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## Perceptions of Equity, Balance of Support Exchange, and Mother–Adult Child Relations

*Equity theory suggests that relationships are more harmonious when both members of a dyad believe that their exchanges are fair. However, the level and frequency of exchange, rather than perceptions of equity, have been the focus of most research on support and the quality of intergenerational relations. Using data from 1,426 mother–child dyads nested within 413 families collected as part of the Within-Family Differences Study, the authors explored whether mothers' perceptions of equity are better predictors of closeness and tension than are mothers' reports of balanced exchanges of support. Mixed-model analyses revealed that mothers' perceptions of equity were more consistent predictors of relationship quality than were the balanced exchanges of support, though the results varied somewhat by gender of adult child. These findings contribute to a growing*

*body of research demonstrating that the psychological processes that shape intergenerational relationships mirror those of other ties.*

Intergenerational exchange has been a central focus of research on parent–adult child relations for several decades, describing and explaining patterns of support and the role that such exchanges play in intergenerational relationship quality (Davey & Eggebeen, 1998; Fingerman, Miller, Birditt, & Zarit, 2009; Kulis, 1992; Lowenstein, Katz, & Gur-Yaish, 2007; Sarkisian & Gerstel, 2004; Silverstein, Conroy, Wang, Giarrusso, & Bengtson, 2002). Although scholars have investigated the ways in which the balance of support between generations shapes parent–child relationship quality (Ingersoll-Dayton & Antonucci, 1988; Kulis, 1992; Levitt, Guacci, & Weber, 1992; Rook, 1987; Schwarz, 2006; Schwarz, Trommsdorff, Albert, & Mayer, 2005; Thompson & Walker, 1984), far less attention has been given to the role of perceptions of equity in these processes. In the current article, we explore the relative effects of balanced exchanges of support and mothers' perceptions of equity in predicting closeness and tension between mothers and their adult children, using data collected from 413 older mothers regarding each of their 1,426 offspring.

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EQUITY, EXCHANGE,  
AND INTERGENERATIONAL RELATIONSHIPS

*Equity theory*, an extension of classic exchange theory, proposes that individuals are the most satisfied with relationships in which they experience a relatively equal exchange of resources, rather than being greatly overbenefited or underbenefited in their exchanges (Austin & Walster, 1974; Walster, Walster, & Berscheid, 1978). Equity theorists argue that this is because role partners in imbalanced relationships tend to feel anger and resentment when underbenefited and guilt when overbenefited (Austin & Walster, 1974; Sprecher, 2001a; Walster et al., 1978).

The salience of perceptions of equity has been documented empirically across a variety of relational contexts, including friendships, dating relationships, and spouses (Cate, Lloyd, Henton, & Larson, 1982; Desmarais & Lerner, 1989; Michaels, Edwards, & Acock, 1984; Roberto & Scott, 1986a, 1986b; Sprecher, 2001a, 2001b; van Yperen & Buunk, 1990). One might assume that the strong effects of perceptions of equity on relationship quality reflect the actual pattern of exchanges; however, there is little empirical evidence to support or refute this assumption. Studies comparing the relative effects of patterns of exchanges and perceptions of equity have found that they are not equally strong predictors of relationship quality, suggesting that perceptions of equity are not driven entirely by patterns of exchange (Sprecher, 2001b; van Yperen & Buunk, 1990).

The largest body of evidence on the relative salience of perceptions of equity compared to reported behaviors in explaining interpersonal relations is found in the study of the division of household labor. This line of research has shown that when women perceive the division of household labor as inequitable, both their own marital quality and that of their husbands decreases, regardless of the actual pattern of contributions to household labor (Frisco & Williams, 2003; Grote, Clark, & Moore, 2004; Kamo, 2000; Lavee & Katz, 2002; Suitor, 1991; Wilcox & Nock, 2006). These findings suggest that, at least for married partners, perceptions of equity and actual balance of exchanges differentially affect relationship quality.

Such a disparity in the effects of balanced exchanges versus perceptions of equity may be particularly likely when mothers assess their relationships with their adult children. The structure of the mother-child tie is inherently

unbalanced for the first decades of the child's life. In fact, not only do mothers provide extensive unreciprocated support to young children, but they continue to provide more support to children than they receive until the mothers reach their 70s (Fingerman, Sechrist, & Birditt, 2012; Suitor, Sechrist, Gilligan, & Pillemer, 2011). Despite this imbalance, however, mothers typically report very high levels of satisfaction in their relationships with their adult children across the life course (Suitor et al., 2011). Thus, it appears that mothers' evaluation of their relationships with their offspring may not reflect the degree to which their exchanges of support are balanced. In contrast, studies that have taken into consideration mothers' perceptions of relational equity have shown that this factor plays an important role in mothers' satisfaction with their relationships with their offspring. Mothers who perceive that they give more than they receive from their relationships are more likely to express ambivalence toward those offspring (Pillemer, et al. 2007) and lower satisfaction with the relationship (Vogl-Bauer, Kalbfleisch, & Beatty, 1999) and are more likely to become estranged from them (Gilligan, Suitor, & Pillemer, 2010). This is in line with symbolic interactionist perspectives that have argued that individuals are directly influenced by the meaning or attributions they give to others and only indirectly influenced by the actual responses of others (Kinch, 1963; Stryker, 1956; Thomas & Thomas, 1928). Furthermore, symbolic interactionists argue that subjective interpretation of responses from others and of one's own behavior are present in all situations but are especially important in roles with greater ambiguity, such as the mother-adult child relationship, where there are fewer established expectations or rules for either party (Birditt, Miller, Fingerman, & Lefkowitz, 2009; Chodorow, 1987; Clarke, Preston, Raksin, & Bengtson, 1999; Fingerman, 1996).

