

A. MEASUREMENT OF ROMANTIC LOVE

Love is generally regarded to be the deepest and most meaningful of sentiments. It has occupied a preeminent position in the art and literature of every age, and it is presumably experienced, at least occasionally, by the vast majority of people. In Western culture, moreover, the association between love and marriage gives it a unique status as a link between the individual and the structure of society.

In view of these considerations, it is surprising to discover that social psychologists have devoted virtually no attention to love. Although interpersonal attraction has been a major focus of social-psychological theory and research, workers in this area have not attempted to conceptualize love as an independent entity. For Heider (1958), for example, "loving" is merely intense liking—there is no discussion of possible qualitative differences between the two. Newcomb (1960) does not include love on his list of the "varieties of interpersonal attraction." Even in experiments directed specifically at "romantic" attraction (e.g., Walster, 1965), the dependent measure is simply a verbal report of "liking."

The present research was predicated on the assumption that love may be independently conceptualized and measured. In keeping with a strategy of construct validation (cf. Cronbach & Meehl, 1955), the attempts to define love, to measure it, and to assess its relationships to other variables are all seen as parts of a single endeavor. An initial assumption in this enterprise is that love is an *attitude* held by a person toward a particular other person, involving predispositions to think, feel, and behave in certain ways toward that other person. This assumption places love in the mainstream of social-psychological approaches to interpersonal attraction, alongside such other

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varieties of attraction as liking, admiration, and respect (cf. Newcomb, 1960).

The view of love as a multifaceted attitude implies a broader perspective than that held by those theorists who view love as an "emotion," a "need," or a set of behaviors. On the other hand, its linkage to a particular target implies a more restricted view than that held by those who regard love as an aspect of the individual's personality or experience which transcends particular persons and situations (e.g., Fromm, 1956). As Orlinsky (1970) has suggested, there may well be important common elements among different varieties of "love" (e.g., filial love, marital love, love of God). The focus of the present research, however, was restricted to *romantic love*, which may be defined simply as love between unmarried opposite-sex peers, of the sort which could possibly lead to marriage.

The research had three major phases. First, a paper-and-pencil love scale was developed. Second, the love scale was employed in a questionnaire study of student dating couples. Third, the predictive validity of the love scale was assessed in a laboratory experiment.

DEVELOPING A LOVE SCALE

The development of a love scale was guided by several considerations:

1. Inasmuch as the content of the scale would constitute the initial conceptual definition of romantic love, its items must be grounded in existing theoretical and popular conceptions of love.

2. Responses to these items, if they are tapping a single underlying attitude, must be highly intercorrelated.

3. In order to establish the discriminant validity (cf. Campbell, 1960) of the love scale, it was constructed in conjunction with a parallel scale of liking. The goal was to develop internally consistent scales of love and of liking which would be conceptually distinct from one another and which would, in practice, be only moderately intercorrelated.

The first step in this procedure was the assembling of a large pool of questionnaire items referring to a respondent's attitude toward a particular other person (the "target person"). Half of these items were suggested by a wide range of speculations about the nature of love (e.g., de Rougemont, 1940; Freud, 1955; Fromm, 1956; Goode, 1959; Slater, 1963). These items referred to physical attraction, idealization, a predisposition to help, the desire to share emotions and experiences, feelings of exclusiveness and absorption, felt affiliative and dependent needs, the holding of ambivalent feelings, and the relative unimportance of universalistic norms in the relationship. The other half of the items were suggested by the existing theoretical and empirical literature on interpersonal attraction (or liking; cf. Lindzey & Byrne, 1968). They included references to the desire to affiliate with the target in various settings, evaluation of the target on several dimensions, the

TABLE 1
Means, Standard Deviations, and Correlations with Total Scale Scores of
Love-Scale and Liking-Scale Items

