

# Power and Dependence in Intimate Exchange

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## *Abstract*

*A division of labor is mediated by exchange of valued goods and services. We use social exchange theory to extend this principal to “labors of love.” Sexual activity in a close personal relationship seems outside the domain of bargaining and exchange. Nevertheless, we explore the possibility that this most intimate of human relations is influenced by exchange mechanisms. We derive exchange-theoretic predictions about the level of sexual effort and test these using U.S. survey data on sexual behavior. Results provide modest support for the predictions. Sexual favors are reciprocated, and individuals offer greater sexual gratification to partners who are themselves more sexually generous and less emotionally attached. Evidence is inconclusive for the effects of relative income, physical attractiveness and household chores.*

## **The Theory of Social Exchange**

The social division of labor is mediated by exchange, the terms of which reflect relative power. Social exchange theory (Blau 1964; Emerson 1976; Homans 1958) models power in an ongoing relationship as a bargaining process that reflects the relative dependence of the partners. The theory has received widespread empirical support in several domains, including marriage. Although there are numerous exchange-theoretic studies of marital relations, researchers have been understandably reluctant to extend the theory to intimate relations that seem outside the sphere of bargaining and exchange. As Blau (1964:88) warned, “People do things for fear of other men [sic] or for fear of God or for fear of their conscience, and nothing is gained by trying to force such action into a conceptual framework of exchange.” Yet Blau did not regard intimate relations as outside this framework. “Social exchange can be observed everywhere once we are sensitized by this conception to it, not only in market relations but also in friendship and even in love ...” (1964:88) We explore the possibility that this most intimate of human relations is governed by the same exchange mechanisms identified by Blau and elaborated by Emerson.

We begin by briefly outlining the theory of social exchange and reviewing applications of the theory to marital relations. We then propose an exchange-theoretic model of sexual labor, derive predictions about exchange outcomes, and test these hypotheses using survey data. The model predicts greater sexual effort toward partners who are themselves more sexually generous, and who are more desirable, less dependent and who contribute more to the household.

Social exchange differs from economic exchange in three important ways. First, the articles of exchange are not commodities but gifts. No money is involved, nor credit, nor contract. Giving a gift could be seen as a “selfish act of generosity” in that it creates in the

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recipient the need to reciprocate with something that is desired by the giver. Both parties to the exchange "are prone to supply more of their own services to provide incentives for the other to increase his supply." (Blau 1964:89) Simply put, in social exchange theory, a gift is not an expression of altruism, it is a way to exercise power over another.

Second, the terms of exchange are unspecified.<sup>1</sup> One side offers something the other values without knowing how or when the partner will return the favor.

Third, the exchange is not instrumentally calculated. Without a quid pro quo and in the absence of explicit bargaining, one cannot know if the gift is optimal in a given transaction. Instead, optimization takes place on the fly through incremental adjustments to behavior in response to experience. These need not be conscious adjustments but could be experienced merely as feelings of satisfaction or dissatisfaction with the relationship, such that the terms of exchange emerge as a byproduct of a learning process. Each partner evaluates the outcomes from the exchange relative to a comparison level corresponding to what the actor expects to receive from his or her best alternative relationship. When the value falls below this standard, the individual is dissatisfied and seeks alternative partners whose offers are perceived as superior (Thibaut and Kelley 1959). On the other hand, "if the outcomes they are receiving from their current relationship are better than what they expect to receive from their best alternative(s), they will feel dependent on the relationship and become committed to it." (Sprecher 1998:34)

These differences with economic exchange make SET applicable to emotionally-charged behaviors where instrumental manipulation of the partner would ruin the experience for both. Social exchanges can be experienced as acts of generosity toward those we trust. Trust is necessary because of the unspecified terms of exchange. It increases when the generosity is satisfactorily reciprocated and decreases when it is not (Blau 1964:93).

