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Interpersonal Conflict and Relational Models Theory: A Structural Approach to Injustice

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Two experiments analyzed social conflicts based on A. P. Fiske's (1991, 1992) four relational models: communal sharing, authority ranking, equality matching, and market pricing. Because each model has a distinct logical structure, it was hypothesized that social conflicts in which participants used incommensurate models would lead to more extreme reactions than would conflicts in which both participants used the same model. Participants (N = 178 for Study 1, N = 132 for Study 2) in both experiments read 16 interpersonal scenarios in which an expectation based on one of the four models was contradicted by a negative outcome based on one of the four models. In neither experiment was the incommensurability interaction hypothesis supported. However, exploratory analyses indicated a significant main effect for equality matching and a significant interaction for communal sharing. The results are interpreted as providing qualified support for the role of relationship structures in conflict.

Social conflict has been an overarching topic in the history of social psychology. Classic studies have addressed the effects of significant factors in conflict, such as frustration in achieving important goals (Dollard, Doob, Miller, Mowrer, & Sears, 1939), unflattering social comparisons (Festinger, 1954), competition for scarce resources (Sherif, Harvey, White, Hood, & Sherif, 1961), the mere presence of cues for aggression and conflict (Berkowitz & LePage, 1967), deindividuation (Zimbardo, 1969), obedience to malevolent authority (Milgram, 1974), unjust procedures (Thibaut & Walker, 1975; Lind & Tyler, 1988), relative deprivation (Olson, Herman, & Zanna, 1986), hot weather (Anderson, Anderson, Dorr, DeNeve, & Flanagan, 2000), and many others (for a review, see Rubin, Pruitt, & Kim, 1994).

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A recent development in the study of social relations, relational models theory (Fiske, 1991, 1992; Fiske & Haslam, 1996), has several characteristics that make it a prime candidate for complementing the existing social psychological research on conflict. First, it takes a novel approach to conflict (and other social relations) by focusing not on the content of the interaction, per se, but on its logical structure. That is, the forms of the categories of relationships and associated cognitive procedures both receive special emphasis in the theory. Second, the theory focuses directly on the relationships between individuals, as opposed to strictly individual-level phenomena such as neuroticism or strictly group-level phenomena such as rioting. To the extent that conflict is an interpersonal phenomenon, this level of analysis is most appropriate. Third, Fiske (1991, 1992; Fiske & Haslam, 1996) argues that the theory is universally applicable. That is, it can be applied to any person in any social interaction. Fourth, it is exhaustive, in that there are no social interactions to which it does not apply. Fifth, it is simple. It accomplishes this universal, exhaustive application with just four general forms of relationships (plus two forms of non-relationships). And sixth, it makes novel, testable predictions about the ori-

gins of conflict. Taken together, these characteristics make relational models theory a compelling choice for expanding the investigation of conflict.

The following sections describe the details of the theory and arguments for its relevance to conflict (both theoretical and empirical). In the first section, Fiske's relational models are described in detail, as well as the evidence that they are, in fact, used as expected. In the second section, the theoretical argument for their application to conflict will be presented, along with the existing evidence on the direct application of relational models theory to interpersonal conflict.

Relational Models Theory: Basic Principles and Evidence of Use

Relational models theory (Fiske, 1991, 1992; Fiske & Haslam, 1996) is based on a synthesis of the relationship literature from anthropology, economics, sociology, psychology, and theology. Relational models theory outlines four fundamental and universal structures for social relations: communal sharing, authority ranking, equality matching, and market pricing.[1] Communal sharing relationships are based on categorical membership, in which all group members are treated as identical in some sense, such as among spouses (who may share a joint checking account) or within ethnic groups (e.g., a Swede may feel unity with all other Swedes). Authority ranking relations involve linear ordering or hierarchy, in which certain people are given precedence, as in military hierarchies (e.g., generals have precedence over colonels). Equality matching assumes strict balance or in-kind reciprocity, as with dinner invitations (e.g., if you have me over for dinner, I then invite you over for dinner) or one-person-one-vote elections, in which all people have equal influence. Finally, market pricing relationships are based on proportional input and output. Unlike equality matching, in which tradeoffs are between identical acts or objects, market pricing strives to balance inherently unequal quantities or objects, such as receiving wages for labor.

A substantial body of naturalistic and experimental data[2] demonstrates that people from several cultures do, in fact, use the relational models in thinking about people and relationships (see Fiske and Haslam, 1996, for a review). These studies examined social errors (in which one person is mistaken for another; Fiske, 1993; Fiske, Haslam, & Fiske, 1991), intentional substitutions (e.g., finding a new partner for a game of tennis; Fiske & Haslam, 1998), order of recall for friends (Fiske, 1995), and personality disorders (Haslam, Reichert, & Fiske, 1998). These studies showed not only that people intuitively use the relational models in thinking about people, but also that relational information appears to take cognitive precedence over information about social roles, personality, race/ethnicity, or age (but not gender). Other research has applied the theory to distributive and procedural justice (Folger, Sheppard, & Buttram, 1995), worker attrition (Connelley, 1997), negotiation (Gelfand, Dominguez, & Nishii, 1998), and moral violations (Tetlock, Kristel, Elson, Green, & Lerner, 2000), demonstrating the flexibility of the models.

Relational Models and Conflict

The above evidence demonstrates that people use relational models intuitively in thinking about their relationships. But how do these categories relate to conflict? Two factors make the connection possible. The first factor is that, as logical structures, the relational models must be implemented in contextually responsive ways to actually be used in a relationship. This leads to the possibility that two people in a relationship will implement the same model in different, conflicting ways. This is termed "within-model conflict." The second factor is that the four relational models are theoretical incommensurable categories. That is, each model represents a qualitatively distinct form that cannot be reduced to any of the other three models. This characteristic is supported by the mathematical properties of each model (Fiske, 1991) and by empirical studies (Haslam, 1994; Haslam & Fiske, 1992). This leads to the possibility that two people in a relationship will use different, conflicting models. (The manner in which each model is implemented in not important at this point because the structural dif-

[1] There are also two forms of non-relationships, in which a person is being either ignored or treated purely as the means to non-social ends (termed "null" and "asocial" relations, respectively) that Fiske (1991) does not consider relationships, per se. Therefore, they are not discussed further in this article.