Love-Scale Items	Women				Men			
	\bar{X}	SD	r^a Love	r Like	\bar{X}	SD	r^a Love	r Like
1. If _____ were feeling badly, my first duty would be to cheer him (her) up.	7.56	1.79	.393	.335	7.28	1.67	.432	.304
2. I feel that I can confide in _____ about virtually everything.	7.77	1.73	.524	.274	7.80	1.65	.425	.408
3. I find it easy to ignore _____'s faults.	5.83	1.90	.184	.436	5.61	2.13	.248	.428
4. I would do almost anything for _____.	7.15	2.03	.630	.341	7.35	1.83	.724	.530
5. I feel very possessive toward _____.	6.26	2.36	.438	-.005	6.24	2.33	.481	.342
6. If I could never be with _____, I would feel miserable.	6.52	2.43	.633	.276	6.58	2.26	.699	.422
7. If I were lonely, my first thought would be to seek _____ out.	7.90	1.72	.555	.204	7.75	1.54	.546	.328
8. One of my primary concerns is _____'s welfare.	7.47	1.62	.606	.218	7.59	1.56	.683	.290
9. I would forgive _____ for practically anything.	6.77	2.03	.551	.185	6.54	2.05	.394	.237
10. I feel responsible for _____'s well-being.	6.35	2.25	.582	.178	6.67	1.88	.548	.307
11. When I am with _____, I spend a good deal of time just looking at him (her).	5.42	2.36	.271	.137	5.94	2.18	.491	.318
12. I would greatly enjoy being confided in by _____.	8.35	1.14	.498	.292	7.88	1.47	.513	.383
13. It would be hard for me to get along without _____.	6.27	2.54	.676	.254	6.19	2.16	.663	.464

Liking-Scale Items	Women				Men			
	\bar{X}	SD	r Love	r^b Like	\bar{X}	SD	r Love	r^b Like
1. When I am with _____, we are almost always in the same mood.	5.51	1.72	.163	.270	5.30	1.77	.235	.294
2. I think _____ is unusually well-adjusted.	6.36	2.07	.093	.452	6.04	1.98	.339	.610
3. I would highly recommend _____ for a responsible job.	7.87	1.77	.199	.370	7.90	1.55	.281	.422
4. In my opinion, _____ is an exceptionally mature person.	6.72	1.93	.190	.559	6.40	2.00	.372	.609
5. I have great confidence in _____'s good judgment.	7.37	1.59	.310	.538	6.68	1.80	.381	.562
6. Most people would react very favorably to _____ after a brief acquaintance.	7.08	2.00	.167	.366	7.32	1.73	.202	.287
7. I think that _____ and I are quite similar to each other.	6.12	2.24	.292	.410	5.94	2.14	.407	.417
8. I would vote for _____ in a class or group election.	7.29	2.00	.057	.381	6.28	2.36	.299	.297
9. I think that _____ is one of those people who quickly wins respect.	7.11	1.67	.182	.588	6.71	1.69	.370	.669
10. I feel that _____ is an extremely intelligent person.	8.04	1.42	.193	.155	7.48	1.50	.377	.415
11. _____ is one of the most likable people I know.	6.99	1.98	.346	.402	7.33	1.63	.438	.514
12. _____ is the sort of person whom I myself would like to be.	5.50	2.00	.253	.340	4.71	2.26	.417	.552
13. It seems to me that it is very easy for _____ to gain admiration.	6.71	1.87	.176	.528	6.53	1.64	.345	.519

Note: Based on responses of 158 couples. Scores on individual items can range from 1 to 9, with 9 always indicating the positive end of the continuum.

^aCorrelation between item and love scale total *minus that item*.

^bCorrelation between item and liking scale total *minus that item*.

saliency of norms of responsibility and equity, feelings of respect and trust, and the perception that the target is similar to oneself.

① To provide some degree of consensual validation for this initial categorization of items, two successive panels of student and faculty judges sorted the items into love and liking categories, relying simply on their personal understanding of the connotations of the two labels. Following this screening procedure, a revised set of 70 items was administered to 198 introductory psychology students during their regular class sessions. Each respondent completed the items with reference to his girlfriend or boyfriend (if he had one), and also with reference to a nonromantically viewed "platonic friend" of the opposite sex. The scales of love and of liking which were employed in the subsequent phases of the research were arrived at through factor analyses of these responses. Two separate factor analyses were performed—one for responses with reference to boyfriends and girlfriends (or "lovers") and one for responses with reference to platonic friends. In each case, there was a general factor accounting for a large proportion of the total variance. The items loading highest on this general factor, particularly for lovers, were almost exclusively those which had previously been categorized as love items. These high-loading items defined the more circumscribed conception of love adopted. The items forming the liking scale were based on those which loaded highly on the second factor with respect to platonic friends. Details of the scale development procedure are reported in Rubin (1969, Ch. 2).