Although social exchange lacks explicit terms of trade, enforceable contracts or a monetary medium, it nevertheless follows a basic principle of economic bargaining over the price of commodities, the "principle of least interest." (Waller 1937; Waller and Hill 1951) This principle predicts that the lower the dependence on the relationship, the greater will be the power. "The party who is receiving the least comparative benefit from a trade has the greater bargaining power to improve upon that trade. If that power is used, as we assume above, then the terms of the trade will shift until power is balanced." (Cook and Emerson 1978:724)

## **From Social to Intimate Exchange**

SET applies to the balancing of power in exchanges between workers, neighbors, friends and business associates. It has also been applied to exchanges between intimate partners. "Whether it is two lovers who share a warm and mutual affection or two corporations who pool resources to generate a new product, the basic form of interaction remains the same," note Lawler and Thye (1999:217). "Two or more actors, each of whom has something of value to the other, decide whether to exchange and in what amounts."

There is a large and growing research literature that has found consistent support for SET predictions for exchange outcomes in intimate relations. Sprecher (1998:32), one of the key contributors to this field, surveys applications of SET to research on "mate selection, relationship formation, and the prediction of relationship dissolution." A central hypothesis is the matching hypothesis (Hatfield et al. 1985; Sprecher and Hatfield 1996; Walster et al. 1966), which states that the more socially desirable a person is, the more socially desirable will (s)he expect a partner to be (Sprecher 1998:35).

In the realm of mate selection, South (1991:928) summarizes a number of studies that demonstrate strong tendencies toward homogamy – the tendency to marry persons close in status (Kalmijn 1998) – based on age (Atkinson and Glass 1985), race and ethnicity (Labov and

Jacobs 1986; Tucker and Mitchell-Kerman 1990), religion (Glenn 1982), education (Rockwell 1976; Schoen and Wooldredge 1989), and occupational status (Morgan 1981). Homophily (Buss 1985; Byrne 1971; Byrne and Nelson 1965; Hoffman and Maier 1966; Rubin 1973) – the principle that “likes attract,” also known as the “law of attraction” – provides a straightforward explanation. A related explanation focuses on the greater opportunities for interaction with those who are less culturally or socially distant (Blau and Schwartz 1984; Kalmijn and Flap 2001). The matching hypothesis suggests an alternative possibility. Homogamy may reflect not a taste for similarity but rather constraints on the ability to attract a partner who has more valued resources. From an exchange-theoretic perspective, romantic relationships are formed through an assortative matching process in which women and men look for the best “catch” (Shibazaki and Brennan 1998).

However, the matching hypothesis does not require a like-kind exchange. Becker’s (1973, 1981) specialization hypothesis, that it is difference rather than similarity in human capital that makes marriage worthwhile, is perfectly compatible with SET. Two complementary resources are exchanged. Using data from the National Survey of Families and Households, South confirms the popular impression that “men place higher value than do women on physical attractiveness and youth, while women are less willing than men to marry someone with low earnings or unstable employment.” (South 1991:928) Sprecher (1998:928) also cites several other studies that indicate that “women’s physical attractiveness is often exchanged for a man’s wealth or social standing (e.g., Elder 1969; Stevens, Owens and Schaefer 1990; Taylor and Glenn 1976; Udry 1977; Udry and Eckland 1984).” However, as women’s socio-economic standing has improved during the second half of the 20<sup>th</sup> century, SET predicts more symmetrical exchanges in current relationships. This trend toward greater symmetry has been noted in a number of studies, both theoretically (Bergstrom and Bagnoli 1993; Oppenheimer 1988; Schoeni 1996) and empirically (Blackwell 1988; Kalmijn 1991; Mare 1991; Sweeney and Cancian 2004).