Thus, it may be that perceived equity and balanced exchanges do not have the same impact on mother-adult child relations, mirroring the findings for marital partners. If, in fact, relationship quality is fueled primarily by perceptions of equity rather than the actual pattern of exchanges, this could help to account for the inconsistencies in the literature regarding the effects of balanced and imbalanced exchange processes on parent-adult child relations. For example, some investigations have found that

parents reported more positive relationships when they received more support than they gave to their children (Levitt et al., 1992; Rook, 1987) and more negative relationships when they gave more than they received (Ingersoll-Dayton & Antonucci, 1988), yet other studies have found that balanced exchanges are better predictors of parent–child relationship quality than are other patterns (Kulis, 1992; Thompson & Walker, 1984). Furthermore, some investigations have reported that the salience of the balance of the exchange varies by whether the support was instrumental or expressive in nature (Kulis, 1992; Rook, 1987). In fact, almost the only consistent pattern across the literature is that under most circumstances, exchange of support, regardless of the particular form, has positive effects relative to no exchanges (Suitor et al., 2011).

We suggest that although these inconsistencies may be the result of differences in study design, it is also possible that they may be the consequence of the fact that patterns of support do not capture the most salient dimension of exchange for intergenerational relations: perceptions of equity. Thus, in the present article we address this question by making direct comparisons in the relative effects of patterns of exchange between parents and adult children and mothers' perception of equity in the relationship. Specifically, we hypothesize that perceptions of equity will be a stronger predictor of both mother–child tension and closeness than will patterns of exchange.

#### *Gender of Child as a Moderator*

Although we believe that perceptions of equity will, overall, be a stronger predictor of mother–child relationship quality than will balanced exchanges, there is reason to suggest that this pattern may differ somewhat by child's gender. In particular, differences in mothers' relationships with daughters and sons are likely to lead mothers to expect greater equity in their relationships with their daughters, with less concern with the specific balance of exchanges of support. Mothers' ties to their daughters tend to be stronger and are characterized by a more sustained history of support across the life course than are the bonds they share with their sons (Suitor & Pillemer, 2006; Suitor, Gilligan, & Pillemer, 2013; Suitor et al., 2011). Furthermore, theories of gender socialization posit that

mothers expect that their relationships with their daughters will be characterized by shared perspectives, including the salience of their dyadic relationship (Chodorow, 1987). On these bases, we anticipated that relational equity would play a more important role in mother–child closeness and tension between mothers and daughters than between mothers and sons, whose relationships tend to be less close and reciprocal. Furthermore, because there is more attention to “accounting” in the balance of exchanges in ties with less closeness and a weaker history of reciprocation than in very close relationships with strong histories of reciprocal support (Desmarais & Lerner, 1989; Roberto & Scott, 1986a; Walster et al., 1978) we anticipated that balanced exchanges of support would be a stronger predictor of relationship quality for sons than daughters.

In sum, we anticipated that perceptions of equity would be stronger predictors of tension and closeness in mother–daughter dyads, whereas balanced exchanges of support would be stronger predictors of relationship quality in mother–son dyads.

#### *Control Variables in the Analysis*

We also take into consideration several mother and child characteristics that have been found to play important roles in the quality of relations between the generations. The mother-level characteristics included were number of living offspring, marital status, physical limitations, and race. There is some evidence that mother–child relations are closer in larger families (Kaufman & Uhlenberg, 1998; Kulis, 1992; Rossi & Rossi, 1990). Studies have shown that married mothers have more positive relationships with their children than their unmarried counterparts (Aquilino, 1999; Kaufman & Uhlenberg, 1998; Sarkisian & Gerstel, 2008; Umberson, 1992). Mother's declining health has also been shown to decrease relationship quality (Kaufman & Uhlenberg, 1998). Finally, studies have indicated closer relationships within racial/ethnic minority families (Aquilino, 1997; Kaufman & Uhlenberg, 1998; Lawton, Silverstein, & Bengtson, 1994; Sarkisian & Gerstel, 2008).

The child characteristics we included were geographic proximity to mothers, marital status, parental status, age, educational attainment, and similarity of attitudes between mothers and their children. Living in closer proximity was associated with closer relationships in several studies

(Aquilino, 1997, 1999; Kaufman & Uhlenberg, 1998; Sarkisian & Gerstel, 2008). There is some indication that closer proximity is also related to greater strain (Umberson, 1992). Marital status has been found to play a role in relationship quality, with some studies having reported more positive relationships with married children compared to unmarried children (Aquilino, 1997, 1999; Kaufman & Uhlenberg, 1998; Sechrist, Suito, Henderson, Cline, & Steinhour, 2007) and others having found married children are less likely to maintain high levels of closeness, relative to their unmarried counterparts (Gilligan et al., 2010; Suito et al., 2013). Some studies have indicated that having children is linked to lower closeness with parents (Aquilino, 1997; Kaufman & Uhlenberg, 1998) and higher conflict (Aquilino, 1999) in the parent-child relationship. In several studies, parents reported better relationship quality when children had higher levels of education (Aquilino, 1997, 1999; Hogan, Eggebeen, & Clogg, 1993). Finally, similarity has been shown to be one of the most consistent and strongest predictors of relationship quality in parent-child relationships (Suito et al., 2011).

