be affected positively by satisfaction (which is further predicted by the positive difference between rewards and costs) and investments, and negatively by desirable alternatives. Stability of the

relationship is expected to be affected directly by commitment and thus indirectly by the other social exchange variables.

Both equity theory and the investment model purport to predict relationship outcomes such as satisfaction, commitment, and stability, although there have been few attempts to compare the relative explanatory power of equity and investment model variables. The general goal of this investigation is to extend the integration of the two social exchange theories by examining the contribution of equity, relative to several investment model variables, in predicting relationship satisfaction, commitment, and stability. Relationship and family researchers, theoreticians, and practitioners have long been interested in identifying the factors that contribute to relationship happiness and success, and this investigation contributes to this body of literature.

Representative Research on Equity

Early research that examined equity in intimate relationships found that individuals who reported underbenefit in their relationships experienced the most distress, those who reported equity experienced the least distress, and those who were overbenefited were intermediate between these two groups (for a review, see Hatfield et al., 1979). Research also has provided support for the prediction that distress experienced as a result of inequity strains the overall relationship and is associated with lower satisfaction and commitment (e.g., Davidson, 1984; Sabatelli & Cecil-Pigo, 1985; Sprecher, 1988; Traupmann, Hatfield, & Wexler, 1983; Traupmann, Peterson, Utne, & Hatfield, 1981; Utne, Hatfield, Traupmann, & Greenberger, 1984).

Other research focused on comparing equity with reward level or equality (another justice norm) in predicting relationship quality. These studies found equity to be less important than rewards as a predictor of relationship quality (Cate, Lloyd, & Henton, 1985; Cate, Lloyd, Henton, & Larson, 1982; Cate, Lloyd, & Long,

1988; Desmarais & Lerner, 1989; Martin, 1985; Michaels, Acock, & Edwards, 1986; Michaels, Edwards, & Acock, 1984). Sprecher (1988) compared equity with several investment variables—satisfaction, investments, and alternatives (as well as with the degree of social network support)—in predicting relationship commitment. She found comparison level for alternatives to be the strongest predictor of commitment but also found that equity, satisfaction, and network support explained unique variance in commitment (investments did not explain any additional variance in commitment when the other variables were included in the model). Floyd and Wasner (1994) found equity to be correlated with commitment in bivariate analyses but unrelated to commitment when satisfaction and desirable alternatives also were included in multivariate analyses.

Although equity appears to be at least modestly associated with satisfaction and commitment in concurrent analyses, it appears to do less well in forecasting later relationship stability (see Berg & McQuinn, 1986; Felmler, Sprecher, & Bassin, 1990; Lujansky & Mikula, 1983). In addition, very little evidence has been found that equity at one time contributes to a change in relationship quality over time (see Cate et al., 1988; Lujansky & Mikula, 1983). However, VanYperen and Buunk (1990), with a Dutch sample of men and women most of whom were married, found that the more equity that wives perceived at Time 1, the smaller the decrease (or the greater the increase) in their satisfaction a year later. In addition, Grote and Clark (2001), in a longitudinal study of husbands and wives making the transition to parenthood, found that inequity in division of labor at one time contributed to an increase in conflict and a decrease in satisfaction 6 to 8 months later, although for wives only.

Although equity appears not to be a strong predictor of change in relationship quality, what about the reverse causal direction? Is there evidence that dissatisfaction in a relationship leads people to perceive or create inequities? Some exchange theorists (e.g., Grote & Clark, 2001) have argued that this causal direction is also

likely to occur in part because dissatisfaction, as a negative emotion, can trigger people to become more focused on what is going on in their relationship and possibly lead to biased retrieval of information on who is contributing what. In support of this prediction, Grote and Clark (2001) found that conflict and dissatisfaction measured at one time (for both husbands and wives) predicted greater inequity in household tasks several months later.

A Brief Overview of Research on the Investment Model

Rusbult and her students have provided several tests of the predictions derived from the investment model (e.g., Duffy & Rusbult, 1986; Rusbult, 1980, 1983; Rusbult, Johnson, & Morrow, 1986; Rusbult & Martz, 1995; Rusbult, Marts, & Agnew, 1998). In addition, others have tested some of the associations predicted from the theory (e.g., Bui, Peplau, & Hill, 1996; Felmler et al., 1990; Floyd & Wasner, 1994; Kurdek, 1992; Sacher & Fine, 1996; Simpson, 1987). This previous research has found satisfaction to be generally predicted by rewards but less affected by costs. In a majority of the studies, commitment has been found to be associated positively with investments and rewards and associated negatively with comparison level for alternatives. However, and as noted earlier, very little research has examined investment model variables along with justice norms (e.g., equity). In addition, very little of the research has been longitudinal, particularly of the type that includes measures of the theoretical variables at later time points (see, however, Rusbult, 1983).

Purposes of This Investigation

The first purpose of this study is to examine the unique association of equity with commitment and satisfaction, relative to rewards, investments, and comparison level for alternatives, with all variables measured concurrently. I hypothesize that inequity (particularly underbenefiting inequity) and alternatives will be associated

168 • READINGS IN FAMILY THEORY

negatively with commitment and satisfaction, and that rewards and investments will be associated positively with commitment and satisfaction. Although prior research (e.g., Cate et al., 1988; Martin, 1985) suggests that rewards will be a more important predictor of satisfaction and commitment than equity, little prior research has compared equity with other investment model variables, and thus the importance of equity relative to the other variables will be explored.