Although exchange theorists have focused mainly on mate selection, recently attention has shifted to the problem of marital stability, satisfaction and duration (McDonald 1981). Equity theory (Walster [Hatfield] et al. 1978), a variant of SET, suggests the hypothesis that the more equitable the exchange of resources in a relationship, the more stable, satisfying and durable the relationship will be. Various studies document support for the equity hypothesis (Walster [Hatfield], Walster and Traupman 1978; Schaefer and Keith 1980; Traupman et al. 1981; Cate et al. 1982; Davidson 1984; Michaels, Edwards and Acock 1984). While Sprecher finds the predicted effects of equity in three separate studies (1986, 1988, 1992), she notes (1998:34) that the theory overlooks the importance of the comparison level. Comparisons with prospective others are particularly important among young, relatively uncommitted partners. The rewards from the exchange are compared not only to those given to the partner, but also to those that one might receive in an alternative relationship. Relationships are predicted to be stable, satisfactory and durable if rewards in the current relationship are above the ones that one would expect to get in another relationship. According to Sprecher (1998:35), “most researchers examining the degree to which equity forecasts relationship stability have not found it to be a good predictor... On the other hand, absolute reward level, investments, and poor alternatives have been good predictors of relationship longevity.” (e.g., Felmler et al. 1990; Rusbult 1983) Sprecher (2001) reproduces this result for dating couples. Effects of rewards, investments and alternatives on satisfaction and commitment were in the expected direction and generally significant, while results for the effects of inequity were less convincing (Sprecher 2001:606).

SET has also been applied to the exercise of power in the family. The principle of least interest predicts a positive effect of relative socioeconomic position on conjugal power in decision-making (Heer 1963; Rank 1982). For example, Sprecher and Felmler (1997) report

that women with high-paying jobs are less dependent on their husbands and thus have more power in marital exchange than do women without such jobs. Similarly, "being the less emotionally involved partner in the relationship was associated with greater power." (Sprecher and Felmlee 1997:361)

Sprecher (1998) overviews evidence for the operation of exchange mechanisms at three stages of the sexual relationship: the negotiation of the onset of sex, evaluation of sexual satisfaction and decisions about extra-dyadic sex. Walster [Hatfield], Walster and Traupmann (1978) found that undergraduates who had relationships that were perceived as more equitable were more likely to engage in premarital sex. Lawrance and Byers (1992) note that a model of sexual satisfaction "needs to take into account the interpersonal context in which sexual activity occurs... exchange theories offer such an approach." (p. 268) They found sexual satisfaction to be independently related to both *absolute* and *comparative* reward and cost levels and equality in reward.

Sprecher also reports support for SET in studies of extra-dyadic sex (1998: 38). She speculates that "extra-dyadic behavior may be one way in which a partner in an inequitable relationship restores equity to his or her relationship." Both Hatfield et al. (1979) and Prins, Buunk and Van Yperen (1993) find a positive relationship between inequity and desired and actual extra-dyadic involvement, the latter only for women. Rusbult, Drigotas and Verette (1993) find that a constructive response to extra-dyadic sex (i.e., trying to save the relationship) is more likely in the case of greater satisfaction, commitment, investments and poorer alternatives.

### ***Intimate Exchange***

Although support has been found for exchange theory hypotheses about the formation, duration and satisfaction of sexual relationships, one area of intimate exchange that has been largely ignored by SET is the exercise of power in the bedroom. The important exception is Sprecher, who believes "this framework is useful for understanding... which partner has more influence on what sexual activities they do together." (1998:32) And "because most dyadic sex occurs within the context of an emotional relationship in which partners are interdependent at many levels," she continues, "an exchange approach is particularly applicable to the *study of sexual phenomena in close relationships*." (1998:40, emphasis in original)

SET predicts that the exchange of sexual favors will be direct reciprocity or "for other resources in the relationship such as intimacy, love, favors and money." (Sprecher 1998:32) Based on the least-interest principle, "the partner who is more reluctant to have sex has a valued resource – his or her consent to sexual activity. At some point he or she may agree to have sex, and although there may never be any discussion of a 'trade' or an 'exchange,' one or both partners may treat the act as having exchange value. Gifts or special favors may be presented by the person who wants sex more, either before sex occurs (to create a sense of obligation) or after sex begins (as a form of reciprocation)." (Sprecher 1998:36) Sprecher offers an example of a working-class woman interviewed by Lillian Rubin, who appreciated the exchange value of oral sex: "He gets different treats at different times, depending on what he deserves. Sometimes I let him do that oral stuff you're talking about to me. Sometimes when he's very good, I do it to him." (Rubin 1976:207)

More precisely, SET predicts that, all else being equal, sexual effort (defined as the acts aimed at the physical gratification of one's partner) increases with the gratification received from the partner, and with the value of other resources that one's partner brings to the relationship, including contributions to household tasks. Conversely, effort decreases with the value of other resources that one brings to the relationship.