#### METHOD

The data for this study were collected as part of the Within-Family Differences Study (WFDS), which involved selecting a sample of mothers 65–75 years of age with at least two living adult children. (For a more detailed description of the WFDS design, see Gilligan, Suito, Kim, & Pillemer, 2013, and Suito et al., 2013, in which portions of this section have already been published.) In the original wave, data were collected from 566 mothers about their relationships with each of their living adult children; the original study was expanded to include data collection from 2008 to 2011.

Massachusetts city and town lists were used as the source of the original WFDS sample, from which women ages 65–75 were identified. With the assistance of the Center for Survey Research at the University of Massachusetts, Boston, the investigators drew a probability sample of women ages 65–75 with two or more children from the greater Boston area. The Time 1 (T1) sample consisted of 566 mothers, which represented 61% of those who were eligible for participation, a rate comparable to that of similar surveys in the past decade (Wright & Marsden, 2010).

For the follow-up study, the survey team attempted to contact each mother who participated in the original study. At Time 2 (T2), 420 mothers were interviewed. Of the 146 mothers who participated at only T1, 78 had died between waves, 19 were too ill to be interviewed, 33 refused, and 16 could not be reached. Thus, the 420 represent 86% of mothers who were living at T2. Comparison of the T1 and T2 samples revealed that the respondents differed on subjective health, educational attainment, marital status, and race. Mothers who were not interviewed at T2 were less healthy, less educated, and less likely to have been married at T1; they were also more likely to be Black.

The 420 mothers interviewed at T2 had 1,577 adult children for whom they provided information; however, 29 mother-child dyads (1.8%) were omitted because the adult child died between T1 and T2. Two more dyads (<1%) were omitted because the child was estranged from the mother and she did not provide information on aspects of those relationships. An additional 31 dyads (2.0%) were omitted because mothers did not provide complete information on the relationship quality, perceptions of equity, or support variables.

The variables of central interest in the present article were collected at T2; information on most of them was not available in the T1 data. Thus, in this article we use the T2 data, except in cases of demographic characteristics that were asked only at T1, which we note in our discussion of the measures. In this article we use data on 1,426 mother-child dyads nested within 413 families from the second wave of the WFDS for which there were data on all variables in the model. Data on the mothers' and children's demographic characteristics, as reported by mothers for the analyses used in this article, are presented in Table 1.

#### Measures

##### *Dependent variables.*

**Closeness.** To measure closeness with their adult children, mothers were asked the following three questions: (a) "What number would you use to describe the closeness in your relationship with (adult child's name) nowadays?" (1 = *very distant*, 7 = *very close*); (b) "How often does (adult child's name) make you feel loved or cared for?" (1 = *never*, 5 = *very often*); and (c) "For



Table 1. *Sample Characteristics*

Sample	<i>M (SD)</i> or %
Mothers' ( <i>N</i> = 413)	
Age in years	76.9 (3.1)
Race (%)	
White	71.9
Non-White	28.1
Married (%)	39.5
Education (%)	
Less than high school	19.2
High school graduate	44.5
At least some college	12.7
College graduate	23.6
Number of children	3.7 (1.7)
Children's ( <i>N</i> = 1,426)	
Age in years	49.4 (5.9)
Daughters (%)	51.8
Married (%)	68.6
Parents (%)	74.8
Education (%)	
Less than high school	6.4
High school graduate	31.8
Some college	12.4
College graduate	49.4

each of the following statements, tell me whether you strongly agree, agree, disagree, or strongly disagree: Being with (adult child's name) makes you feel happy?" (1 = *strongly disagree*, 4 = *strongly agree*). Consistent with other studies using similar measures (Lawton et al., 1994; Ward, 2008; Ward, Spitze, & Deane, 2009), the distributions of the first two items were highly skewed; for this reason, item (a) was transformed into a 1-to-4 range by collapsing the bottom four categories, and item (b) was transformed into a 1-to-4 range by collapsing the bottom two categories, after which all three were combined to create a measure of relational closeness that ranged from 3 to 12 ( $M = 10.21$ ,  $SD = 1.95$ ,  $\alpha = .72$ ).

**Tension.** To measure tension with their adult children, mothers were asked these three questions: (a) "What number would you use to describe the tension and strain in your relationship with [adult child's name] nowadays?" (1 = *not at all tense and strained*, 7 = *very tense and strained*); (b) "How often would you say the two of you typically have disagreements or conflicts?" (1 = *never*, 5 = *very often*); and (c) "How often does [adult

child's name] make too many demands on you?" (1 = *never*, 5 = *very often*). To be consistent with the closeness scale and to reduce skewness, item (a) was transformed into a 1-to-4 range by collapsing the top four categories and items (b) and (c) were transformed into a 1-to-4 range by collapsing the top two categories. Then they were combined to create a measure of tension that ranged from 3 to 12 ( $M = 5.67$ ,  $SD = 2.29$ ,  $\alpha = .69$ ).