[2] For a constantly updated list of studies relevant to Relational Models Theory, see Fiske's website at: http://www.sscnet.ucla.edu/anthro/faculty/fiske/evidence.htm.

ferences preempt the differences in implementation.) This is termed "between-model conflict."

In other words, within-model conflicts involve an agreement about *whether* a particular relational model applies to a given situation but disagreements about *how* to apply it. Between-model conflicts, by contrast, focus exclusively on *whether* a particular relational model or a different, logically incommensurate model is appropriate for the situation. Because between-model conflicts lack even the small amount of agreement that within-model conflicts involve, it is hypothesized that between-model conflicts would lead to stronger, more negative reactions than would within-model conflicts.

To date, one study has directly examined the relevance of relational models theory to conflict, with a special emphasis on the within-model/between-model incommensurability effect. In an experimental comparison of within-model and between-model conflicts, Tetlock et al. (2000) compared reactions to "taboo tradeoffs," or unethical between-model tradeoffs (Fiske & Tetlock, 1997), with "tragic tradeoffs," which are ethically challenging within-model conflicts. In the taboo-tradeoff condition, participants read a scenario in which a hospital administrator had to chose between allocating financial resources to equipment and personnel for the hospital (a market pricing choice) instead of saving a child's life with a needed transplant (indicative of communal sharing values, and therefore a between-model conflict). In the tragic tradeoff condition, the same administrator had to choose between allocating resources to save one child's life or another child's life (a within-model conflict involving communal sharing). Participants reacted much more negatively to the taboo tradeoff than the tragic tradeoff, as shown through moral outrage, sanctions, and moral cleansing.

The study by Tetlock et al. (2000) provided preliminary support of the incommensurability effect in social conflict. However, it is limited by the inclusion of only two conflicts (communal sharing vs. market pricing and communal sharing vs. communal sharing), whereas the four models allow for sixteen possible combinations. Moreover, the study centers on a single domain (resource allocation in a hospital) with life-and-death consequences. Consequently, two important questions remain. First, does the incommensurability effect exist for other combinations of the relational models, such as authority ranking vs. equality matching or market pricing vs. market pricing? Second, does the incommensurability effect exist for less dramatic (i.e., non-life-and-death) situations? Relational models theory makes no specific predictions about the severity of conflicts. However, because the great majority of conflicts in life appear to center around less significant issues, then the relevance of the relational models to daily life would be greatly enhanced if it could explain reactions to these more common, more minor difficulties. The current studies were designed to answer these two questions.

To summarize, both the theoretical analysis of conflict among relational models and the one existing empirical study suggest that between-model conflicts, which involve fundamentally incommensurable logical structures, would lead to more negative reactions than would within-model conflicts, which involve differences in implementation but incommensurable structures. These negative reactions should be manifest in affect (e.g., moral outrage or deep distrust), behavior (avoidance or sanctions), and cognition (judgments about the people involved).

Pilot Study

Several stages of pretesting were used to create materials that would be used in Study 1. A scenario method was employed, in which participants would read short descriptions of conflicts and provide reactions to those conflicts. In order to maximize generalizability of results, the scenarios were composed to reflect a wide variety of conflicts in a wide variety of situations. Two complete sets of sixteen short scenarios were created (one set for each combination of the four models). Two sets of scenarios were used to compensate partially for the variability in expectations and context that could affect reactions to the scenarios. In addition, the use of two sets allowed for a greater range of more natural scenarios, which would reduce fatigue. The substantial variation of these two sets does allow for uncontrolled confounds in the scenarios, but the more restricted method of Study 2 provides a counterbalance to this.

In the first stage of pretesting, the equivalence of potential scenario outcomes (i.e., the end result of the interaction) was established. This was done to ensure that the outcome of the interaction, such as not being invited on a family vacation or being laid off, would be negative outcomes

that did not vary substantially in their unpleasantness. This would allow the manipulation of relational models to be assessed independently of the objective outcome of the interaction. To accomplish this, a pool of 65 potential scenario outcomes was composed by the researcher. The outcomes addressed diverse behavioral domains: decision making, distribution, contribution, and social influence. In addition, the scenarios described personal (i.e., the other party was known) and impersonal (i.e., the other party was anonymous, as with a letter from a company) interactions that could have one or more people enacting the outcomes.

A sample of 33 participants was recruited from psychology departments at Hunter College and Lehman College, both large public universities in New York City. These participants rated the outcomes of the 65 scenarios on a 7 point scale (-3 = *very negative* to +3 = *very positive*). From these original 65 scenarios, 32 scenarios (permitting 2 scenarios for each of the 16 relational model combinations) had outcomes with moderately negative outcomes (i.e., between -1 and -2) and were selected to form the basis for the scenarios. This assessment assured that the unpleasantness of the interactions did not vary substantially and would not present a significant source of variability in participants' reaction to the scenarios.

In the second stage, expectations for the interaction and relational structure were added to the 32 scenario outcomes. Two judges, using definitions and examples from Fiske (1991), showed substantial agreement when determining whether the scenarios clearly reflected the desired models, $\kappa = .92$. A scenario in which the perceiver expected equality matching but authority ranking was enacted (i.e., a between-model conflict) follows:

> Imagine that you're working with several people to organize a group project. You expected that the group would vote on the various decisions. However, one of your group members claims to be a natural leader with very high standards. Because nobody's suggestions meet his/her standards, this person decides to make all of the decisions and tells everybody what to do.

Another scenario in which the perceiver expected one implementation of communal sharing but another implementation was enacted (i.e., a within-model conflict) is as follows:

> Imagine that your spouse's family is trying to make a difficult decision. They want to make sure they all agree before they do anything. You make a suggestion and they say that although you are married to a member of the family, you yourself are not a member of the family. As a result, they disregard your suggestion and do not involve you in the decision.

The resulting 32 scenarios were then placed into two groups of 16 (the number of possible pairings of 4 relational models) and randomly ordered. The reaction data for Study 1 could then be gathered.