The second purpose is to examine whether equity predicts change in satisfaction and commitment over time. As noted previously, most of the research demonstrating links between equity and relationship outcomes has been based on cross-sectional data. Only VanYperen and Buunk (1990) and Grote and Clark (2001) found any evidence that equity may contribute to a change in satisfaction, and for women only. In the present study, panel analyses examine how equity measured at Time n predicted satisfaction (and commitment) at Time $n + 1$ controlling for satisfaction (commitment) at Time n . As a comparison, similar analyses are conducted with the other social exchange variables.

The third purpose is to test the reverse causal direction between equity and relationship quality—does inequity arise out of relationship unhappiness? Individuals may perceive preexisting inequities or create new ones only if a relationship dips below a certain threshold of relationship quality. Panel analyses examine how satisfaction (and commitment) measured at Time n predicts inequity at Time $n + 1$ controlling for inequity at Time n . As a comparison, similar analyses are conducted with the other social exchange variables.

The final purpose of this study is to examine the degree to which equity predicts the stability of the relationship, also in comparison with other social exchange variables. Although inequity should have a negative effect on the entire relationship and lead to dissolution, previous research (e.g., Berg & McQuinn, 1986; Felmlee et al., 1990; Lujansky & Mikula, 1983) has found almost no support for the theory that equity predicts which couples break up and

which remain together over time. Investment model variables (e.g., comparison level for alternatives) have done better in forecasting the final status of the relationship (e.g., Berg & McQuinn, 1986; Bui et al., 1996; Rusbult et al., 1998), although most previous longitudinal studies have followed couples over a limited period of time or at only one follow-up (the Bui et al. study is an exception).

In sum, through both concurrent and longitudinal analyses, equity is compared to other social exchange variables in predicting satisfaction and commitment (including change in satisfaction and commitment) and relationship stability with a sample of romantic couples. In addition, the longitudinal data allow for the examination of the degree to which change in equity (and the other exchange variables) is affected by satisfaction and commitment.

Method

Overview of the Data

The data are from a longitudinal study conducted at a Midwestern university with a volunteer sample of romantic couples. The original sample consisted of both partners of 101 dating couples who completed a self-administered questionnaire in fall 1988. The first follow-up was conducted 6 months later (spring, 1989), and then three additional follow-ups were conducted approximately annually (spring-summer of 1990, 1991, and 1992).

Most of the participants were university undergraduate students when they first participated at Time 1. They were recruited primarily through advertisements in the student newspaper and posters placed around campus. The mean age of the participants at Time 1 was approximately 20 years (by Time 5, the participants were, on the average, 24–25 years of age). Most of the sample was White (97.5%) and of the middle or upper-middle class (86.6%). The mean number of months the couples had been dating was 18.7.

All of the participants at Time 1 and some of the participants at the follow-ups completed the

questionnaire in a university office. In the follow-ups, the couples were initially contacted over the phone to determine the current status of their relationships. Participants who had moved away were mailed the questionnaire, with a stamped, self-addressed return envelope. Generally, there was very little refusal to participate, particularly among couples whose relationships remained intact. Of the 41 couples who remained together over the study, 38 of the women and 36 of the men participated at all five waves of the study. (Six participants from five different relationships did not participate in one of the waves, and one couple [two participants] were missing at two waves.) A higher rate of non-response occurred in the final contact (the breakup questionnaire) for the subsample of couples who broke up, although the response rate was still high (86%).

Measurement

Social Exchange Measures. At each wave of the study, equity, rewards, and investments were assessed by both a detailed measure and a global item. The detailed measure for each exchange variable was based on the six resources included in Foa and Foa's (1974) classification of resources—love (affection, warmth); status (prestige, esteem); money (cash, credit, earning potential, paying on dates); material goods (gifts, sharing possessions); services (favors, comfort); and information (knowledge, common sense); it also included the resource sex (meeting needs and preferences) (see also Cate et al., 1988; Michaels et al., 1984). The exchange variables were assessed in the following order:

Rewards. Participants were first asked to indicate how rewarding their partner's contributions have been in each of the seven resource areas. A 1 (*very unrewarding*) to 7 (*very rewarding*) response scale followed each resource. The mean of these seven items represents the participant's score on the rewards scale. Cronbach's alpha ranged from .70 to .93 for men and women across the five waves of the study. Participants

also were asked the global item: "When you think about everything that your partner has to offer to you and the relationship (in the areas above as well as in other areas), how unrewarding or rewarding are his/her contributions?" This was followed by a 1 (*very unrewarding*) to 7 (*very rewarding*) response scale. Because the scores on the rewards scale and the global reward item were highly correlated (r ranged from .60 to .82 for men and women across the waves), they were averaged for a total rewards score.

Investments. Participants were then asked to indicate how much they had invested of each of the resources listed. An investment was defined as "something you put into the relationship that cannot easily be taken back if the relationship were to end." The same list of seven resources was provided, with each item followed by a 1 (*very little invested*) to 7 (*a great deal invested*) response scale. Cronbach's alpha ranged from .63 to .75. The global item of investments was: "Overall, how much have you invested into the relationship?" (options ranged from 1 = *very little invested* to 7 = *a great deal invested*). The mean score to the investment scale and the global item were correlated (r from .48 to .75) and were averaged for a total investments score.