To retain as many dyads as possible, if only one item in the closeness or tension scale was missing for a particular dyad (.07% and .06%, respectively), the dyad's mean score for the other two items in that scale was imputed for the missing item (Downey & King, 1998; McDonald, Thurston, & Nelson, 2000; Roth, Switzer, & Switzer, 1999).

#### *Independent variables.*

**Perceptions of equity.** To measure perceptions of equity regarding the relationship, mothers were asked, "All in all, do you feel that in your relationship with [adult child's name], you give more than you receive, [adult child's name] gives more, or is it about equal?" We created three dummy variables: (a) mother perceived she received more than she gave, (b) relationship was about equal, and (c) mother perceived she gave more than she received. Mothers reported that they perceived they gave more than they received from their adult child in 5% of dyads, equity in 82% of dyads, and received more than they gave in 13% of dyads.

**Exchanges of expressive support.** Mothers were asked about the support they gave to each child as well as the support they received from each child. The measures for expressive support were based on items that assessed two expressive tasks. For each of their children, mothers were asked to report whether, within the previous year, they had given either (a) comfort during a personal crisis or (b) advice on a decision the child had to make. If mothers answered yes to these items, they were asked how often: 1 = once or twice, 2 = 3–5 times, 3 = 6–10 times, 4 = 11–20 times, and 5 = more than 20 times. The same procedures were used to ask mothers about the comfort and advice that they had received from each of their children. The frequency at which mothers gave and received each support type was skewed for all items. Therefore, we created items indicating the frequency at which mothers gave advice and comfort and the frequency at

which mothers received advice and comfort, which we coded as 0 = no support, 1 = 1–5 times, and 2 = 6 or more times.

These four items were used to create the balance of exchange of expressive support. First we summed the scores for the two expressive items for support mothers provided to children (range: 0–4); we then summed the scores for the two items for support that mothers received from children (range: 0–4). We then calculated a difference score of expressive support given minus expressive support received (range: –4 to 4). Negative numbers reflect that mothers received more than they gave, and positive numbers reflect that mothers gave more than they received. In the difference-score measure, a zero can mean that mothers and children exchanged support at equal frequencies or that there was no exchange of support. Therefore, we created four dichotomous variables: (a) 1 = no expressive exchange, (b) 1 = mother received more expressive support than she gave, (c) 1 = balanced expressive exchange, and (d) 1 = mother gave more expressive support than she received. In regression analyses, we used balance expressive exchange as the comparison category. Mothers reported no expressive exchange in 16% of dyads, receiving more expressive support in 39% dyads, balanced expressive exchange in 21% dyads, and giving more expressive support in 23% dyads.

Exchanges of instrumental support. To measure instrumental support exchanged, mothers were asked whether they gave two forms: (a) help during an illness and (b) help with regular chores. As we did with expressive support, mothers were also asked the frequency at which they provided this support. The same procedures were used to ask mothers about the help during illness and regular chores that they had received from each of their children. Similar to the expressive support items, these items were also skewed; thus, we created items measuring the frequency at which mothers gave help when a child was ill and help with chores and the frequency at which mothers received help when she was ill and help with chores, coded as 0 = no support, 1 = 1–5 times, 2 = 6 or more times.

We followed the same process in creating the balance of instrumental exchange measures as we did for the balance of expressive exchange, which resulted in four dummy variables: (a) 1 = no instrumental exchange, (b) 1 = mother received more instrumental

support than she gave, (c) 1 = balanced instrumental support, and (d) 1 = mother gave more instrumental support than she received. Balanced instrumental support was used as the comparison category in the regression analyses. Mothers reported no instrumental exchange in 37% of dyads, receiving more instrumental support in 46% dyads, balanced instrumental exchange in 7% dyads, and giving more instrumental support in 10% dyads.

We ran correlations among all of the independent dummy variables for equity, expressive, and instrumental exchanges. This analysis revealed that perceptions of equity in the relationship were not highly correlated with the balance of expressive or instrumental exchange. All correlation coefficients between perception-of-equity variables and balance-of-exchange variables were under  $\pm .16$ .

*Control variables.* Family size was measured by the number of living adult children at T2. Mothers' marital status was coded as 1 = married and 0 = not married. Mothers' physical limitations were assessed with the question "Do you have any health conditions or difficulties that limit your activities or things you can do?" This item was coded 1 = yes, has limitations or 0 = no, has no limitations. Proximity was measured as the distance the child lived from the mother in terms of travel time by ground transportation. Categories were 1 = same house, 2 = same neighborhood, 3 = less than 15 minutes away, 4 = 15–30 minutes away, 5 = 30–60 minutes away, 6 = 60–120 minutes away, and 7 = more than 2 hours away. Race was measured by asking the mothers to select from a card listing several races and ethnicities (e.g., White, Black or African American, Hispanic or Latina, Native American, Asian). They were instructed that they could choose more than one race or ethnicity. Because patterns of support in Hispanic families is more similar to those in Black families than to those in White families, race was coded 0 = White only and 1 = Non-White.