Study 1

Method

Participants. A power analysis indicated that 197 participants would be necessary to have power = .80 in detecting a small effect ($\eta^2 = .01$) for the incommensurability hypothesis using a repeated-measures design (Cohen, 1988). Consequently, 199 participants (153 women, 45 men, 1 not specified; mean age = 26.1) were recruited from psychology department participant pools at Hunter College in New York City and Lehman College in the Bronx, New York. Of these, 178 (137 women, 40 men, 1 not specified; mean age = 25.9) provided completed data and are included in the analyses. Participants received course credit for their participation.

Materials. The 32 scenarios were randomly split into two sets of 16 scenarios each and randomly ordered. Participants were then asked to imagine themselves in the place of the perceiver and then to rate each scenario on 6 items that measured negative reactions to conflicts on a 5-point Likert scale (1 = *not at all*, 5 = *very much*). These items were composed by the researcher to measure affective, behavioral, and cognitive reactions. Items included the following: "This interaction made me feel upset," "This interaction made me feel hostile," "I wanted to stop this interaction," "I wanted to change this interaction," "I thought that this interaction was strange or unusual," and "I thought that this interaction reflected insensitivity on the part of the other(s)."

These items had a coefficient alpha of .85, so scores on the six items were averaged and subsequent analyses were based on those means.

Procedure. Participants were surveyed in classrooms in groups ranging in size from 2 to 20. The study was described in detail, using example scenarios and illustrating the methods for responding. The scenario packets were then distributed, and further verbal and written instructions were given. The study required approximately 90 minutes.

Results

Both focused and general approaches were used to analyze the averaged affective, behavioral, and cognitive reaction scores (see Table 1). The focused approach directly assessed the incommensurability hypothesis. The general approach used SPSS 11 for Mac OS X to conduct a standard analysis of variance to examine marginal means and interactions. The incommensurability hypothesis and all post-hoc tests were investigated using Rom's sequentially rejective t-test (Wilcox, 1996), which maintains a familywise error rate and has higher power than other procedures such as the Bonferroni or Scheffé tests. In addition, the Rom test has great flexibility. This technique requires first that standard t-tests be computed for all comparisons of interest (a total of 16 for Study 1). The comparisons are ranked according to their probability levels, and the probability levels are compared to criterion probability levels that become more stringent for each ordered comparison, from $p = .05$ for the first comparison to $p = .0031$ for the sixteenth (see Table 2).

In addition, for each paired comparison, standardized mean differences (d) and 95% percentile bootstrap confidence intervals were computed using Resampling Stats for Excel version 3 (Blank, Seiter, & Bruce, 2004) and Microsoft Excel 2004 for Macintosh. No adjustments for familywise alpha rates were made for these confidence intervals, so they should be used solely as interpretive aids for the statistical hypothesis tests.

Incommensurability Hypothesis. The Rom test showed that, contrary to the hypothesis, participants generally reacted more negatively to within-model conflicts than to between-model conflicts (see Table 2). This result led to the need for greater exploration of the data (see below).

Analysis of Variance. The reaction data were also analyzed with a 4 (Expected relational model: communal sharing, authority ranking, equality matching, market pricing) x 4 (Enacted relational model: communal sharing, authority ranking, equality matching, market pricing) ANOVA with repeated measures on both variables. A main effect for Expected relational model was found, $F(3, 531) = 33.22$, $p < .001$, $\eta^2 = .16$. Post-hoc comparisons using the Rom test showed that violations of communal sharing and market pricing expectations elicited more negative reactions than did authority ranking or equality matching expectations (see Table 2). A main effect for Enacted relational model was also observed, $F(3, 531) = 61.02$, $p < .001$,$\eta^2 = .26$. Conflict based on communal sharing and authority ranking enactments elicited the most negative reactions, followed by market pricing. Equality matching elicited the least negative reactions.

The significant interaction of Expected relational model and Enacted relational model, $F(9, 1593) = 9.21$, $p < .001$, $\eta^2 = .05$, indicated that reactions depended jointly, although weakly, on expectations and outcomes. The earlier Rom t-test showed that while part of this effect could be explained by the difference in reactions to within-model and between-model conflict (although the difference was in the direction opposite of what was hypothesized), further exploration was needed to ascertain the exact nature of the interaction.

Data Exploration. Because this study represents an initial investigation into the full range of relational model conflicts and because the data contradicted the hypothesis, the data were explored for unexpected patterns. This approach revealed unusually negative reactions to communal sharing/communal sharing conflicts. Exploratory analyses also revealed mildly negative reactions to conflicts involving equality matching, both when expected and when enacted. Consequently, the scenarios were placed into three categories: communal sharing/communal sharing conflicts, the 7 equality matching conflicts, and midrange conflicts (i.e., the 8 conflicts that remained). Post hoc tests showed highly significant differences between all three conflict categories (see Table 2). Communal sharing/communal sharing conflicts elicited significantly more negative reactions than did midrange conflicts or equality matching conflicts. Midrange conflicts were also significantly more negative than equality matching conflicts.

Table 1. Mean Reactions to Conflicts by Expected Relational Model and Enacted Relational Model: Study 1

	Enacted Relational Model				
Expected Relational Model	Communal Sharing	Authority Ranking	Equality Matching	Market Pricing	Row Average
Communal Sharing					
Mean	3.61	3.35	2.58	3.05	3.15[a]
SD	1.17	1.16	1.13	1.16	0.87
Authority Ranking					
Mean	3.02	2.83	2.40	2.84	2.77[b]
SD	1.26	1.19	1.12	1.09	0.79
Equality Matching					
Mean	2.66	2.91	2.78	2.67	2.76[b]
SD	1.24	1.22	1.20	1.21	0.87
Market Pricing					
Mean	3.46	3.29	2.55	3.10	3.10[a]
SD	1.11	1.15	1.22	1.27	0.87
Column Average					
Mean	3.19[a]	3.10[a]	2.58[b]	2.91[c]	2.94
SD	0.82	0.90	0.83	0.82	0.72

Note: Scores range from 1 (Not at all negative) to 5 (Very negative). N = 178. Post-hoc comparisons using the Rom sequentially rejective procedure were conducted separately for the row averages and the column averages. Cells that do not share superscripts are significantly different at the familywise .05 rate.