Equity. Participants were then asked to indicate the degree to which the exchange in each resource area was fair or unfair. Participants responded to each resource on a 7-point scale, where 1 = *very unfair; I'm getting the worse deal*; 4 = *fair*; and 7 = *very unfair; I'm getting the better deal*. A total score on the equity scale was represented by the mean of the seven items. Cronbach's alpha ranged from .48 to .72. A global equity measure was represented by the Hatfield Global Equity Measure (described in Hatfield et al., 1979), which asks participants to indicate who is getting a better deal in the relationship (options ranged from 1 = *I am getting a much better deal than my partner* to 7 = *My partner is getting a much better deal than I am*; 4 was the equitable response). This item was

170 • READINGS IN FAMILY THEORY

recoded so that the lower scores (1–3) represented an underbenefiting response, and the higher scores (5–7) represented an overbenefiting response. Scores on the equity scale and the global item were correlated (r ranged from .43 to .73) and were averaged for a total equity score.

Equity, as measured in this study, differs from the other social exchange variables because it is curvilinear (the midpoint represents equity, and low and high scores represent two types of inequity). Various analytic approaches have been used in prior research to deal with equity in combination with linear variables (for a review of these strategies, see Sprecher & Schwartz, 1994). The approach used here was to develop underbenefiting and overbenefiting indices created from the mean of the equity scale and the Hatfield global item (also see Sprecher, 1986). The analysis is similar to dummy variable regression in that there are two variables that represent the three possible categories of equity. If a participant had an equity score of 4 or higher, his or her score on the underbenefiting index was 0; otherwise the score on the underbenefiting index was the absolute value away from the midpoint of the equity score. A participant's score on the overbenefiting index was 0 if he or she had a score of 4 or lower on the equity score; otherwise the score was the absolute value away from the midpoint of the equity score. For example, a mean equity score of 3.79 resulted in a score of .21 on the underbenefiting index and a score of 0 on the overbenefiting index. A mean score of 4.14 resulted in a score of .14 on the overbenefiting index and a score of 0 on the underbenefiting index.

Comparison level for alternatives. Later in the questionnaire, five items were included to measure the quality and likelihood of alternative situations in comparison to continuing the relationship. These were: "Considering what you have to offer, how difficult/easy would it be to find a new partner?" (1 = *very difficult*; 7 = *very easy*); "Considering the number of 'eligibles' you are aware of, how difficult/easy would it be to find a new partner?" (1 = *very difficult* to

7 = *very easy*); "Considering what you have to offer and the number of 'eligibles' you are aware of, how do you think you would fare in finding a new partner? That is, how would the new partner compare to your present partner?" (1 = *far worse than present partner* to 7 = *far better than present partner*); "Think about the alternative of being unattached (not dating anyone for a while). Right now, how desirable is this alternative compared to your current situation?" (1 = *far worse than current situation* to 7 = *far better than current situation*); and "Consider your alternatives to the relationship. These alternatives could include beginning a relationship with another person, begin seeing several people, or spending time alone. All things considered, how do your alternatives compare with your relationship with your partner?" (1 = *relationship with partner is much worse than alternatives* to 7 = *relationship with partner is much better than alternatives*). Comparison level for alternatives was represented by the mean of these five items, after the last item was reverse scored. The higher the score, the better and more likely are the alternatives. Cronbach's alpha ranged from .54 to .81.

Relationship Quality Measures. There are two major subcategories measuring relationship quality:

- *Satisfaction.* The Hendrick (1988) Relationship Assessment Scale was used to measure general satisfaction in the relationship. Example items of this seven-item scale include, "In general, how satisfied are you with your relationship?" and "To what extent has your relationship met your original expectations?" A 5-point response scale was provided for each item. The mean of the seven items represents the total score. Cronbach's alpha ranged from .65 to .87.

- *Commitment.* Five items were included to measure relationship commitment. Four of these items were from the commitment scale developed by Lund (1985) and include "How likely is it that your relationship will be permanent?" and "How likely are you to pursue another relationship or single life in the future?" The final item

was the direct question, "How committed are you to your partner?" Each item was followed by a 7-point response scale. The mean of the five items represents the total score. Cronbach's alpha ranged from .52 to .97.

Results

The analyses presented are based on the participants' data from Time 1 and from each of the follow-ups at which their relationship was intact.

Preliminary Analyses

At each wave of the study, men and women described their relationship as generally equitable, the rewards they received to be high, their investments to be considerable, and alternatives to be only slightly desirable and available. A table of means and standard deviations for the exchange variables is available by writing the author. The participants also reported high levels of satisfaction and commitment (see Sprecher, 1999).