Adult children's characteristics are based on mothers' reports and children's gender and educational attainment were measured using T1 reports, whereas children's age, marital status, parental status, and value similarity were measured at T2. Parental status was coded as 0 = no children and 1 = has children. Adult children's marital status was coded as 1 = married and 0 = not married. Child's age was measured

in years. The *child's gender* was coded as 0 = son and 1 = daughter. Mothers were asked which educational category was applicable to their *adult children's educational attainment*: 1 = less than high school, 2 = high school graduate, 3 = some college, and 4 = college graduate.

*Perceived value similarity* was measured by the following item: "Parents and children are sometimes similar to each other in their views and opinions and sometimes different from each other. Would you say that you and [child's name] share very similar views (4), similar views (3), different views (2), or very different views (1) in terms of general outlook on life?" Twenty-four percent of the children were described as holding very similar views to their mothers, 52.5% were described as holding similar views, 18.6% were described as holding different views from their mothers, and 4.8% were described as holding very different views.

#### *Analytic Strategy*

The 1,426 mother–adult child dyads are nested within the 413 mothers on whose reports the present analysis is based; thus the observations are not independent and the mothers' reports will likely have correlated errors. Therefore, to examine the relative strength of association of equity and balance of exchange with relationship quality between mothers and adult children, we conducted clustered regression analyses using Stata SE software (version 12.1) using the *xtreg* command. Similar to hierarchical linear modeling procedures, the *xtreg* procedure accounts for the violation of the independence assumption and allows for correlated error structures. In all analyses, dummy variables for perceptions of equity and for balance of expressive and instrumental exchange were used; the comparison categories for each set of dummy variables are equity or balanced exchange. To examine the effects of perceptions of equity and balance of exchange by gender, we performed clustered analyses separately for daughters and sons. We used the following *t* test to test for significant differences in coefficients across the two models (Paternoster, Brame, Mazerolle, & Piquero, 1998):

$$t = \frac{b_1 - b_2}{\sqrt{(SEb_1^2 + SEb_2^2)}}$$

We used listwise deletion to handle missing data on the control variables because there were fewer than 6% missing (cf. Allison, 2010).

## RESULTS

### *Main Effects Models*

*Tension.* The findings for tension are presented in the left-hand columns of Table 2. The analysis revealed that mothers who perceived that they gave more in their relationships with their children reported greater tension in their relationships than did mothers who perceived equity in their relationship ( $B = 1.80, p < .01$ ). In contrast, mothers' perceptions that they received more than they gave did not predict tension.

We did not observe consistent patterns in the effect of support exchange on tension. Mothers' reports of expressive exchange did not predict tension, regardless of the pattern of exchange. Contrary to the principles of equity theory, only receiving more instrumental support predicted tension, and that effect was in the opposite direction than was expected: Mothers reported less tension when they received more support relative to having a balanced exchange. Mothers who reported no exchange also reported less tension than those who reported balanced exchanges.

Next, we conducted postestimation tests to determine whether the coefficients for perceived equity differed significantly from those for balanced exchanges. These tests revealed that the association between perceptions of equity and mother–child tension were significantly stronger than were those for balanced exchanges regarding instrumental support.

*Closeness.* The findings for closeness are presented in the right-hand columns of Table 2. These findings mirrored those for tension regarding the effects of perceptions of equity but differed regarding balanced exchanges. Mothers reported substantially lower closeness with adult children to whom they perceived they gave more than they received in the relationship ( $B = -1.17, p < .01$ ), relative to perceiving the relationship as equitable. Perceiving that they received more than they gave relative to equity did not predict closeness.

Although balanced exchanges of expressive support did not predict tension, they predicted closeness under one condition: Mothers reported less closeness when they had no exchange

Table 2. Clustered Regression: Effects of Perceptions of Equity and Balance of Support on Relationship Quality in the Mother–Child Relationship (N = 1,426 in 413 Families)

Predictor	Tension <sup>a</sup>		Closeness <sup>b</sup>	
	Estimate	SE	Estimate	SE
Perceptions of equity <sup>c</sup>				
Perceives giving more	1.80**	0.15	-1.17**	0.13
Perceives receiving more	0.17	0.22	0.16	0.19
Expressive exchange <sup>d</sup>				
Gives more	0.16	0.13	-0.19	0.11
Receives more	0.06	0.12	-0.12	0.11
No exchange	-0.32	0.18	-0.76**	0.15
Instrumental exchange <sup>d</sup>				
Gives more	-0.30	0.22	-0.33	0.19
Receives more	-0.44**	0.19	0.10	0.16
No exchange	-0.59**	0.20	-0.35**	0.17
Mothers' characteristics				
Has limitations	0.42**	0.16	-0.34**	0.12
Non-White	-0.13	0.19	0.13	0.14
Married	-0.07	0.17	0.02	0.13
Family size	-0.05	0.04	-0.05	0.03
Children's characteristics				
Age	-0.01	0.01	0.00	0.01
Married	-0.59**	0.11	0.15	0.10
Female	0.18*	0.09	0.37**	0.08
Education	-0.01	0.04	-0.02	0.03
Parent	0.18	0.11	-0.06	0.10
Distance from mother	-0.11**	0.03	-0.03	0.02
Value similarity to mother	-0.77**	0.07	0.99**	0.06
Constant	9.38**	0.60	8.26**	0.50

<sup>a</sup> $\chi^2(19) = 550.35, p < .01$ . <sup>b</sup> $\chi^2(19) = 688.00, p < .01$ . <sup>c</sup>The comparison category is mother perceives equity in the relationship. <sup>d</sup>The comparison category is balanced exchange.