Table 2. Pairwise Comparisons of Reactions to Conflicts: Study 1

First Variable	*M*	*SD*	Second Variable	*M*	*SD*	*t*	p_{obs}	p_{crit}	*d*	.95CI(*d*)
Expect CS	3.15	0.87	Expect AR	2.77	0.79	7.39	<.0001*	.0045	0.55	[0.40, 0.72]
Expect CS	3.15	0.87	Expect EM	2.76	0.87	7.74	<.0001*	.0042	0.58	[0.44, 0.74]
Expect CS	3.15	0.87	Expect MP	3.10	0.87	0.95	.3449	.0250	0.07	[-0.08, 0.22]
Expect AR	2.77	0.79	Expect EM	2.76	0.87	0.31	.7546	.0500	0.02	[-0.13, 0.17]
Expect AR	2.77	0.79	Expect MP	3.10	0.87	-6.60	<.0001*	.0051	-0.50	[-0.67, -0.34]
Expect EM	2.76	0.87	Expect MP	3.10	0.87	-6.55	<.0001*	.0057	-0.49	[-0.66, -0.34]
Enact CS	3.19	0.82	Enact AR	3.10	0.90	1.98	.0497	.0169	0.15	[0.00, 0.31]
Enact CS	3.19	0.82	Enact EM	2.58	0.83	12.55	<.0001*	.0036	0.95	[0.78, 1.13]
Enact CS	3.19	0.82	Enact MP	2.91	0.82	5.73	<.0001*	.0085	0.43	[0.29, 0.59]
Enact AR	3.10	0.90	Enact EM	2.58	0.83	10.42	<.0001*	.0038	0.78	[0.64, 0.95]
Enact AR	3.10	0.90	Enact MP	2.91	0.82	3.89	.0001*	.0127	0.29	[0.15, 0.45]
Enact EM	2.58	0.83	Enact MP	2.91	0.82	-6.38	<.0001*	.0073	-0.48	[-0.64, -0.33]
Within RM	3.08	0.85	Between RM	2.90	0.75	4.27	<.0001*	.0102	0.32	[0.17, 0.48]
CS/CS	3.61	1.17	Midrange RMs	3.12	0.79	6.63	<.0001*	.0033	0.50	[0.34, 0.68]
CS/CS	3.61	1.17	EM Conflicts	2.65	0.77	11.69	<.0001*	.0064	0.88	[0.71, 1.07]
Midrange RMs	3.12	0.79	EM Conflicts	2.65	0.77	13.46	<.0001*	.0031	1.02	[0.86, 1.19]

Note. Scores range from 1 (Not at all negative) to 5 (Very negative). N = 178. df = 177. CS = Communal Sharing, AR = Authority Ranking, EM = Equality Matching, MP = Market Pricing, RM = Relational Model.
*Familywise p < .05 using Rom sequentially rejective test.

Discussion

The incommensurability hypothesis—i.e., between-model conflicts should lead to more negative reactions than within-model conflicts—was contradicted. That is, the analyses yielded statistically significant results in the direction opposite of what had been hypothesized. However, data exploration indicated that this might have been due primarily to the extreme scores for the communal sharing/communal sharing conflicts. Two such conflicts were used in Study 1. The first, which had to do with being excluded from an important family decision by one's in-laws, was given as an example earlier. The other communal sharing/communal sharing conflict was as follows:

> Imagine that a good friend of yours was throwing a big holiday party. Because you are part of this person's social circle, you had assumed that you would be invited to the party. However, your friend never mentions it to you and when the night of the party arrives you find that were not, in fact, invited to your friend's party.

Both of these conflicts involve being excluded from groups in which one expected to be included. As the data show, this situation provokes unusually strong negative responses. It is, however, possible to violate communal sharing boundaries by *inclusion* of persons that one expected to have excluded, as will be discussed below.

In addition to the contradiction of the hypothesis, exploration of the data showed surprising effects for communal sharing (when paired with communal sharing) and equality matching (with paired with all relational models).

The former result could be attributed to the dichotomous nature of the communal sharing/communal sharing conflict; a person who has been excluded from communal sharing may feel that he or she no longer has any relationship at all. With other models, there is some middle ground (e.g., a person may not be as highly ranked as they would like to in authority ranking, but they still may not be in last place). Communal sharing, on the other hand, is all or nothing—you are in the relationship or you are not. In hindsight, it is not surprising that categorical exclusion should be so painful to people. It should be noted, however, that both of the communal sharing/communal sharing conflicts involved exclusion when inclusion was expected. The boundaries of communal sharing can be violated in other ways, such as the inclusion of persons that one expected to exclude. This possibility will be discussed in greater length in the second study.

The data also showed unusually mild (but still negative) reactions to all scenarios involving equality matching, when either expected or enacted. Although the data are not clear on why this should occur, the results are consistent with the idea that equality matching may serve as a sort of default relational structure, which is generally accepted unless there is some compelling reason to use a different relational structure. This interpretation is consistent with other work on social conflict (e.g., Fisher, Ury, & Patton, 1991; Rubin et al., 1994) that generally finds a strong preference for equality matching behaviors in negotiating settlements, even when such behavior does not lead to the maximization of personal outcomes.

In summary, Study 1 contradicted the incommensurability hypothesis. It also yielded some interesting findings about possible special roles for equality matching (which generally led to less negative reactions) and communal sharing (which sometimes led to unusually strong reactions).

A few cautions about these findings warrant mention. First, this study involved a wide range of behavioral domains (decision making, distribution, contribution, and social influence). The approach was beneficial because it allowed for a more complete representation of the conflicts that can arise in daily life. In addition, the theoretical background of incommensurability of relational models does not make specific predictions about different domains, so it was reasonable to treat these differences as a random variable. However, this was an untested hypothesis. A second study was therefore designed to assess the influence of behavioral domain on interpersonal conflicts. To keep the study to a reasonable size, however, the numbers of domains was reduced to two (distribution and decision making), and this factor varied between subjects.