The items forming the love and liking scales are listed in Table 1. Although it was constructed in such a way as to be factorially unitary, the content of the love scale points to three major components of romantic love:

1. *Affiliative and dependent need*—for example, "If I could never be with _____, I would feel miserable"; "It would be hard for me to get along without _____."

2. *Predisposition to help*—for example, "If _____ were feeling badly, my first duty would be to cheer him (her) up"; "I would do almost anything for _____."

3. *Exclusiveness and absorption*—for example, "I feel very possessive toward _____"; "I feel that I can confide in _____ about virtually everything."

The emerging conception of romantic love, as defined by the content of the scale, has an eclectic flavor. The affiliative and dependent need component evokes both Freud's (1955) view of love as sublimated sexuality and Harlow's (1958) equation of love with attachment behavior. The predisposition to help is congruent with Fromm's (1956) analysis of the components of love, which he identifies as care, responsibility, respect, and knowledge. Absorption in a single other person is the aspect of love which is pointed to most directly by Slater's (1963) analysis of the social-structural implications of dyadic intimacy. The conception of liking, as defined by the liking-scale

items, includes components of favorable evaluation and respect for the target person, as well as the perception that the target is similar to oneself. It is in reasonably close accord with measures of "attraction" employed in previous research (cf. Lindzey & Byrne, 1968).

QUESTIONNAIRE STUDY

The 13-item love and liking scales, with their component items interspersed, were included in a questionnaire administered in October 1968 to 158 dating (but nonengaged) couples at the University of Michigan, recruited by means of posters and newspaper ads. In addition to the love and liking scales, completed first with respect to one's dating partner and later with respect to a close, same-sex friend, the questionnaire contained several personality scales and requests for background information about the dating relationship. Each partner completed the questionnaire individually and was paid \$1 for taking part. The modal couple consisted of a junior man and a sophomore or junior woman who had been dating for about 1 year.

Each item on the love and liking scales was responded to on a continuum ranging from "Not at all true; disagree completely" (scored as 1) to "Definitely true; agree completely" (scored as 9), and total scale scores were computed by summing scores on individual items. Table 1 presents the mean scores and standard deviations for the items, together with the correlations between individual items and total scale scores. In several cases an inappropriate pattern of correlations was obtained, such as a love item correlating more highly with the total liking score than with the total love score (minus that item). These inappropriate patterns suggest specific revisions for future versions of the scales. On the whole, however, the pattern of correlations was appropriate. The love scale had high internal consistency (coefficient alpha was .84 for women and .86 for men)¹ and, as desired, was only moderately correlated with the liking scale ($r = .39$ for women and $.60$ for men). The finding that love and liking were more highly correlated among men than among women ($z = 2.48, p < .02$) was unexpected. It provides at least suggestive support for the notion that women discriminate more sharply between the two sentiments than men do (cf. Banta & Hetherington, 1963).

Table 2 reveals that the love scores of men (for their girlfriends) and women (for their boyfriends) were almost identical. Women *liked* their boyfriends somewhat more than they were liked in return, however ($t = 2.95, df = 157, p < .01$). Inspection of the item means in Table 1 indicates that this sex difference may be attributed to the higher ratings given by women to their boyfriends on such "task-related" dimensions as intelligence, good judgment, and leadership potential. To the extent that these items accurately represent the construct of liking, men may indeed tend to be more "likable"

1. Coefficient alpha of the liking scale was .81 for women and .83 for men.

(but not more "lovable") than women. Table 2 also reveals, however, that there was no such sex difference with respect to the respondents' liking for their same-sex friends. The mean liking-for-friend scores for the two sexes were virtually identical. Thus, the data do not support the conclusion that men are generally more likable than women, but only that they are liked more in the context of the dating relationship.

Table 2 also indicates that women tended to love their same-sex friends more than men did ($t = 5.33$, $df = 314$, $p < .01$). This result is in accord with cultural stereotypes concerning male and female friendships. It is more socially acceptable for female than for male friends to speak of themselves as "loving" one another, and it has been reported that women tend to confide in same-sex friends more than men do (Jourard & Lasakow, 1958). Finally, the means presented in Table 2 show that whereas both women and men liked their dating partners only slightly more than they liked their same-sex friends, they loved their dating partners much more than their friends.