\* $p < .05$ . \*\* $p < .01$ .

of expressive support ( $B = -0.76, p < .01$ ) relative to a balanced exchange. Exchanges of instrumental support also predicted closeness; however, contrary to the findings for tension, the patterns were in the expected direction. Mothers reported less closeness when they had no exchange of instrumental support ( $B = -0.35, p < .01$ ) relative to balanced exchanges. As was the case for expressive support, neither giving more nor receiving more instrumental support predicted closeness.

Finally, we conducted postestimation tests to determine whether the coefficients for perceived equity differed significantly from those

for balanced exchanges. Consistent with the findings for tension, the results indicated that the association between perceptions of equity and mother–child closeness was significantly stronger than were those for instrumental and expressive exchanges in which mothers gave more than they received. Taken together, these findings demonstrate a strong and consistent pattern regarding the way in which perceptions of relational equity shape mothers' reports of closeness and tension in their relationships with their adult children. Further, these effects were significantly stronger than those regarding patterns of balance in instrumental and expressive support.

*Gender differences.* We conducted the analysis of both tension and closeness by child's gender, as shown in Table 3. Because the focus was on only the relative effects of perceptions of equity and balanced exchanges, we included only the coefficients for these variables in the table. Nevertheless, all of the controls included in Table 2 were also included in the models in Table 3.

*Tension.* Findings for mother–child tension by child's gender are presented in the left-hand columns of Table 3. Consistent with the full model, mothers' perceptions that they gave more in the relationship, relative to perceptions of relational equity, was a strong predictor of tension for both daughters and sons ( $B = 2.03, p < .01$ , for daughters;  $B = 1.65, p < .01$ , for sons). The findings for balanced exchanges of expressive support were also similar for daughters and sons, with the exception of no exchanges, which was a predictor of less tension for daughters but not sons ( $B = -0.60, p < .05$ , for daughters;  $B = -0.38, ns$ , for sons), although using the  $t$  test to compare the coefficients for sons and daughters revealed a nonsignificant difference. For giving more or giving less than a balanced exchange, expressive support was not a predictor for either gender.

Nevertheless, the findings regarding instrumental exchanges of support differed considerably by child's gender and departed markedly from what would be expected on the basis of equity theory. For daughters, the pattern of instrumental exchanges did not predict mother–child tension. In contrast, mothers reported less tension with sons when receiving more than they gave ( $B = -1.03, p < .01$ ), less than they gave ( $B = -1.19, p < .01$ ), and when no support was exchanged ( $B = -1.45,$



Table 3. Clustered Regression: The Effects of Perceptions of Equity and Balance of Support on Relationship Quality in the Mother–Child Relationship by Child’s Gender (Ns = 738 Daughters, 688 Sons)

Predictor	Tension				Closeness			
	Daughters <sup>a</sup>		Sons <sup>b</sup>		Daughters <sup>c</sup>		Sons <sup>d</sup>	
	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
Perceptions of equity <sup>c</sup>								
Perceives giving more	2.03**	0.22	1.65**	0.21	-1.27**	0.18	-1.15**	0.18
Perceives receiving more	0.21	0.32	0.16	0.34	0.29	0.26	-0.05	0.29
Expressive exchange <sup>f</sup>								
Gives more	0.07	0.19	0.14	0.22	0.03 <sup>g</sup>	0.15	-0.45*	0.18
Receives more	-0.04	0.18	0.03	0.20	-0.04 <sup>g</sup>	0.15	-0.35*	0.17
No exchange	-0.60*	0.28	-0.38	0.25	-0.24 <sup>g</sup>	0.22	-1.16**	0.21
Instrumental exchange <sup>f</sup>								
Gives more	-0.04 <sup>g</sup>	0.30	-1.03**	0.39	-0.29	0.25	-0.37	0.33
Receives more	-0.04 <sup>g</sup>	0.26	-1.19**	0.32	0.02	0.21	0.28	0.27
No exchange	-0.14 <sup>g</sup>	0.27	-1.45**	0.34	-0.52*	0.22	-0.04	0.28
Constant	9.52**	0.60	9.85**	0.85	7.40**	0.67	9.22**	0.72

Note: Controls in the model include mothers’ physical limitations, race, marital status, and family size as well as adult children’s age, marital status, educational attainment, parental status, geographic distance from mother, and mothers’ reports of value similarity to mother.

<sup>a</sup> $\chi^2(18) = 296.10, p < .01$ . <sup>b</sup> $\chi^2(18) = 233.04, p < .01$ . <sup>c</sup> $\chi^2(18) = 317.92, p < .01$ . <sup>d</sup> $\chi^2(18) = 346.44, p < .01$ .

<sup>e</sup>The comparison category is mother perceives equity in the relationship. <sup>f</sup>The comparison category is balanced exchange.