As part of preliminary analyses, I also examined the intercorrelations among the exchange variables at each wave of the study (for each gender separately). Scores on the underbenefiting and overbenefiting indices at each wave of the study were moderately and negatively correlated ($-.16$ to $-.34$, mean $r = -.26$). Underbenefiting inequity was correlated negatively with rewards ($-.19$ to $-.66$, mean $r = -.46$), generally unrelated to investments ($-.16$ to $.10$, mean $r = -.01$), and generally positively related to perceptions of alternatives ($.02$ to $.49$, mean $r = .25$). Overbenefiting inequity was generally unrelated to the other exchange variables, with the exception of a significant ($p < .01$) negative correlation with investments at Time 3 for men ($-.35$) and women ($-.46$) and at Time 4 for men ($-.39$), and a positive correlation ($.26$, $p < .01$) with rewards at Time 1 for women. Rewards and investments were positively correlated ($.43$ to $.81$, mean $r = .63$). Finally, alternatives were negatively correlated with rewards ($-.13$ to $-.68$,

mean $r = -.43$) and with investments, although less so ($-.09$ to $-.46$, mean $r = -.24$). In general, then, with the exception of a few high correlations between rewards and investments (particularly at later waves of the study), multicollinearity among the independent variables was not a problem. For a table of the specific correlations, write to the author.

The Association Between Exchange Variables and Satisfaction and Commitment. The first major purpose of this study was to examine how equity and the other exchange variables were related to satisfaction and commitment, all measured concurrently. Table 5.5 presents these correlations for each wave of the study. Because of the number of correlations considered in these analyses, statistical significance was set to $p < .01$ (rather than the standard $p < .05$) in order to reduce the likelihood of a Type I error.

The first two columns of Table 5.5 present the correlations between the exchange variables and satisfaction and commitment, all measured at Time 1 for the full sample. These correlations generally support the first set of predictions. For both men and women, satisfaction and commitment were associated negatively with underbenefiting inequity (although the correlation with commitment did not reach significance for men) and alternatives and were associated positively with rewards and investments. Overbenefiting inequity, however, was not significantly associated with either satisfaction or commitment.

Multiple regressions also were conducted with the full sample at Time 1 in order to examine the unique contribution of equity, relative to the other social exchange variables, in predicting satisfaction and commitment. These results are presented in Table 5.6. As a set, the exchange variables accounted for a significant amount of variance in both satisfaction ($R^2 = .60$ for men and $.56$ for women) and commitment ($R^2 = .59$ for men and $.57$ for women). For men, satisfaction was uniquely predicted by underbenefiting inequity, rewards, and alternatives (in that order). For women, satisfaction was uniquely predicted by rewards and also by alternatives, although less

Table 5.5 Correlations of Exchange Variables With Satisfaction and Commitment at Five Waves

Variable	Time 1		Time 2		Time 3		Time 4		Time 5	
	M (100)	W (101)	M (80)	W (79)	M ^a	W (62)	M (46)	W (48)	M (37)	W (39)
Satisfaction										
Underbenefiting inequity	-.56***	-.41***	-.51***	-.38**	-.45***	.00	-.61***	-.36	-.10	-.11
Overbenefiting inequity	.08	.21	.15	.11	-.08	-.27	.04	-.03	-.14	-.05
Rewards	.67***	.73***	.74***	.78***	.71***	.63***	.72***	.71**	.73***	.43**
Investments	.34**	.41***	.52***	.48***	.48***	.56***	.30	.69***	.53**	.43**
Alternatives	-.51***	-.37***	-.67***	-.46***	-.64***	-.48***	-.57***	-.46**	-.62***	-.17
Commitment										
Underbenefiting inequity	-.24	-.37***	-.34**	-.37**	-.06	.03	-.39**	-.46**	-.01	.01
Overbenefiting inequity	.00	.11	.01	.11	-.03	-.38**	-.09	-.04	-.19	.07
Rewards	.55***	.56***	.68***	.60***	.64***	.60***	.67***	.59***	.67***	.36
Investments	.46***	.49***	.57***	.34**	.34**	.56***	.40**	.55***	.42**	.35
Alternatives	-.69***	-.57***	-.73***	-.61***	-.72***	-.65***	-.75***	-.76***	-.75***	-.34

NOTE: M = men; W = women.

a. *n* = for satisfaction = 57; *n* for commitment = 59.****p* < .01. ***p* < .001.

Table 5.6 Multiple Regression of Satisfaction and Commitment on Social Exchange Variables at Time 1

Variable	β	
	Men	Women
Satisfaction		
Underbenefiting inequity	-.35***	-.05
Overbenefiting inequity	-.04	.04
Rewards	.34***	.60***
Investments	.15	.10
Alternatives	-.25**	-.16*
R ²	.60***	.56***
Commitment		
Underbenefiting inequity	.05	-.22*
Overbenefiting inequity	.00	.00
Rewards	.30**	.14
Investments	.20*	.37***
Alternatives	-.54***	-.59***
R ²	.59***	.57***

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

so. Commitment was uniquely predicted by alternatives, rewards, and investments (in that order) for men and by alternatives, investments, and underbenefiting inequity (in that order) for women.

Multiple regressions were not conducted with the follow-up data, because the results could be misleading with the smaller n sizes in combination with the number of independent variables. However, the correlations conducted at the follow-ups, which are presented in Table 5.5, indicate that the positive associations of rewards and investments with satisfaction and commitment and the negative associations of alternatives with satisfaction and commitment were generally found (with a few exceptions that did not reach significance) in each wave's subsample. However, the correlations of inequity with satisfaction and commitment were somewhat less consistent across the panels of the study. Generally, underbenefiting inequity was associated negatively with satisfaction, although this association was not found in the Time 3 and Time 4 subsamples for women and was also not found for either

gender in the Time 5 subsample. Similarly, underbenefiting inequity was unrelated to commitment for both genders in the Times 3 and 5 subsamples. Overbenefiting inequity was generally unrelated to satisfaction and commitment but was associated negatively with commitment for women in the Time 3 subsample. It must be noted that the correlations in Table 5.5 cannot be compared for drawing conclusions about how the associations change over time because the subsamples of participants differed (declined) across waves of the study.