In addition, SET also predicts that sexual effort varies with relative dependence on the partner as a source of valued resources. The greater the relative attraction and attachment to the partner, the greater the partner's power, and thus the greater the sexual effort that must be invested in the partner in order to balance the partner's power.

## Measures and Methods

We tested the SET predictions using data from the Chicago Health and Social Life Survey (CHSL), a retrospective survey ( $N = 2,114$ ) containing detailed questions about past and current sexual relationships and with unique information on sexual activities.<sup>2</sup> The CHSL was conducted between 1995 and 1997 using a stratified random sample of the non-institutionalized Chicago population, composed of five sub-samples on two geographical levels. The greater Chicago sub-sample consists of 890 respondents from Cook County, including the inner suburban ring. Another 1,224 respondents were sampled from four ethnically-targeted neighborhoods within the city of Chicago, each characterized by the dominance of a particular ethnic group. Response rates were 71 percent for the city-level sub-sample and ranged from 60 percent to 78 percent for the neighborhood sub-samples. We tested for neighborhood-level heterogeneity by estimating the model separately for each neighborhood but found no significant neighborhood differences. Therefore we report only the results for the pooled sample.

The survey was executed using Computer Assisted Personal Interview (CAPI) techniques, with responses entered directly into laptop computers. Respondents were surveyed in person by experienced interviewers from the National Opinion Research Center (NORC), who matched respondents on various social attributes such as race and ethnicity, for an interview averaging 90 minutes. Spanish-speaking interviewers were employed so that recent migrants lacking facility in English could be included.

Respondents answered a series of questions concerning their most recent sexual relationships. Table 1 displays the descriptive statistics of the observed variables that we used in the empirical analysis. Sexual effort refers to the willingness to confer physical and sexual pleasure.<sup>3</sup> Respondents were asked to indicate on a scale of 1 (always) to 5 (never) their own and their partner's participation in six sexual activities: active & passive chest/breast stimulation, active & passive manual sex, and active & passive oral sex. The three responses for respondent  $R$ 's participation were standardized and added as a composite measure of  $R$ 's sexual effort ( $\alpha = .69$ ).  $R$ 's three responses for partner  $P$ 's participation were standardized and added as a composite measure of  $P$ 's sexual effort ( $\alpha = .72$ ).<sup>4</sup>

We also included a measure of  $R$ 's desire to please  $P$ , and  $R$ 's desire for  $P$  to please  $R$ . Unfortunately, the survey included only a single activity, oral sex, using two items that asked  $R$  to indicate on a scale of 1 to 4 how appealing they found "performing oral sex on your partner" and "your partner performing oral sex on you."

Attractiveness was measured by responses to the question: "How would you rate your partner in terms of attractiveness compared to other men/women in his/her age group (during the time you were involved with him/her)," on a scale of 1 (very unattractive) to 7 (very attractive). A similar question was asked about  $R$ 's own attractiveness.

Emotional attachment was measured by responses to two related questions: "On a scale of 1 (not at all) to 5 (deeply), how in love is your partner with you?" and a similar question about  $R$ 's love for her or his  $P$ .

We also use measures for the total personal income of last year for both  $R$  and  $P$ . Respondents picked one out of a series of income categories. We constructed two income variables, transforming the mean income value of each category by taking the natural