<sup>g</sup>Difference between sons and daughters is statistically significant.

\* $p < .05$ . \*\* $p < .01$ .

$p < .01$ ) relative to balanced exchanges. Furthermore, the differences in the effect of instrumental exchanges by child’s gender were statistically significant. This is particularly striking when one considers that none of the differences between the coefficients for equity and patterns of expressive exchange were found to be statistically significant.

Closeness. The findings for closeness by child’s gender are presented in the right-hand columns of Table 3. As was the case for all of the analyses presented thus far, mothers’ perceptions of giving more than they received in the relationship with their offspring strongly predicted closeness. Specifically, for both sons and daughters, mothers reported lower closeness when they perceived that they gave more than they received in the relationship, relative to perceptions of equity ( $B = -1.27, p < .01$ , for daughters;  $B = -1.15, p < .01$ , for sons).

Again, there were marked differences between the effects of support exchanges for sons and daughters. In particular, expressive support was a consistent predictor for mothers’ closeness with sons but not daughters. Mothers reported less closeness with sons when

the mothers gave more than they received ( $B = -0.45, p < .05$ ), gave less than they received ( $B = -0.35, p < .05$ ), and when they had no exchanges ( $B = -1.16, p < .01$ ) relative to equal exchanges of expressive support. In contrast, all of the coefficients for daughters were relatively weak and not significant. Furthermore, the difference between each of the coefficients for sons and daughters was statistically significant. In contrast to the findings for instrumental exchanges and tension, however, the direction of effects was as expected: Mothers had less close relationships with sons with whom they had imbalanced exchanges of expressive support. Finally, mothers’ closeness with children was not predicted by any patterns of instrumental exchanges, with one exception: For daughters, no exchange was associated with less closeness for daughters but not for sons (difference between coefficients not significant).

Taken together, the analyses by gender revealed some similarities between daughters and sons as well as some differences. Most salient to the central research question we posed is that perceptions of relational equity predicted both tension and closeness regardless

of child's gender; however, the patterns of effects for support exchanges differed by gender. Specifically, unbalanced expressive exchanges were much stronger predictors of lower closeness for sons than daughters. In contrast, and most surprising, instrumental exchanges were more important predictors of tension with sons than daughters, but the effects were in the opposite direction than we hypothesized—mothers reported *greater* tension when their exchanges were balanced than under any other circumstances.

#### DISCUSSION

Taken together, classic theories of equity (Thomas & Thomas, 1928; Walster et al., 1978) and symbolic interaction (Kinch, 1963; Stryker, 1956; Thomas & Thomas, 1928) combine to posit that perceptions of equity play a greater role in explaining the quality of interpersonal relations than do the actual balance of exchanges between role partners. The findings presented here contribute to this line of scholarship by demonstrating the greater salience of perceptions of equity than balanced exchanges of support in explaining relations between older mothers and their adult children, thus paralleling other empirical studies of the relative importance of these two dimensions of exchange (Frisco & Williams, 2003; Grote et al., 2004; Lavee & Katz, 2002; Sutor, 1991; Wilcox & Nock, 2006; Van Willigen & Drentea, 2001).

Although the balance of exchanges of support played only a small role in predicting relationship quality compared to perceptions of equity, the analyses revealed that relationships that lacked any exchanges of support had lower closeness, suggesting that the absence of these normative processes between the generations is detrimental to parent-child closeness—a pattern consistent with the literature on intergenerational relations (Sutor et al., 2011; van Gaalen & Dykstra, 2006). However, contrary to expectations, the absence of instrumental exchanges was related to lower tension between mothers and their adult children. We suggest that this counterintuitive finding might be accounted for by the fact that dyads who exchange no support may be more emotionally and geographically distant with lower contact (Sutor, Pillemer, & Sechrist, 2006; van Gaalen & Dykstra, 2006), in which case there is a lower likelihood of conflict and criticism (Birditt

et al., 2009; Fingerma, 1996; van Gaalen & Dykstra, 2006).

Counter to what would be expected both theories of equity and exchange, mothers who reported that they received more instrumental support than they gave their child reported lower tension. This finding is not surprising, however, given that the mothers were in their 70s and 80s—a point in the life course when the flow of support typically begins to shift toward more support to parents with less reciprocation (Sutor et al., 2011). Furthermore, more than half of the mothers had experienced a major illness or injury for which they had needed assistance within 2 years prior to the T2 interviews, suggesting that their ability to reciprocate may have been reduced from earlier points. Thus, receiving instrumental support without the expectation of reciprocation may have been considered normative under the circumstances, whereas being expected to provide such support might have been difficult (Davey & Eggebeen, 1998; Liang, Krause, & Bennett, 2001) and burdensome (Talbot, 1990), thus creating tension in their relationships with their children.

The pattern of findings regarding children's gender were consistent with classic theories of gender socialization and intergenerational relations (Chodorow, 1987) regarding daughters, albeit less so regarding sons. In particular, for daughters, mothers' perceptions that their relationships were equitable shaped both closeness and tension, whereas the specific balance of exchanges were of less consequence. Although we might have expected that the balance of expressive exchanges would predict daughters' relationship quality more than sons', it is possible that the stronger mother-daughter tie, with its expectation of support when necessary, results in less concern with the balance of ongoing day-to-day exchanges of either expressive or instrumental support. However, given the strong norms of supportive exchanges between mothers and daughters (Rossi & Rossi, 1990), it is not surprising that having no exchanges were associated with lower tension but also lower closeness.