Equity and Social Exchange as Predictors of Change in Satisfaction and Commitment

The second purpose of this investigation was to examine whether equity contributes to a *change* in satisfaction and commitment. This was first examined by regressing the Time 2 score of satisfaction (commitment) on the Time 1 score of underbenefiting inequity, controlling for the Time 1 score on satisfaction (commitment). Similar analyses were conducted with overbenefiting inequity. A significant beta for the predictor variable (e.g., underbenefiting inequity) would indicate that it is significantly associated with change in the dependent variable (e.g., satisfaction) over time. In these results, satisfaction at Time 1 was a significant predictor of satisfaction at Time 2 (6 months later), and furthermore, commitment at Time 1 was a significant predictor of commitment at Time 2 (betas ranged from .43 to .65, $p < .001$). However, underbenefiting inequity at Time 1 did not predict satisfaction and commitment at Time 2, controlling for satisfaction and commitment at Time 1 (betas ranged from -16 to .05). Thus, no evidence was found that equity contributes to a change in satisfaction and commitment over time.

I also conducted similar regressions for underbenefiting inequity only (with satisfaction and commitment) for Times 2 and 3, Times 3 and 4, and Times 4 and 5. In the analyses for consecutive later waves, some evidence was found that Time n underbenefiting inequity predicted Time

174 • READINGS IN FAMILY THEORY

$n + 1$ satisfaction or commitment, although only for men. For men, Time 4 satisfaction was predicted by Time 3 underbenefiting inequity (beta = $-.37$, $p < .01$), controlling for Time 3 satisfaction. Furthermore, men's Time 4 commitment was predicted by their Time 3 underbenefiting inequity (beta = $-.24$, $p < .05$), controlling for their Time 3 commitment. Thus, men experienced greater increases in their satisfaction and commitment between Times 3 and 4 the lower their underbenefiting inequity score at Time 3 (i.e., the more equity they perceived).

A similar set of over-time regressions was conducted for rewards, investments, and alternatives with Times 1 and 2 data only. Some evidence was found that women's perceptions of rewards at Time 1 predicted an increase in their satisfaction and commitment 6 months later. The beta for Time 1 rewards as a predictor of Time 2 satisfaction was $.21$ ($p < .05$), controlling for Time 1 satisfaction. In addition, for women, the beta for Time 1 rewards as a predictor of Time 2 commitment was $.21$ (marginally significant at $p = .055$), controlling for Time 1 commitment. Women's investments at Time 1 also contributed to a change in commitment 6 months later. The beta for Time 1 investments as a predictor of Time 2 commitment, controlling for Time 1 commitment, was $.24$ ($p < .05$).

Satisfaction and Commitment as a Predictor of Changes in Equity and Social Exchange

The third purpose of this research was to examine the reverse causal direction. Does satisfaction or commitment measured early in the relationship contribute to a later change in equity? To examine this, Time 2 underbenefiting inequity was regressed on Time 1 satisfaction and commitment (one at a time), controlling for Time 1 underbenefiting inequity. For men, Time 2 underbenefiting inequity was not predicted by either Time 1 satisfaction or Time 1 commitment, controlling for Time 1 underbenefiting inequity. However for women, Time 2 underbenefiting inequity was predicted by Time 1

satisfaction (beta = $-.28$, $p < .01$), controlling for Time 1 underbenefiting inequity. Time 1 commitment also had a near significant effect (beta = $-.19$, $p = .06$) on Time 2 underbenefiting inequity, controlling for Time 1 underbenefiting inequity. These results indicate that women experienced a greater increase in underbenefiting inequity between Time 1 and Time 2 the lower their satisfaction and commitment at Time 1. No evidence was found that satisfaction and commitment contributed to a change in overbenefiting inequity by Time 2 for either men or women.

Evidence of a reverse causal direction was also found at the later follow-ups. Men experienced a decrease in their underbenefiting inequity between Times 2 and 3, the greater their satisfaction at Time 2 (beta = $-.26$, $p < .05$). In addition, there was a near significant effect (beta = $-.27$, $p = .053$) of women's commitment at Time 3 as a predictor of their underbenefiting inequity at Time 4, controlling for Time 3 underbenefiting inequity.

Such a reverse causal direction also was examined for the other exchange variables in a set of regressions conducted with the Times 1 and 2 data. Evidence was found that Time 2 rewards were predicted by Time 1 satisfaction, controlling for Time 1 rewards for women (beta = $.29$, $p < .01$). Furthermore, for women, Time 2 rewards were predicted by Time 1 commitment (beta = $.21$, $p < .01$), controlling for Time 1 rewards. These results indicate, then, that for women only, greater satisfaction and commitment at Time 1 were associated with an increase in rewards by Time 2. However, no evidence was found that Time 2 investments or alternatives were predicted by Time 1 satisfaction or commitment, for either gender.