**Table 1: Mean, Standard Deviation, Minimum, Maximum and Number of Cases for Each Observed Variable**

Variable	Mean	St. Dev.	Minimum	Maximum	N
Dependent					
R's sexual effort <sup>a</sup>	.597	.239	0	1	1,491
Breast/chest stimulation	2.973	1.183	0	4	1,491
Digital sex	2.722	1.206	0	4	1,491
Oral sex	1.466	1.275	0	4	1,491
Independent					
Male	.419	.493	0	1	1,491
Race / ethnicity					
African American	.293	.455	0	1	1,482
Hispanic	.290	.454	0	1	1,482
White	.317	.465	0	1	1,482
Other	.098	.298	0	1	1,482
R's age	35.299	10.270	18	60	1,491
P's age <sup>b</sup>	35.703	10.799	18	72	1,490
R's education	1.973	1.751	0	6	1,491
P's education	2.026	1.755	0	6	1,481
R's church attendance	4.064	2.101	1	8	1,491
R's attraction to P	5.801	1.261	1	7	1,489
P's attraction to R	5.144	1.290	1	7	1,478
R's attachment to P	4.232	1.088	1	5	1,490
P's attachment to R	4.339	1.011	1	5	1,477
R's income	25,803	38,284	2,500	400,000	1,453
P's income	26,181	36,689	0	400,000	1,367
P's sexual effort					
Breast/ chest stimulation	3.029	1.114	0	4	1,491
Digital sex	2.704	1.221	0	4	1,491
Oral sex	1.557	1.287	0	4	1,491
R desires active P	2.975	1.131	1	4	1,473
R enjoys own effort	2.726	1.081	1	4	1,472

logarithm. Note that the difference in standard deviation between the two variables in table 1 is a result of a difference in categorization in the questionnaire.

Respondents were also asked to indicate the weekly hours spent by R and P on seven different household tasks: preparing meals, washing dishes, cleaning the house, outdoor tasks, shopping, washing and ironing, and paying bills. Participation in household tasks was asked only if R and P cohabited at the time of the interview.

We included standard demographic controls for age, gender, ethnicity and education (highest degree). Three ethnic compositions of relationships dominate: both Hispanic (431), both white (470), and both African American (436). We created four race/ethnicity dummy

variables, one for each of the above and one 'other' category (146), which contains mixed race couples and very small minorities such as Asian and Native American couples. We also included a measure of church attendance because religious norms are likely to influence sexual behavior.

This information was available for the two most recent heterosexual<sup>6</sup> relationships that were current at the time of the interview ( $N = 1,491$ ). Our analysis is limited to these observations. The two 'most recent' relationships are those for which the moments of first sexual contact are most recent. A relationship is considered 'current' on the basis of the answer to the question, "Are you still sexually involved with your partner, that is, do you expect to have sex with your partner again?" One hundred fifty-five respondents answered this question affirmatively for *both* their most recent and second most recent sexual relationship. For these respondents, we have two observations.<sup>6</sup> Our estimates are based on the assumption of independence between respondents, but interdependence between multiple observations for a single respondent (Huber 1967). We thus obtained conservative standard errors.

### ***Measurement Validity***

Following the publication of "The Social Organization of Sexuality" (Laumann et al. 1994), based on responses to a survey very similar to the one used in our study, critics scoffed at the ability to study sexual behavior using survey responses (Lewontin 1995). We acknowledge that survey respondents, at best, "tell us the truth as they see it." (John H. Gagnon in Boxer 2000) For example, Table 1 shows that the people of Chicago, like the children of Lake Wobegon, are "all above average" in attractiveness, indicating that respondents have inflated assessments of themselves and their partners.<sup>7</sup> We also recognize the need to confirm survey-based results with in-depth interviews, ethnographic case studies and laboratory experiments that provide measures whose strengths and weaknesses complement those of the survey methods. Nevertheless, we believe much can be learned from survey responses, despite the discrepancies that undoubtedly exist between what respondents report and what they experience.

We base this view on four considerations. First, the theory we are testing is about the effects of *subjective* beliefs, not objective conditions. If  $R$ 's assessments of  $R$ 's and  $P$ 's attractiveness differs systematically from the consensus of third parties, it is not a problem as long as those inflated reports correspond to what  $R$  actually believes. Second, even if respondents intentionally and consciously misrepresent what they believe, these distortions do not necessarily invalidate the results. For example, misrepresentation of attractiveness, sexual effort or emotional attachment does not bias the results if the errors are uncorrelated with the dependent measure, and moreover, the inflated scores impose a ceiling effect that actually makes our estimates conservative. Third, because of the sensitive nature of some of the questions (Laumann et al. 2004:51), special care was taken to ensure response validity, including self-administration of some items and the use of racially matched interviewers. Less than 1 percent of respondents refused to answer the questions about intimate behavior. Fourth, the responses in this survey were in line with those of other surveys (Hamilton 2003).