Second, Study 1 included interactions with identifiable others (e.g., with friends or family) as well as impersonal interactions (such as with a large corporation). Because theories of procedural justice (e.g., Folger, Sheppard, & Buttram, 1995; Lind & Tyler, 1988) emphasize the importance of personal recognition in interactions, it would be reasonable to suppose that people's conflicts with

personal and impersonal others could be substantially different. Consequently, in Study 2, all interactions were personal in nature, as personal interactions are perhaps more frequently encountered in daily life. It remains to be seen how conflicts would vary under systematic investigations of this factor.

Third, and finally, the unexpected findings of Study 1 require verification. Both the reversal of the hypothesized incommensurability effect and the unanticipated effects for communal sharing and equality matching deserved further exploration and possible confirmation.

For these reasons, a second study was designed to complement the method of Study 1 and provide further exploration and possible confirmation of unexpected patterns.

Study 2

Study 2 modified the experimental scenarios and method to overcome some of the weaknesses of Study 1 and provide additional tests of unanticipated results. Participants again read one of two sets of 16 scenarios describing each possible combination of relational models and were asked to respond to evaluative items. However, several important changes had been made: (a) Two domains—distribution and decision making—were used, whereas the previous study used social influence and contribution as well; (b) Scenarios were all explicitly interpersonal with a known partner (e.g., parents or spouse); (c) Evaluations were measured with a single item to reduce participant fatigue; (d) Outcome desirability was included as a covariate; and (e) Scenarios were constructed in a combinatorial manner, such that four expectations and four enactments were combined to make the 16 scenarios (see the materials section below).

Method

Participants. A convenience sample of 132 participants (43 men, 85 women, 4 not specified; mean age = 26.1) was recruited at Hunter College. All of the participants provided complete data and are included in all analyses. Participants received class credit for their participation.

Materials. Two sets of scenarios were prepared for this study. The first set of scenarios involved a student asking a parent for money to buy schoolbooks and being denied that money (the distribution condition). The second set of scenarios involved choosing an apartment with one's spouse and ending up in the personally less-desired apartment (the decision making condition). In contrast to Study 1, scenarios were constructed in a combinatorial manner. That is, for each behavioral domain, one expectation was composed for each of the four relational models. For example, the authority ranking expectation for decision making read as follows:

> Imagine that you and your spouse are trying to decide which of two apartments you should rent. You expected that because you were going to make most of the money for the rent that you would have final say on which apartment you took.

In the same manner, one enactment of each relational model was also composed for each relational model in each behavioral domain. The communal sharing enactment for decision making read:

> However, your spouse felt that you and his/her whole family should agree unanimously with your choice before you move. They all wanted you to move into the apartment that you didn't like as much, but you eventually agreed because you saw that they would never agree with you. As a result, you ended up living someplace that you didn't really like.

After the four expectations and enactments for each domain were composed, they were crossed with each other to create 16 final scenarios. The outcome (e.g., "As a result, you ended up living someplace that you didn't really like.") was identical for every scenario in each behavioral domain.

After reading each scenario, participants responded to two statements: (a) "This interaction made me feel upset," and (b) "An interaction like this could happen in real life." Both statements were rated using 5 point Likert-type scales (1 = *not at all* and 5 = *very much*). Participants then evaluated the scenario outcomes (e.g., "How bad is it to live someplace you don't really like?") using the same 5 point Likert scale.

Procedure. The questionnaires were administered to participants either individually or in small groups. Participants were randomly assigned to complete either the distribution condition or

the decision making condition. The scenarios were presented in random order for each participant. Participants were asked to read each scenario carefully and imagine themselves in each interaction. After reading and responding to each scenario, participants evaluated the outcome of the scenarios and provided demographic data. They were then asked for comments on the study, debriefed, and thanked for their time.

Results

Outcome Evaluation. The average evaluations of the outcomes for the distribution scenarios (M = 4.27; SD = 0.96) and decision making scenarios (M = 4.39; SD = 0.74) did not differ significantly, t(121) = 0.77, p = .44, η^2 = 005. Consequently, the valence of the scenarios may be roughly comparable to those in Study 1, although the use of different rating scales in the two studies makes direct comparisons difficult.

Reaction Scores. The reaction data (see Table 3) were analyzed with a 4 (Expected relational model: communal sharing, authority ranking, equality matching, market pricing) x 4 (Enacted relational model: communal sharing, authority ranking, equality matching, market pricing) x 2 (Behavioral domain: Distribution or Decision Making) ANOVA with repeated measures on the first two variables. The main effect for Expected model was significant, F(3, 390) = 6.10; p < .001, η^2 = .04. Post hoc Rom t-tests (see Table 4) showed that, contrary to the results in Study 1, scenarios in which equality matching was expected were associated with more negative reactions than were communal sharing, authority ranking, or market pricing scenarios, none of which differed from each other.

A significant main effect for Enacted relational model was also found, $F(3, 390) = 5.32$; $p = .001$, $\eta^2 = .04$. Scenarios in which communal sharing was enacted led to significantly more negative responses than did equality matching. None of the other differences was significant (see Table 4). This pattern, however, was qualified by an interaction of Enacted relational model and Behavioral domain, $F(3, 390) = 22.50$; $p < .001$, $\eta^2 = .15$. Table 4 shows that distribution scenarios in which authority ranking or market pricing were enacted led to more negative reactions than did corresponding decision making scenarios, while the pattern was reversed for communal sharing scenarios (i.e., decision making scenarios elicited more negative

Table 3. Means Reactions to Conflicts by Expected Relational Model and Enacted Relational Model: Study 2

	Enacted Relational Model				
Expected Relational Model	Communal Sharing	Authority Ranking	Equality Matching	Market Pricing	Row Average
Communal Sharing					
Mean	3.71	3.42	3.30	3.39	3.45[a]
SD	1.18	1.24	1.19	1.29	0.90
Authority Ranking					
Mean	3.60	3.48	3.30	3.40	3.44[a]
SD	1.23	1.20	1.34	1.22	0.90
Equality Matching					
Mean	3.72	3.58	3.67	3.49	3.62[b]
SD	1.14	1.26	1.18	1.33	0.91
Market Pricing					
Mean	3.73	3.45	3.38	3.30	3.47[a]
SD	1.18	1.26	1.25	1.31	0.95
Column Average					
Mean	3.69[a]	3.48[ab]	3.41[b]	3.39[ab]	3.50
SD	1.05	1.08	1.05	1.10	0.85