Predicting Stability of the Relationship

The final purpose of this study was to examine how equity and the other social exchange variables, as well as satisfaction and commitment, were associated with the likelihood of relationship dissolution. Spearman correlations were first used to examine these associations. The

analyses conducted were the following: (a) correlations between the exchange variables measured at Time 1 and the likelihood of breakup by Time 2 (1 = intact; 2 = broken up); (b) correlations between the exchange variables measured at Time 1 and the likelihood of breakup at any time during the study (1 = intact; 2 = broken up); and (c) correlations between the exchange variables measured at Time 1 and the timing of the breakup, operationalized as: 1 = not broken up yet; 2 = broken up between Times 4 and 5; 3 = broken up between Times 3 and 4; 4 = broken up between Times 2 and 3; and 5 = broken up between Times 1 and 2; thus, the higher the score, the earlier the breakup. These correlations are presented in Table 5.7.

The strongest and most consistent predictor of the likelihood of a breakup was the woman's commitment (significant in all three correlations). Women's perception of alternatives also was a consistent predictor of breakups, as

indicated by the correlations. Variables associated significantly with two (out of three) operationalizations of breakup were men's commitment, women's underbenefiting inequity, women's rewards, and women's satisfaction. The significant effects found were in the directions predicted. Commitment, satisfaction, and rewards were associated negatively with the likelihood of breakup, and underbenefiting inequity and alternatives were associated positively with the likelihood of breakup. (Women's overbenefiting inequity score was actually associated with the lesser likelihood of a breakup by Time 2.) Investments were not associated with breakups, regardless of how breakup was operationalized.

Second, regressions were conducted with all of the predictors included, with each operationalization of breakup as the dependent variable one at a time. In predicting the likelihood of breakup at Time 2 and in predicting the likelihood of breakup ever in the study (dichotomous

Table 5.7 Spearman Correlations of Equity, Other Exchange Variables, Satisfaction, and Commitment with Likelihood of Breaking Up

	<i>Broken Up by Time 2/Time 1 Predictors</i>	<i>Broken Up by Time 5/Time 1 Predictors</i>	<i>How Soon Broken Up/Time 1 Predictors</i>
Men's scores			
Underbenefiting inequity	-.02	.03	.06
Overbenefiting inequity	.13	-.08	-.04
Rewards	-.10	-.13	-.18
Investments	-.05	-.11	-.16
Alternatives	.20*	.09	.16
Satisfaction	-.13	-.17	-.23
Commitment	-.26**	-.17	-.25*
Women's scores			
Underbenefiting inequity	.38***	.12	.25*
Overbenefiting inequity	-.22*	-.04	-.14
Rewards	-.28**	-.15	-.22*
Investments	-.14	-.11	-.15
Alternatives	.35***	.25*	.32**
Satisfaction	-.31**	-.18	-.25*
Commitment	-.46***	-.42***	-.52***

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

176 • READINGS IN FAMILY THEORY

dependent variables), logistic regression was used. In the logistic regression for relationship status at Time 2, none of the Time 1 predictors reached significance for either men or women. (However, in analyses that included only the Time 1 exchange variables as predictors, without also satisfaction and commitment, underbenefiting inequity and alternatives were significant [$p < .05$] and positive, unique predictors for women.) In the logistic regression for relationship status at the end of the study, no Time 1 predictor was significant for men. However, for women, commitment was a unique, significant ($p < .001$) predictor of breakups. In predicting the timing of the breakups, linear regression was used. Once again, women's commitment was a significant ($p < .001$) unique predictor of the likelihood (and timing) of breakups. In a regression equation that included only the Time 1 exchange variables (without satisfaction and commitment), underbenefiting inequity and alternatives were significant ($p < .05$) unique predictors of breakups for women.

Discussion

This study makes an important contribution to the equity and social exchange literatures because contemporaneous effects of equity and exchange were examined at multiple times, effects of equity and exchange on changes in relationship quality across time points were examined, and reverse causal directions (relationship quality leading to changes in equity and exchange) were explored. Furthermore, this study extended prior investigations on determinants of breakups by monitoring the status of the relationships over an extended period of time (almost 5 years), including data from both partners of the couple, and comparing predictors from two theoretical frameworks on social exchange (equity and interdependence-investment). However, because of the number of ways that the theoretical associations could be tested with multiwave data, interpretations can be problematic, particularly because findings are not always consistent across times, as will be discussed in the following.

Equity as a Predictor of Relationship Satisfaction and Commitment

The prediction from equity theory that the distress associated with inequity is likely to strain the overall relationship and decrease satisfaction and commitment in the relationship received some support in the concurrent analyses, although only for underbenefiting inequity. In bivariate correlational results, underbenefiting inequity was found to be associated negatively with both satisfaction and commitment, for both genders, although not at all five waves. For example, in the Time 5 subsample, underbenefiting inequity was not associated significantly with satisfaction or commitment for either gender. A selection effect may explain the decreasing association between underbenefiting inequity and relationship quality. For example, the couples who survived to Time 5 are a select group of couples whose satisfaction with the relationship may have been generally unaffected by fairness concerns. Further analyses (not presented in the paper but available by writing the author) were conducted to examine how the correlations changed over time specifically for the subsample of respondents who remained in their relationship and participated at all waves of the study. For the men in this subsample, the negative association of underbenefiting inequity with satisfaction and commitment was reduced to nonsignificance by Time 5. For women in this select group, the association of underbenefiting inequity with satisfaction and commitment was weak at all waves of the study. These are happy and committed couples at one of the most exciting stages of their relationship (most were approaching marriage or going through the honeymoon phase). Any inequities experienced during this stage may be perceived positively—as signs of one's own or one's partner's willingness to sacrifice. Thus, there may be a window of time in the progression of heterosexual romantic relationships, shortly before and after marriage, during which perceived inequities are less consequential for the quality of the relationship. The relatively small sample by

Time 5 (< 40 couples), however, reduces the generalizability of these results.