In contrast, the findings regarding sons did not adhere to our expectations. First, although we anticipated that perceptions of equity would predict relationship quality for both sons and daughters, we hypothesized that the association would be substantially weaker for sons; however, this was not the case. Second,

imbalanced expressive exchange measures were associated with lower closeness, which would be expected. However, imbalances of instrumental exchanges were associated with *lower* tension between mothers and sons. It may be that relationships in which mothers and sons have balanced instrumental exchanges have a more intense bond and greater levels of contact and interdependence—much like those of daughters, thus providing more opportunities to experience tension in the relationship (Birditt et al., 2009; van Gaalen & Dykstra, 2006).

We should note two important issues regarding measurement. First, it is important to point out that mothers tend to evaluate their relationships with their adult children as very positive. This was apparent in our data, where we saw overall high levels of relationship quality, particularly in terms of reported closeness. Therefore, we should interpret the nonsignificant findings with some caution because there may be a ceiling effect when it comes to the ability of our independent variables to predict closeness. Second, the measures of exchange in this study were self-reported behaviors and thus are perceptions themselves. Nevertheless, the low correlation of perceptions of equity and balance of exchange suggest that even when mothers report an imbalance in the support exchanges, they still perceive the relationship as equitable.

#### *Limitations and Directions for Future Research*

The present study points toward several directions for future research. First, because of the study's cross-sectional design, the findings and their interpretations must be considered with some caution, because it could be that when mothers and adult children are closer and have less tension in their relationships mothers are more likely to perceive the relationship as equitable. Clearly, understanding how and why perceptions of equity affect relationship quality between mothers and their adult children is an area of research that needs further study using longitudinal data that are better able to answer the question of causal ordering. A longitudinal study would also allow a more dynamic picture regarding possible changes in the role equity plays in explaining intergenerational closeness and tension over the life course. It is clear that exchange relationships vary across the life course (Antonucci & Akiyama, 1987) and that support is not always provided

with the expectation of immediate reciprocity (Antonucci, 1985, 1990); therefore, perceptions of equity and the salience of equity may vary as well. We suggest that future studies address the importance of perceptions of equity for relationship quality at different stages in the life course.

Second, in this study we examined outcomes of closeness and conflict within the relationship separately, yet a growing body of literature points to the importance of considering ambivalence within the parent–child relationship (Suitor et al., 2011). There is evidence that perceptions of imbalance in the relationship predict greater ambivalence between mothers and children (Pillemer et al., 2007); however, there have been no direct comparisons between the relative effects of perceptions of equity and reports of actual exchange with regard to ambivalence. Thus, future studies should examine the relative effects of perceptions of equity and balance of support on ambivalence in the parent–child relationship.

Furthermore, it is possible that the patterns we observed here regarding the association of relationship quality and perceptions of equity and balance of exchange might differ if considered from the adult child's perspective (Bengtson & Kuypers, 1971; Giarrusso, Feng, & Bengtson, 2004; Shapiro, 2004; Suitor, Sechrist, Steinhour, & Pillemer, 2006). Previous studies by Schwarz (2006; Schwarz et al., 2005) have examined the association of perceptions of equity and relationship quality in mother–daughter relationships from the perspective of the daughter. Consistent with findings presented here, these studies indicated that perceptions of equity were salient predictors of relationship quality; however, they did not compare the relative effects of perceptions of equity to reports of support exchanged. Thus, it is important to explore whether the patterns reported here can be replicated using reports from adult children, particularly in families in which reports from parents and children can be compared.

Finally, the findings we have presented focus on exchanges with only mothers. Given that differences continue to be found between mothers' and fathers' relationships with their adult children (Gilligan et al., 2013; Pillemer, Munsch, Fuller-Rowell, Riffin, & Suitor, 2012; Suitor & Pillemer, 2013; Ward et al., 2009), it is possible that these processes would not be replicated when considering father–child

relationships. Given that mothers expect higher levels of exchange and engage in more support exchanges with adult children than do fathers (Rossi & Rossi, 1990), it is possible that exchanges of support may play a greater role in mothers' relationship quality with adult children than fathers. Furthermore, because mothers place greater emphasis on expressive dimensions of their relationships with their adult children, whereas men place greater emphasis on instrumental dimensions (Suitor & Pillemer, 2013; Pillemer et al., 2012), it is possible that perceptions of relational equity would play a smaller role in fathers' than mothers' relationships with their adult children. Thus, we hope that future research will explore whether the relative salience of perceived equity and balanced exchanges differ by parents' gender.

The findings we have presented shed new light on the relative role of perceived equity and patterns of exchange in explaining relationship quality between mothers and their adult children. Consistent with classic theories of equity, in the present study we found that mothers' perceptions were the most consistent predictor of mother–adult child relationship quality, whereas mothers' reports of actual support exchanges played smaller roles in these processes. Thus, this set of findings contributes to a growing body of work demonstrating that relations between older parents and adult children are shaped by many of the same social psychological processes that influence other interpersonal relationships.

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