Note: Scores range from 1 (Not at all negative) to 5 (Very negative). N = 132. Post-hoc comparisons were conducted separately for the row averages and the column averages. Cells that do not share superscripts are significantly different.

reactions) and there was no difference in reactions between the equality matching scenarios in the two behavioral domains. Patterns of responses within each domain, however, varied considerably. For distribution scenarios, communal sharing scenarios had mild (i.e., not very negative) reactions, whereas authority ranking and market pricing had equivalently more negative responses. Equality matching scenarios did not differ from any other the others. For decision making, communal sharing elicited significantly more negative responses than the other relational models. Enactments of equality matching were associated with more negative responses in the decision making scenarios than any other scenarios, which did not differ from each other.

The interaction of Expected model and Enacted model did not reach conventional levels of statistical significance, $F(9, 1170) = 1.78$, $p = .07$, $\eta^2 = .01$. More specifically, the difference between responses to within-model conflicts and between-model conflicts was not statistically significant, although it did have a positive bootstrap confidence interval for the effect size. No other main effects or interactions were statistically significant. Thus, for the second time, the incommensurability hypothesis (within-model vs. between-model conflicts) was not supported.

Data Exploration. Exploration of the data in Study 1 showed that communal sharing/communal sharing conflicts elicited the most negative responses and conflicts involving equality matching had the least negative responses. When this pattern was applied to Study 2, there was some agreement, although none of the differences was statistically significant. (On the other hand, two did have positive bootstrap confidence intervals for the effect size.) As with Study 1, communal sharing/communal sharing conflicts elicited somewhat more negative reactions than did equality matching conflicts, but not at adjusted levels of statistical significance (see Table 4). Similarly, communal sharing/communal sharing conflicts also elicited somewhat more negative reactions than did the remaining mid-level conflicts (again, not statistically significant with the familywise adjustment). Unlike Study 1, however, equality matching conflicts and the remaining mid-level conflicts did not differ from each other in eliciting negative reactions. However, the main effect for Enacted model made it clear that communal sharing again played an unusual role. Responses to conflicts in which communal sharing was expected were markedly negative (along with market pricing), a surprising finding because the conflicts in these situations did not involve being excluded from the relationship—rather, other people were included. In addition, scenarios in which equality matching was enacted elicited significantly less-negative reactions. This provides partial support for the theory of equality matching as a commonly acceptable model.

Discussion

Study 2 investigated the same hypothesis as Study 1, but had greater consistency among the experimental scenarios, briefer outcome measures, and fewer behavioral domains. As with Study 1, the incommensurability hypothesis was not supported. The communal sharing/communal sharing conflicts were again strongly offensive when compared with the 7 equality matching conflicts or the remaining 8 mid-range conflicts. This is particularly interesting given that the decision making scenario, which was given above, involved *over*inclusion in the group, whereas in Study 1 both scenarios involved communal exclusion.

It should be noted, however, that the effect could be attributed to conflicts in which communal sharing was enacted, as two of the three others also had unusually negative responses. The data regarding the role of equality matching were less consistent with Study 1. Contrary to those earlier findings, violations of equality matching expectations in Study 2 were associated with greater negativity than violations of any other expectations. The role of equality matching as an enacted relational model was more in line with Study 1, in that equality matching was never more offensive than the other models, even though it wasn't the least offensive for either distribution, where it was similar to communal sharing, or decision making, where it was similar authority ranking and market pricing.

In summary, Study 2 provided results that were largely consistent with those of Study 1—the incommensurability hypothesis was not supported, the communal sharing/communal sharing conflict was associated with strongly negative reactions, and equality matching was at least no more negative than other relational models when enacted, although conflicts were more offense when equality matching was expected.