TABLE 2
Love and Liking for Dating Partners and Same-Sex Friends

Index	Women		Men	
	\bar{X}	SD	\bar{X}	SD
Love for partner	89.46	15.54	89.37	15.16
Liking for partner	88.48	13.40	84.65	13.81
Love for friend	65.27	17.84	55.07	16.08
Liking for friend	80.47	16.47	79.10	18.07

Note: Based on responses of 158 couples.

TABLE 3
Intercorrelations among Indexes of Attraction

Index	1	2	3	4
Women				
1. Love for partner				
2. Liking for partner .....	.39			
3. "In love" ^a .....	.59	.28		
4. Marriage probability ^b .....	.59	.32	.65	
5. Dating length ^c .....	.16	.01	.27	.46
Men				
1. Love for partner				
2. Liking for partner .....	.60			
3. "In love" ^a .....	.52	.35		
4. Marriage probability ^b .....	.59	.35	.62	
5. Dating length ^c .....	.04	-.03	.22	.38

Note: Based on responses of 158 couples. With an N of 158, a correlation of .16 is significant at the .05 level and a correlation of .21 is significant at the .01 level (two-tailed values).

^aResponses to question, "Would you say that you and _____ are in love?", scored on a 3-point scale ("No" = 0, "Uncertain" = 1, "Yes" = 2).

^bResponses to question, "What is your best estimate of the likelihood that you and _____ will marry one another?" Scale ranges from 0 (0%-10% probability) to 9 (91%-100% probability).

^cThe correlation across couples between the two partners' reports of the length of time they had been dating (in months) was .967. In this table, "dating length" was arbitrarily equated with the woman's estimates.

Further insight into the conceptual distinction between love and liking may be derived from the correlational results presented in Table 3. As expected, love scores were highly correlated both with respondents' reports of whether or not they were "in love" and with their estimates of the likelihood that they would marry their current dating partners. Liking scores were only moderately correlated with these indexes.

Although love scores were highly related to perceived marriage probability, these variables may be distinguished from one another on empirical as well as conceptual grounds. As Table 3 indicates, the length of time that the couple had been dating was unrelated to love scores among men, and only slightly related among women. In contrast, the respondents' perceptions of their closeness to marriage were significantly correlated with length of dating among both men and women. These results are in keeping with the common observations that although love may develop rather quickly, progress toward marriage typically occurs only over a longer period of time.

The construct validity of the love scale was further attested to by the findings that love for one's dating partner was only slightly correlated with love for one's same-sex friend ($r = .18$ for women, and $r = .15$ for men) and was uncorrelated with scores on the Marlowe-Crowne Social Desirability Scale ($r = .01$ for both women and men). These findings are consistent with the assumption that the love scale was tapping an attitude toward a specific other person, rather than more general interpersonal orientations or response tendencies. Finally, the love scores of the two partners tended to be moderately symmetrical. The correlation across couples between the woman's and the man's love was .42. The corresponding intracouple correlation with respect to liking was somewhat lower ($r = .28$). With respect to the partners' estimates of the probability of marriage, on the other hand, the intracouple correlation was considerably higher ($r = .68$).

LABORATORY EXPERIMENT: LOVE AND GAZING

Although the questionnaire results provided evidence for the construct validity of the emerging conception of romantic love, it remained to be determined whether love-scale scores could be used to predict behavior outside the realm of questionnaire responses. The notion that romantic love includes a component of exclusiveness and absorption led to the prediction that in an unstructured laboratory situation, dating partners who loved each other a great deal would gaze into one another's eyes more than would partners who loved each other to a lesser degree.

The test of the prediction involved a comparison between "strong-love" and "weak-love" couples, as categorized by their scores on the love scale. To control for the possibility that "strong" and "weak" lovers differ from one another in their more general interpersonal orientations, additional groups were included in which subjects were paired with opposite-sex strangers. The

love scores of subjects in these "apart" groups were equated with those of the subjects who were paired with their own dating partners (the "together" groups). In contrast to the prediction for the together groups, no difference in the amount of eye contact engaged in by the strong-apart and weak-apart groups was expected.