The Importance of Equity Relative to Other Social Exchange Variables

The present study generally indicated that underbenefiting inequity was a unique predictor, distinct from rewards and other exchange variables, of relationship quality. For example, in the multiple regression results conducted at Time 1, underbenefiting inequity (controlling for the other social exchange variables) explained unique variance in satisfaction for men and unique variance in commitment for women. Nonetheless, and consistent with the previous studies (e.g., Cate et al., 1982; Cate et al., 1988; Desmarais & Lerner, 1989; Martin, 1985; Michaels et al., 1986; Michaels et al., 1984), there was some evidence that rewards were more important than equity in predicting relationship quality. For example, the correlational results conducted at each wave indicated that rewards were consistently associated with satisfaction and commitment, whereas underbenefiting inequity was not (as noted earlier). Rewards were particularly important as a predictor of satisfaction, especially for women.

In support of the investment model, investments were generally correlated significantly and positively with commitment (as well as satisfaction) for both genders at each wave of the study. In addition, investments were a significant predictor of commitment for both men and women in the multiple regression analyses. Contrary to the results of the present study, an earlier study (Sprecher, 1988) found that investments did not explain any unique variance in commitment, once equity and other investment model variables were controlled. However, there are at least two differences between the studies that may explain the stronger effect of investments in the present study. Sprecher (1988) included among the predictor variables social approval from networks of family and friends, which was found to be a positive predictor of commitment. Embeddedness in a larger network

of supportive family and friends may be an important component of feeling invested in the relationship, and thus the variance left to be accounted for by general investments may have been reduced. The other difference is that investments were measured by only one item in the Sprecher (1988) study. The limited variance of a one-item measure may have reduced the amount of unique variance that can be explained. In contrast, investments were operationalized in this study by a combination of detailed measures and a global item.

Of all the variables considered in this study, comparison level for alternatives was most highly associated with commitment in the multiple regression analyses. Alternatives also were found to be a significant and unique predictor of satisfaction. Furthermore, the correlational results conducted at each wave of the study indicated that alternatives were consistently and negatively correlated with both commitment and satisfaction for both genders. Several other previous studies also found comparison level for alternatives to be an important predictor of a relationship outcome variable (e.g., Michaels et al., 1986; Rusbult, 1983; Sprecher, 1988). The strength of alternatives in the contemporaneous results is not surprising. Those who lack alternatives are likely to remain committed (and satisfied), but also those who are satisfied and committed to the relationship are likely to devalue alternatives (e.g., Johnson & Rusbult, 1989).

In sum, underbenefiting inequity was a unique predictor of satisfaction (for men) and commitment (for women) at Time 1, controlling for the other social exchange variables, but was less consistently correlated with satisfaction and commitment over time than were the other exchange variables.

Equity and Social Exchange as Predictors of Change in Satisfaction and Commitment

Very little evidence was found in this study that inequity in a relationship at one time can erode the relationship and decrease satisfaction

178 • READINGS IN FAMILY THEORY

and commitment at a later time. For example, no evidence was found that underbenefiting inequity at Time 1 contributed to a change in satisfaction or commitment by Time 2 for either men or women. However, the more underbenefited men perceived themselves to be at Time 3, the more their satisfaction and commitment decreased by Time 4. There are many possible explanations for the general failure of equity to contribute unique variance in satisfaction and commitment at a later date (controlling for earlier equity). First, the participants' satisfaction and commitment scores were already quite high early in the study, and thus ceiling effects may have been reached, preventing further increases. Second, the relationships tended to remain generally equitable over time, and furthermore, the types of inequities that may have been experienced were probably not severe enough to set in motion a chain of events that would decrease satisfaction or commitment 6 months to 1 year later. Finally, it may be that those couples who were most susceptible to having a decrease in satisfaction or commitment at a later time because of an earlier equity broke up and thus were removed from the sample.

Equity was not unique in its weak over-time effects. The other exchange variables also did not evidence strong links with later increases or decreases in satisfaction and commitment. However, there was some evidence that rewards and investments measured at Time 1 were associated with an increase in relationship quality by Time 2, but for women only.

Satisfaction and Commitment as Predictors of Change in Equity and Social Exchange

Critics of equity theory have argued that people may not perceive inequities or become upset about inequities until the relationship becomes dissatisfying. For example, Duck (1982) suggested that evaluations of equity and exchange do not occur in earnest until initial stages of the breakup process. Equity theory predictions are not necessarily incompatible with the prediction that a decreased level of

satisfaction and commitment is likely to lead to inequity. Both processes could operate, possibly at different times in the relationship.