Table 4. Pairwise Comparisons of Reactions to Conflicts: Study 2

First Variable	*M*	*SD*	Second Variable	*M*	*SD*	*t*	*df*	p_{obs}	p_{crit}	*d*	.95CI(*d*)
Expect CS	3.45	0.90	Expect AR	3.45	0.90	0.21	131	.8309	.0169	0.02	[-0.15, 0.18]
Expect CS	3.45	0.90	Expect EM	3.62	0.91	-3.53	131	.0006*	.0020	-0.30	[-0.48, -0.14]
Expect CS	3.45	0.90	Expect MP	3.47	0.95	-0.23	131	.8185	.0127	-0.02	[-0.19, 0.15]
Expect AR	3.45	0.90	Expect EM	3.62	0.91	-3.95	131	.0001*	.0018	-0.34	[-0.51, -0.18]
Expect AR	3.45	0.90	Expect MP	3.47	0.95	-0.43	131	.6679	.0073	-0.03	[-0.21, 0.16]
Expect EM	3.62	0.91	Expect MP	3.47	0.95	3.13	131	.0022*	.0023	0.27	[0.11, 0.44]
Enact CS	3.69	1.05	Enact AR	3.48	1.08	2.09	131	.0386	.0036	0.11	[-0.05, 0.29]
Enact CS	3.69	1.05	Enact EM	3.41	1.05	3.17	131	.0019*	.0022	0.44	[0.28, 0.60]
Enact CS	3.69	1.05	Enact MP	3.39	1.11	2.89	131	.0045	.0026	0.13	[-0.08, 0.30]
Enact AR	3.48	1.08	Enact EM	3.41	1.05	0.80	131	.4275	.0064	0.39	[0.24, 0.55]
Enact AR	3.48	1.08	Enact MP	3.39	1.11	1.16	131	.2482	.0051	0.05	[-0.11, 0.22]
Enact EM	3.41	1.05	Enact MP	3.39	1.11	0.19	131	.8496	.0250	-0.28	[-0.43, -0.12]
Within RM	3.54	0.92	Between RM	3.48	0.85	1.86	131	.0651	.0038	0.17	[0.00, 0.33]
Distribution: Enact CS	3.33	1.03	Distribution: Enact AR	3.76	1.10	-3.64	65	.0005*	.0019	0.45	[0.21, 0.70]
Distribution: Enact CS	3.33	1.03	Distribution: Enact EM	3.44	1.02	-0.97	65	.3342	.0057	0.58	[0.37, 0.79]
Distribution: Enact CS	3.33	1.03	Distribution: Enact MP	3.74	1.16	-3.51	65	.0008*	.0021	0.97	[0.77, 1.19]
Distribution: Enact AR	3.76	1.10	Distribution: Enact EM	3.44	1.02	2.82	65	.0063	.0029	0.15	[-0.08, 0.40]
Distribution: Enact AR	3.76	1.10	Distribution: Enact MP	3.74	1.16	0.18	65	.8608	.0500	0.62	[0.40, 0.83]
Distribution: Enact EM	3.44	1.02	Distribution: Enact MP	3.74	1.16	-2.89	65	.0052	.0028	0.52	[0.31, 0.74]
Decision: Enact CS	4.05	0.95	Decision: Enact AR	3.21	1.00	7.21	65	<.0001*	.0016	-0.20	[-0.45, 0.04]
Decision: Enact CS	4.05	0.95	Decision: Enact EM	3.39	1.09	5.25	65	<.0001*	.0017	0.39	[0.14, 0.63]
Decision: Enact CS	4.05	0.95	Decision: Enact MP	3.05	0.94	8.42	65	<.0001*	.0016	-0.70	[-0.97, -0.48]
Decision: Enact AR	3.21	1.00	Decision: Enact EM	3.39	1.09	-1.24	65	.2202	.0045	0.61	[0.39, 0.84]
Decision: Enact AR	3.21	1.00	Decision: Enact MP	3.05	0.94	1.43	65	.1587	.0042	-0.65	[-0.88, -0.45]
Decision: Enact EM	3.39	1.09	Decision: Enact MP	3.05	0.94	2.49	65	.0155	.0033	-0.88	[-1.14, -0.67]
Enact CS: Decision	4.05	0.95	Enact CS: Distribution	3.33	1.03	4.14	130	.0001*	.0017	0.73	[0.37, 1.13]
Enact AR: Decision	3.21	1.00	Enact AR: Distribution	3.76	1.10	-2.99	130	.0033	.0024	-0.52	[-0.92, -0.17]
Enact EM: Decision	3.39	1.09	Enact EM: Distribution	3.44	1.02	-0.27	130	.7876	.0102	-0.05	[-0.38, 0.30]
Enact MP: Decision	3.05	0.94	Enact MP: Distribution	3.74	1.16	-3.76	130	.0003*	.0019	-0.67	[-1.07, -0.30]
CS/CS	3.71	1.18	Midrange RMs	3.47	0.90	2.92	131	.0042	.0025	0.26	[0.09, 0.43]
CS/CS	3.71	1.18	EM Conflicts	3.49	0.90	2.64	131	.0093	.0031	0.23	[0.06, 0.40]
Midrange RMs	3.47	0.90	EM Conflicts	3.49	0.90	-0.42	131	.6752	.0085	-0.04	[-0.21, 0.13]

Note. Scores range from 1 (Not at all negative) to 5 (Very negative). CS = Communal Sharing, AR = Authority Ranking, EM = Equality Matching, MP = Market Pricing, RM = Relational Model.
*Familywise $p < .05$ using Rom sequentially rejective test.

General Discussion

Scholarly work on the nature of relational models (Fiske, 1991, 1992; 1993, 1995; Fiske & Haslam, 1996, 1998; Fiske, Haslam, & Fiske, 1991; Haslam, 1994; Haslam & Fiske, 1992) and relational model conflict (Fiske & Tetlock, 1997; Gelfand et al., 1998; Haslam et al., 1998; Tetlock et al., 2000) suggested that people may react more negatively to conflicts in which structures are discordant or incommensurable than when they are concordant. That is, because within-model conflicts share the same logical structure, they should be more comprehensible and less disturbing than between-model conflicts would be. The data in Study 1 showed the opposite pattern, although this resulted from extreme reactions to situations in which communal sharing inclusion was expected and categorical exclusion resulted. As mentioned earlier, this reaction is likely due to the binary nature of the communal sharing/communal sharing conflict; a person who has been excluded from communal sharing may feel that he or she no longer has any relationship at all. With other models, compromise may be possible, as when price is negotiated in market pricing. Communal sharing exclusion, in contrast, is dichotomous: you are in the relationship or you are not. It is no surprise that this would be particularly painful and upsetting. It is, however, somewhat surprising that communal sharing *over*inclusion—that is, including unwanted others in the relationship—would also cause such strong reactions, as was the case in Study 2. It would appear that group boundaries carry particularly strong emotional effects and that people alter those boundaries only at great risk.

Also mentioned earlier, Study 1 showed a special role for equality matching, which may have served as a possible default relational structure. That is, when people find themselves in ambiguous situations, they may be willing to propose equality matching, but readily give it up for another option. Similarly, people may be ready to accept equality matching even though another model was initially proposed. Again, the interpretation of equality matching as a default relational category is consistent with other work on social conflict (e.g., Fisher, Ury, & Patton, 1991; Rubin et al., 1994) that generally finds a strong bias towards equality in negotiating settlements, even when it does not lead to the maximization of personal outcomes.

Why wasn't the incommensurability effect observed in the current studies? The nature of the specific conflicts studied may contain the answer. The incommensurability hypothesis was based on the theoretical work of Fiske and Tetlock (1997), whose taboo tradeoffs often involved dramatic social violations. For example, they discuss the horror people would feel at being asked to sell their children or selling a cemetery to a brothel. Both of these situations represent highly unusual (and illegal) relations. In an empirical verification of the incommensurability hypothesis, Tetlock et al. (2000) also relied on dramatic situations, specifically those involving the death of a child (as a tradeoff for either the life of another child or for hospital funding and equipment). As mentioned earlier, relational models theory does not make any predictions regarding the severity of the conflict, so that should not explain the differences between the results of Tetlock et al. (2000) and the current studies. Another difference between the studies was the typicality of the behaviors. Specifically, the Tetlock studies (as well as the examples in Fiske and Tetlock, 1997) involve very unusual behaviors whereas the current studies involve more common behaviors. The different approaches reflect different emphases: the Tetlock studies demonstrate that the incommensurability effect *can* occur whereas the current study sought to show *when* it occurs. In fact, both studies are incomplete and, ideally, complementary—they each address one side of the severity-of-conflict factor. Further research is needed that can specifically manipulate the severity of the conflict to determine whether this would provide a key in explaining the emergence of the incommensurability effect.