METHOD

Subjects

Two pools of subjects were established from among the couples who completed the questionnaire. Those couples in which both partners scored above the median on the love scale (92 or higher) were designated strong-love couples, and those in which both partners scored below the median were designated weak-love couples. Couples in which one partner scored above and the other below the median were not included in the experiment. Within each of the two pools, the couples were divided into two subgroups with approximately equal love scores. One subgroup in each pool was randomly designated as a together group, the other as an apart group. Subjects in the together group were invited to take part in the experiment together with their boyfriends or girlfriends. Subjects in the apart groups were requested to appear at the experimental session individually, where they would be paired with other people's boyfriends or girlfriends. Pairings in the apart conditions were made on the basis of scheduling convenience, with the additional guideline that women should not be paired with men who were younger than themselves. In this way, four experimental groups were created: strong together (19 pairs), weak together (19 pairs), strong apart (21 pairs), and weak apart (20 pairs). Only 5 of the couples contacted (not included in the above cell sizes) refused to participate—2 who had been preassigned to the strong together group, 2 to the weak together group, and 1 to the strong apart group. No changes in the preassignment of subjects to groups were requested or permitted. As desired, none of the pairs of subjects created in the apart groups were previously acquainted. Each subject was paid \$1.25 for his participation.

Sessions

When both members of a scheduled pair had arrived at the laboratory, they were seated across a 52-inch table from one another in an observation room. The experimenter, a male graduate student, explained that the experiment was part of a study of communication among dating and unacquainted couples. The subjects were then asked to read a paragraph about "a couple contemplating marriage" (one of the "choice situations" developed by Wallach & Kogan, 1959). They were told that they would

subsequently discuss the case, and that their discussion would be tape recorded. The experimenter told the pair that it would take a few minutes for him to set up the tape recorder, and that meanwhile they could talk about anything except the case to be discussed. He then left the room. After 1 minute had elapsed (to allow the subjects to adapt themselves to the situation), their visual behavior was observed for a 3-minute period.²

Measurement

The subjects' visual behavior was recorded by two observers stationed behind a one-way mirror, one facing each subject. Each observer pressed a button, which was connected to a cumulative clock, whenever the subject he was watching was looking across the table at his partner's face. The readings on these clocks provided measures of *individual gazing*. In addition, a third clock was activated whenever the two observers were pressing their buttons simultaneously. The reading on this clock provided a measure of *mutual gazing*. The mean percentage of agreement between pairs of observers in 12 reliability trials, interspersed among the experimental sessions, was 92.8. The observers never knew whether a pair of subjects was in a strong-love or weak-love group. They were sometimes able to infer whether the pair was in the together or the apart condition, however. Each observer's assignment alternated between watching the woman and watching the man in successive sessions.

TABLE 4
Mutual Gazing (in seconds)

Group	n	\bar{X}	SD
Strong together	19	56.2	17.1
Weak together	18 ^a	44.7	25.0
Strong apart	21	46.7	29.6
Weak apart	20	40.0	17.5

^aBecause of an equipment failure, the mutual-gazing measure was not obtained for one couple in the weak-together group.

RESULTS

Table 4 reveals that, as predicted, there was a tendency for strong-together couples to engage in more mutual gazing (or "eye contact") than weak-together couples ($t = 1.52$, $p < .07$, one-tailed). Although there was also a tendency for strong-apart couples to make more eye contact than weak-apart couples, it was not a reliable one ($t = .92$).

2. Visual behavior was also observed during a subsequent 3-minute discussion period. The results for this period, which differed from those for the prediscussion waiting period, are reported in Rubin (1969, Ch. 5).

Another approach toward assessing the couples' visual behavior is to consider the percentage of "total gazing" time (i.e., the amount of time during which at least one of the partners was looking at the other) which was occupied by mutual gazing. This measure, to be referred to as *mutual focus*, differs from mutual gazing in that it specifically takes into account the individual gazing tendencies of the two partners. It is possible, for example, that neither member of a particular pair gazed very much at his partner, but that when they did gaze, they did so simultaneously. Such a pair would have a low mutual gazing score, but a high mutual focus score. Within certain limits, the converse of this situation is also possible. Using this measure (see Table 5), the difference between the strong-together and the weak-together groups was more striking than it was in the case of mutual gazing ($t = 2.31$, $p < .02$, one-tailed). The difference between the strong-apart and weak-apart groups was clearly not significant ($t = .72$).