### **Results**

We present the results in three parts. We begin with the effects of the demographic controls. We then address the two principal SET predictors, direct reciprocity and dependence. Finally, we consider secondary SET predictors (e.g., non-sexual contributions).

Table 2<sup>8</sup> reports unstandardized multivariate regression coefficients for three models of R's sexual effort.<sup>9</sup> Models 1 and 2 are nested. Model 1 includes only demographic measures and factors that are not relevant to SET. Model 2 then adds the SET predictors, except for household effort (which was only asked of cohabiting couples). Both models are estimated for the full sample. Model 3 adds household effort for a sub-sample of cohabiting couples.

**Table 2: Three Regression Models of Respondent's Sexual Effort**

Predictor	Model 1		Model 2		Model 3	
	B	S.E.	B	S.E.	B	S.E.
Male	.0699***	.0128	.0818***	.0103	.0856***	.0140
African-American	-.0819***	.0167	-.0160	.0120	.0006	.0141
Hispanic	-.1213***	.0181	-.0225 <sup>^</sup>	.0134	-.0302*	.0151
Other race / ethnicity	.0097	.0178	.0032	.0132	-.0047	.0174
R's age <sup>a</sup>	-.0011	.0011	.0010	.0008	.0003	.0010
P's age <sup>b</sup>	-.0014	.0011	-.0010	.0008	-.0009	.0010
R's education	.0178***	.0045	.0031	.0034	.0066	.0042
P's education	.0087*	.0042	.0039	.0030	-.0001	.0039
R's church attendance	-.0075*	.0030	-.0017	.0022	-.0016	.0024
P's sexual effort			.5691***	.0225	.5765***	.0261
R's attraction to P			.0062	.0039	.0085 <sup>^</sup>	.0045
P's attraction to R			-.0050	.0038	-.0062	.0041
R's attachment to P			.0234**	.0069	.0167	.0109
P's attachment to R			-.0206**	.0073	-.0145	.0114
R's income (log)			.0050	.0049	.0046	.0057
P's income (log)			.0046**	.0014	.0043*	.0017
R enjoys own effort			.0562***	.0070	.0554***	.0086
R desires active P			-.0023	.0071	-.0092	.0084
R's household effort <sup>c</sup>					-.0003	.0002
P's household effort <sup>c</sup>					.0003	.0002
Constant	.6957***	.0294	.0346	.0529	.0070	.0698
R <sup>2</sup>	.18		.61		.63	
N	1491		1491		946	

Note: (Models 1 and 2 are nested and run on the full sample. Model 1 includes only demographic variables and factors that are not relevant to SET. Model 2 adds the SET variables except household effort. In model 3, measures of household effort are added for a sub-sample of cohabiting couples.)

<sup>a</sup> R = Respondent

<sup>b</sup> P = Partner

<sup>c</sup> Currently cohabiting couples only

<sup>^</sup> p < .10 \*p < .05 \*\*p < .01 \*\*\*p < .001 (based on a two-tailed test)

## Demographic Differences in Sexual Behavior

Model 1 documents demographic differences in sexual behavior, based primarily on gender, ethnicity and education. All else being equal, male respondents report a .07 higher level of sexual effort than females (on a scale of 0, no effort, to 1, maximum effort), while African-Americans (-.08) and Hispanics (-.12) report less sexual effort than do white couples. (See also Laumann et al. 1994.) Sexual effort also increases with R's education (.02) and decreases with religious attendance (-.01). Age negatively affects sexual effort (James 1974; Jasso 1985; Kinsey et al. 1948, 1953; Udry 1979; Udry and Morris 1978; Udry et al. 1982). Due to mild collinearity, the effect of R's age becomes significant when P's age is omitted as predictor.

Except for gender, these demographic differences largely disappear after we take into account the determinants of power as hypothesized by SET. The inability of SET to explain gender differences should not be surprising, given the existence of cultural norms that define gender-appropriate sexual behavior (West and Zimmerman 1987; Ridgeway and Correll 2004). Some of these differences are related to differences in the bargaining power men and women derive from the resources they bring to the relationship.