In conclusion, relational models have important effects on interpersonal conflict. Although logical incommensurability does not appear to drive reactions to conflicts, other effects are clear: violations of relational boundaries are particularly painful, and the assumption of strict equality seems widely acceptable. The outcomes of situations and other idiosyncrasies of interactions are not sufficient to explain the full variation in reactions. In addition, the systematic structure of relationships significantly influences whether and to what degree people are satisfied with their social interactions.

References

Anderson, C. A., Anderson, K. B., Dorr, N., DeNeve, K. M., & Flanagan, M. (2000). Temperature and aggression. *Advances in Experimental Social Psychology, 32,* 63-133.

Berkowitz, L., & LePage, A. (1967). Weapons as aggression-eliciting stimuli. *Journal of Personality and Social Psychology, 7,* 202-207.

Blank, S., Seiter, C., & Bruce, P. (2004). Resampling Stats in Excel (Version 3.0) [Computer Software]. Arlington, VA: Resampling Stats, Inc.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

Connelley, D. L. (1997). *Hidden bias: The effect of relational models on assessments of human resource systems in a demographically diverse organization* (Working Paper No. 798). Buffalo, NY: State University of New York at Buffalo, School of Management.

Dollard, J., Doob, L. W., Miller, N. E., Mowrer, O. H., & Sears, R. R. (1939). *Frustration and aggression*. New Haven, CT: Yale University Press.

Festinger, L. (1954). A theory of social comparison processes. *Human Relations, 7*, 117-140.

Fisher, R., Ury, W., & Patton, B. (1991). *Getting to yes: Negotiating agreement without giving in* (2nd ed.). New York: Penguin.

Fiske, A. P. (1991). *Structures of social life: The four elementary forms of human relations*. New York: Free Press.

Fiske, A. P. (1992). The four elementary forms of sociality: Framework for a unified theory of social relations. *Psychological Review, 99*, 689-723.

Fiske, A. P. (1993). Social errors in four cultures: Evidence about universal forms of social relations. *Journal of Cross-Cultural Psychology, 24,* 463-494.

Fiske, A. P. (1995). Social schemata for remembering people: Relationships and person attributes that affect clustering in free recall of acquaintances. *Journal of Quantitative Anthropology, 5*, 305–324.

Fiske, A. P., & Haslam, N. (1996). Social cognition is thinking about relationships. *Current Directions in Psychological Science, 5*, 143-148.

Fiske, A. P., & Haslam, N. (1998). The structure of social substitutions: A test of relational models theory. *European Journal of Social Psychology, 27*, 725–729.

Fiske, A. P., Haslam, N., & Fiske, S. T. (1991). Confusing one person with another: What errors reveal about the elementary forms of social relations. *Journal of Personality and Social Psychology, 60*, 656-674.

Fiske, A. P., & Tetlock, P. E. (1997). Taboo tradeoffs: Reactions to transactions that transgress the spheres of justice. *Political Psychology, 18*, 255-297.

Folger, R., Sheppard, B. H., & Buttram, R. T. (1995). Equity, equality, and need: Three faces of social justice. In B. Benedict & J. Z. Rubin (Eds.), *Conflict, cooperation, and justice: Essays inspired by the work of Morton Deutsch*. San Francisco: Jossey-Bass.

Gelfand, M. J., Dominguez, A., & Nishii, L. (1998). Relational Cognition in Conflict and Negotiation. Presentation at International Association for Conflict Management conference, University of Maryland, June 7-10, 1998.

Haslam, N. (1994). Mental representation of social relationships: Dimensions, laws, or categories? *Journal of Personality and Social Psychology, 67*, 575-584.

Haslam, N., & Fiske, A. P. (1992). Implicit relationship prototypes: Investigating five theories of the cognitive organization of social relationships. *Journal of Experimental Social Psychology, 28*, 441-474.

Haslam, N., Reichert, T., & Fiske, A. P. (1998). Aberrant social relations in the personality disorders. Manuscript under review.

Lind, E. A., & Tyler, T. R. (1988). *The social psychology of procedural justice*. New York: Plenum.

Milgram, S. (1974). *Obedience to authority: An experimental view*. New York: Harper & Row.

Olson, J. J. Herman, C. P., & Zanna, M. P. (Eds.). (1986). *Relative deprivation and social comparison: The Ontario Symposium* (Vol. 4). Hillsdale, NJ: Erlbaum.

Rubin, J. Z., Pruitt, D. G., & Kim, S. H. (1994). *Social conflict: Escalation, stalemate, and settlement* (2nd ed.). New York: McGraw-Hill.

Sherif, M., Harvey, O. J., White, B. J., Hood, W. R., & Sherif, C. W. (1961). *Intergroup conflict and cooperation: The Robber's Cave experiment*. Norman: University of Oklahoma Book Exchange.

Tetlock, P. E., Kristel, O. V., Elson, S. B., Green, M. C., & Lerner, J. (2000). The psychology of the unthinkable: Taboo trade-offs, forbidden base rates, and heretical counterfactuals. *Journal of Personality and Social Psychology, 78*, 853-870.

Thibaut, J., & Kelley, H. H. (1959). *The social psychology of groups*. New York: Wiley.

Thibaut, J., & Walker, L. (1975). *Procedural justice: A psychological analysis*. Hillsdale, NJ: Erlbaum.

Wilcox, R. R. (1996). *Statistics for the social sciences*. San Diego, CA: Academic Press.

Zimbardo, P. G. (1969). The human choice: Individuation, reason, and order versus deindividuation, impulse, and chaos. *Nebraska Symposium on Motivation, 17*, 237-307.