As discussed previously, there was only a small amount of evidence that equity measured at one time led to changes in satisfaction and commitment at a later date. Only slightly stronger support was found for the opposite causal direction. High scores on satisfaction and commitment at Time 1 were associated with decreases in underbenefiting inequity by Time 2 for women. Furthermore, high satisfaction at Time 2 was related to a decrease in underbenefiting inequity by Time 3 for men. There was also slight evidence that other social exchange variables (e.g., rewards) change as functions of earlier satisfaction and commitment. However, in general, the evidence for the reverse causal direction (relationship quality leading to changes in social exchange) was no more consistent across times and genders than was evidence for the causal directions predicted by the social exchange theories. Nonetheless, the significant results that were found point to the importance of examining social exchange variables not only as predictors of relationship quality but also as consequences. When relationships experience a downturn, for whatever internal or external reason, a process may be set in motion in which the partners are particularly sensitive to equity and exchange issues.

These findings also highlight the importance more generally of studying consequences of change in relationship satisfaction and commitment. In most research, relationship quality is the dependent variable rather than the independent variable (see Glenn, 1990). However, relationship quality variables (e.g., commitment) are likely to affect several interactional, behavioral, cognitive, and affective phenomena in relationships, including those experienced by the partner.

Equity and Social Exchange as Predictors of Relationship Stability Versus Dissolution

The degree to which equity and the other exchange variables, as well as satisfaction and commitment, were associated with later stability

(vs. breakup) of the relationship also was examined. Through both bivariate and multivariate analyses, the associations of the predictor variables measured at Time 1 were examined with all of the following: (a) likelihood of breakup by Time 2, which was 6 months later; (b) likelihood of breakup at any time during the study; and (c) timing of breakup (i.e., how soon the relationship ended). In both the correlational and the regression results, the strongest predictor of stability was women's commitment. The more committed women were, the more likely the couple was to be together 6 months to several years later (men's commitment also was important but was less consistently associated with stability). In addition, in at least some of the analyses, satisfaction and rewards were associated negatively and underbenefiting inequity and alternatives were associated positively with breakups. Thus, the associations that were found were consistent with predictions from equity and exchange theories, although the effects were not as strong as might be expected. Surprisingly, investments were not a significant predictor of breakups in any of the analyses. The finding that women's commitment was most highly associated with breakups suggests that women can better forecast the outcome of the relationship or can determine whether the relationship lasts, which is consistent with some prior research (e.g., Rubin, Peplau, & Hill, 1981). More generally, these results also suggest that women may be more sensitive than men to the quality of the exchange, in part because of their greater relationship focus (e.g., Acitelli & Holmberg, 1993).

Limitations

Although this study has the strengths of multiple-wave longitudinal data and data collected from both partners, there are limitations. One primary limitation is the sample. The sample consisted of heterosexual, romantic couples who were initially dating. Whether similar findings would be obtained for other types of relationships (e.g., homosexual, friendship) or for other stages of heterosexual romantic relationships (e.g., long-term marriage) needs to be

investigated in future research. Furthermore, the sample was rather homogeneous on background and demographic characteristics (most were White, middle class, and in college, and all were from the United States). A second potential limitation of the study was the long intervals between measurement. The longitudinal design was based on data collected approximately once a year. Such data may mask fluctuations in equity and relationship quality that occur within that period of time.

Conclusions

The results of this study, as well as the results of several other studies conducted in the past two decades (for a review, see Sprecher & Schwartz, 1994), suggest that equity may not be as important as suggested by early theoretical statements (e.g., Walster [Hatfield] et al., 1978) and by the early research testing equity theory, which was characterized primarily by cross-sectional data and the omission of other exchange variables. Nonetheless, judgments about equity, particularly underbenefiting inequity, may play a role in affecting relationship outcomes, although it may be only one link in a larger chain of processes that occur as relationships grow, change, and deteriorate. Perceptions of equity may sometimes contribute to feelings of satisfaction and commitment and may sometimes be influenced by changes in satisfaction and commitment. The exact association between equity (inequity) and the quality of the relationship may depend on the overall state and stage of the relationship. As two people become acquainted, equity issues are likely to be salient and affect whether a relationship is even established. If they are grossly mismatched, they are likely to discover this in the get-acquainted stage. Once a relationship enters a stage of long-term commitment, equity issues may no longer be as salient, and if perceived, they may not be that harmful for the relationship. Most of the relationships represented in this study, particularly those that remained intact, were of this nature. Such couples probably have strong optimism as they approach marriage. Later in most long-term relationships,

180 • READINGS IN FAMILY THEORY

however, couples face changes, transitions (including parenthood), and stressors, and dissatisfaction may arise because of both internal and external factors, which can lead the partners to perceive inequities. In a study of the association of equity and relationship quality for married couples during the transition to parenthood, Grote and Clark (2001) proposed a process model, which states that the perception of inequity may initially arise out of feelings of distress, but that the perceived inequity may then escalate the distress (in accord with equity theory). A challenge for future research is to determine what other factors are associated with perceptions of equity becoming salient and having detrimental effects on relationships. One possible such factor is the awareness that in comparison to others in similar roles, one is less well off, which has been referred to as *referential comparisons* (e.g., VanYperen & Buunk, 1994).

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182 • READINGS IN FAMILY THEORY

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