### *Core SET Predictions: Reciprocity and Dependence*

The core prediction in SET is direct reciprocity, in which effort is rewarded with effort. The results suggest that this principle extends to intimate exchange. The single most important predictor of sexual effort is the effort received (.57,  $p < .001$ ). This means that a 1 point increase in effort by the partner produces a .57 increase in one's own effort.<sup>10</sup> Despite the size and significance of the effect, the evidence is only suggestive. Part of this effect could be spurious for two reasons. First, respondents with inflated or deflated perceptions of the frequencies of P's sexual activities may have similar biases in their self-assessments. Second, respondents may be reluctant to report imbalances in the frequencies of active and passive sexual activities. Future studies could avoid these potential biases by interviewing both partners separately.

Along with R's desire for P's effort, we also included a measure of R's enjoyment of R's own effort. Model 3 shows that R's effort increases with R's intrinsic gratification and decreases with R's lack of enjoyment (.06). This is consistent with the exchange-theoretic prediction that resistance to exchange increases with the cost of the expenditure.

Along with direct reciprocity, a key prediction in SET is the effect of relative dependence on generosity toward the exchange partner. All else being equal, the greater one's dependence on the partner for a valued resource, the more one is willing to exchange in order to obtain it. Results for Models 2 and 3 (in which the effects are somewhat weaker) provide some support for SET. R's attachment to P increases R's sexual effort in Model 2, while P's attachment to R has the opposite effect. The effects are smaller and statistically insignificant in Model 3, which is limited to a sub-sample of cohabitants. The reason for this difference is that virtually all cohabitants indicate that they love their partner a great deal, and that this love is reciprocated, leaving little variation in these two variables.

The effects of attachment also appear to account for much of the effect of physical attraction on sexual effort. The effects of physical attraction are in the right direction, but are too small to rule out random fluctuation as the default explanation. The effects become significant when measures of attachment are excluded from the model, suggesting the possibility that at least some of the effect of physical attraction on effort may be mediated by increased willingness to commit to the relationship.

Although reciprocity and dependence have the greatest weight in theories of social exchange, other valued resources can also indirectly affect exchange outcomes. In intimate

exchange applications, these other resources might include income (which has a long history of exchange for sexual gratification) and other contributions to the household, such as cooking, cleaning and yard work. Results reported in Table 2 show that these secondary factors do have some effect on sexual effort, albeit modest. The effect of *P*'s income is in the predicted direction and strongly significant, while the effect of *R*'s income is in the wrong direction and insignificant. Separate regression models for male and female respondents (not shown in Table 2) reveal that men ( $p < .001$ ) but not women respond to *P*'s income, while women ( $p < .01$ ) but not men respond to *P*'s degree. Neither men's nor women's effort increases with their own income or degree. These findings do not parallel the significant effects of income and education that have been found for the case of household effort as the dependent variable (cf. Bianchi et al. 2000). For the sub-sample of cohabiting couples, these models show a marginally significant ( $p < .1$ ) positive effect of women's income on their sexual effort.

We also found that the effects of household effort by respondent and partner were in the expected directions but the effects were not significant for the sub-sample of cohabiting couples. Decomposing the composite measure of household effort does, however, reveal a significant effect ( $p < .05$ ) for preparing meals, while all other chores had insignificant effects. Apparently, the way to a lover's heart is through his or her stomach.<sup>11</sup>

## Discussion and Conclusion

The division of labor is mediated by exchange of valued resources. This study extends social exchange theory to labors of love. Although this most intimate of human relations seems outside the domain of bargaining and exchange, we find evidence that the most important determinant of sexual effort is effort received, suggesting that intimate exchange is governed by principles of reciprocity similar to those that have been widely observed in kinship, marriage, friendship and work relations.

Social exchange theory also emphasizes the importance of dependence as a determinant of exchange outcomes, and that prediction is also partially supported by this data along with non-sexual contributions to the relationship. Regardless of gender, respondents report greater sexual effort if they are more deeply loved and cook. Evidence regarding the effects of income, physical attractiveness, and household work other than cooking, however, is inconclusive.