Finally, the individual gazing scores of subjects in the four experimental groups are presented in Table 6. The only significant finding was that in all groups, the women spent much more time looking at the men than the men spent looking at the women ($F = 15.38$, $df = 1/150$, $p < .01$). Although there was a tendency for strong-together subjects of both sexes to look at their partners more than weak-together subjects, these comparisons did not approach significance.

DISCUSSION

The main prediction of the experiment was confirmed. Couples who were strongly in love, as categorized by their scores on the love scale, spent

TABLE 5
Mutual Focus

Group	<i>n</i>	\bar{X}	<i>SD</i>
Strong together	19	44.0	9.8
Weak together	18	34.7	14.0
Strong apart	21	35.3	14.6
Weak apart	20	32.5	9.4

Note: Mutual focus = $100 \times \frac{\text{Mutual gazing}}{\text{woman's nonmutual gazing} + \text{man's nonmutual gazing} + \text{mutual gazing}}$

TABLE 6
Individual Gazing (in seconds)

Group	Women			Men		
	<i>n</i>	\bar{X}	<i>SD</i>	<i>n</i>	\bar{X}	<i>SD</i>
Strong together	19	98.7	23.2	19	83.7	20.2
Weak together	19	87.4	30.4	19	77.7	33.1
Strong apart	21	94.5	39.7	21	75.0	39.3
Weak apart	20	96.8	27.8	20	64.0	25.2

more time gazing into one another's eyes than did couples who were only weakly in love. With respect to the measure of individual gazing, however, the tendency for strong-together subjects to devote more time than the weak-together subjects to looking at their partners was not substantial for either women or men. This finding suggests that the obtained difference in mutual gazing between these two groups must be attributed to differences in the *simultaneousness*, rather than in the sheer quantity, of gazing. This conclusion is bolstered by the fact that the clearest difference between the strong-together and weak-together groups emerged on the percentage measure of mutual focus.

This pattern of results is in accord with the assumption that gazing is a manifestation of the exclusive and absorptive component of romantic love. Freud (1955) maintained that "The more [two people] are in love, the more completely they suffice for each other [p. 140]." More recently, Slater (1963) has linked Freud's theory of love to the popular concept of "the oblivious lovers, who are all wrapped up in each other, and somewhat careless of their social obligations [p. 349]." One way in which this oblivious absorption may be manifested is through eye contact. As the popular song has it, "Millions of people go by, but they all disappear from view—'cause I only have eyes for you."

Another possible explanation for the findings is that people who are in love (or who complete attitude scales in such a way as to indicate that they are in love) are also the sort of people who are most predisposed to make eye contact with others, regardless of whether or not those others are the people they are in love with. The inclusion of the apart groups helped to rule out this possibility, however. Although there was a slight tendency for strong-apart couples to engage in more eye contact than weak-apart couples (see Table 5), it fell far short of significance. Moreover, when the percentage measure of mutual focus was employed (see Table 6), this difference virtually disappeared. It should be noted that no predictions were made concerning the comparisons between strong-together and strong-apart couples or between weak-together and weak-apart couples. It seemed plausible that unacquainted couples might make use of a relatively large amount of eye contact as a means of getting acquainted. The results indicate, in fact, that subjects in the apart groups typically engaged in as much eye contact as those in the weak-together group, with the strong-together subjects outgazing the other three groups. Future studies which systematically vary the extent to which partners are acquainted would be useful in specifying the acquaintance-seeking functions of eye contact.

The finding that in all experimental groups, women spent more time looking at men than vice versa may reflect the frequently reported tendency of women to specialize in the "social-emotional" aspects of interaction (e.g., Strodbeck & Mann, 1956). Gazing may serve as a vehicle of emotional expression for women and, in addition, may allow women to obtain cues

from their male partners concerning the appropriateness of their behavior. The present result is in accord with earlier findings that women tend to make more eye contact than men in same-sex groups (Exline, 1963) and in an interview situation, regardless of the sex of the interviewer (Exline, Gray, & Schuette, 1965).