The positive effect of women's income on their sexual effort constitutes the only direct violation of SET predictions. This effect may be due to self-selection in which women with more assertive attitudes are more successful in their careers and more active in their intimate relations. An alternative explanation is masculine overcompensation in reaction to an identity threat (Brines 1994; Bittman et al. 2003; Munsch and Willer 2005; Willer 2005).

The support for exchange theoretic predictions should not lead us to downplay the importance of emotional determinants of intimate sexual behavior, just as one would not want to deny the role of emotions in other relations such as work teams. As Thibaut and Kelley (1959) showed, there is no need to assume coldly calculating behavior (although there is also no reason to preclude it). Exchange outcomes can also be obtained through a learning process that converges with the balance point predicted for actors whose choices are strictly governed by instrumental calculation.

Another important determinant of the division of labor in the bedroom is gender. While SET is gender-neutral, some of our effects vary by the gender of the partner. Resources that women and men bring to the relationship may be differently valued by women and men, and gender norms of sexuality (cf. Sanchez, Crocker and Boike 2005) may keep exchange partners from obtaining the full sexual rewards for their resources.

Although the results we report are consistent with SET and with intuitions about the non-instrumentality of sexual behavior, we nevertheless urge caution in generalizing from this

single study. The more private the behavior, the greater the difficulty in making accurate measurements. New surveys need to be conducted, with items constructed to better gauge the full range of manifestations of sexual effort. We also need to replicate these findings using different data collection methods. For example, the quote from Rubin's (1976:207) qualitative study strongly suggests an exchange-theory interpretation of our quantitative findings rather than an interpretation informed by another theoretical framework. While we caution against reading too much into these results, we do hope this study will encourage other researchers to extend social exchange theory from non-sexual marital relations, where it has been widely employed for several decades, to the bedroom, which has remained off limits.

## Notes

1. "Social exchange differs in important ways from strictly economic exchange. The basic and most crucial distinction is that social exchange entails *unspecified* obligations." (Blau 1964:91-2)
2. We did not use data from the National Health and Social Life Survey (NHSLs), the predecessor of the CHSLs, because it does not include questions on sexual effort.
3. Respondents privately answered written questions on the frequencies of sexual practices for themselves; no interviewer saw their answers and respondents were guaranteed the information they provided could not be traced back to them. Less than 1 percent of the respondents refused to answer these questions.
4. Principle Component Analysis reveals a single dimension with all measures scoring positively, accounting for 65 percent of the variance. This supports the validity of our composite measure.
5. Although social exchange theory applies equally to homosexual and heterosexual relationships, there were too few cases ( $N = 92$ ) to establish statistical significance for the predicted effects, but the signs of the effects were identical to those for heterosexual relationships.
6. Results are not qualitatively different if these 310 relationships are omitted.
7. We checked self-reports of attractiveness against an interviewer-reported measure. Although the correlation was statistically significant ( $p < .001$ ), the relationship was not strong ( $r = .108$ ), suggesting that beauty is indeed in the eye of the beholder, especially when looking in the mirror. The interviewer-reported measure was not available for partner attractiveness.
8. Byers, Demmons, & Lawrance (1998) use SET to predict sexual satisfaction within dating relationships as a function of many of the same factors we use to predict sexual effort. We therefore estimated parallel models with sexual satisfaction, rather than sexual effort, as the dependent variable. Results were similar to those reported in Table 2.
9. The dependent variable is ordinal and has a lower and upper bound. We therefore replicated the model using ordered logistic regression and linear regression with a transformed dependent variable. Results were robust across these models.

10. Part of this effect could be spurious, due to reporting bias. First, respondents with inflated (or deflated) perceptions of the frequencies of P's sexual activities may have similar biases in their self-assessments. Second, respondents may be reluctant to report imbalances in the frequencies of active and passive sexual activities. Future research could address these limitations by interviewing couples, to allow an independent measure of the partner's behavior.
11. That cooking is more closely linked to intimate exchange than other household tasks may not be too surprising, given the similarities of physical and emotional gratification involved in both activities, compared to, for example, raking the leaves or paying bills. This is consistent with Blau's (1964) distinction between social and economic exchange and his belief that the articles of social exchange are not commodities but *gifts*, with symbolic meaning to the exchange partners.

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