CONCLUSION

"So far as love or affection is concerned," Harlow wrote in 1958, "psychologists have failed in their mission. The little we know about love does not transcend simple observation, and the little we write about it has been written better by poets and novelists [p. 673]." The research reported in this paper represents an attempt to improve this situation by introducing and validating a preliminary social-psychological conception of romantic love. A distinction was drawn between love and liking, and its reasonableness was attested to by the results of the questionnaire study. It was found, for example, that respondents' estimates of the likelihood that they would marry their partners were more highly related to their love than to their liking for their partners. In light of the culturally prescribed association between love and marriage (but not necessarily between liking and marriage), this pattern of correlations seems appropriate. Other findings of the questionnaire study, to be reported elsewhere, point to the value of a measurable construct of romantic love as a link between the individual and social-structural levels of analysis of social behavior.

Although the present investigation was aimed at developing a unitary conception of romantic love, a promising direction for future research is the attempt to distinguish among patterns of romantic love relationships. One theoretical basis for such distinctions is the nature of the interpersonal rewards exchanged between partners (cf. Wright, 1969). The attitudes and behaviors of romantic love may differ, for example, depending on whether the most salient rewards exchanged are those of security or those of stimulation (cf. Maslow's discussion of "Deficiency Love" and "Being Love," 1955). Some of the behavioral variables which might be focused on in the attempt to distinguish among such patterns are in the areas of sexual behavior, helping, and self-disclosure.

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B. ON STUDYING LOVE: NOTES ON THE RESEARCHER- SUBJECT RELATIONSHIP

When I first set out to study romantic love, it was still an unconventional object of study. But I chose this topic of investigation for largely conventional reasons. First, it was time for me to do my doctoral dissertation in social psychology, and so I had to find *something* to study. Second, love was *there*, like Mount Everest, shimmering in the distance, of obvious importance to the human experience, and yet almost completely untouched by nonpoetic human hands. Almost everyone embarking upon a doctoral dissertation searches for such an unspoiled, virgin subject. Third, romantic love seemed a particularly appropriate *social-psychological* topic. In my view, social psychology is not a subarea of psychology or of sociology, but rather the interface between the two—it deals with the links between the individual and his social environment. Love seemed to be one such link. It is simultaneously an element of individual experience and an ingredient and reflection of social structure. Especially in the context of the interdisciplinary doctoral program I was in (run jointly by the departments of psychology and sociology at the University of Michigan), I was eager to bridge these two levels of analysis.

Of course, there were some less conventional reasons as well. An important influence on the development of my interests in graduate school was Professor Theodore Newcomb. Newcomb had, some 15 years earlier, conducted an investigation which did much to pave the way for the scientific study of positive sentiments. Gordon Allport had observed, with special reference to the period between 1920 and 1950, that "Psychologists, in their research and in their theory, devote far more attention to aggressive, hostile, prejudiced behavior than to the softer acts of sympathy and love, which are equally important ingredients of social life" (Allport, 1968, p. 2). He suggested that social scientists, in their attempts to deal with pressing social problems, had indulged in a "flight from tenderness." Ted Newcomb helped to bring this flight back to earth. His pioneering study of the process of friendship formation was conducted in the mid-1950s, using a real boarding-house at the University of Michigan as his laboratory (Newcomb, 1961). This study helped to trigger a tremendous flood of research on the bases of interpersonal attraction.¹ Extending such research to romantic love was another

Source: Prepared especially for this volume.

1. For recent reviews of research in this area, see Berscheid and Walster (1969), Rubin (1973), and Huston (1974).

step in the direction Newcomb had taken. Throughout my research endeavor, from initial planning to final writeups, Newcomb, as my dissertation committee chairman, was an invaluable source of counsel, encouragement, and criticism.

All of the reasons I have listed so far represent what attribution theorists would call *situational* rather than *dispositional* explanations of my decision to study love. That is, they refer to aspects of the situation in which I found myself, rather than to personal dispositions or intentions residing uniquely in me. Edward Jones and Richard Nisbett (1972) suggest that it is hard for actors to recognize the internal causes of their own behavior, preferring instead to ascribe things to external factors. But if I try hard to take an outside observer's point of view, I can find a dispositional cause as well. I am, by temperament and avocation, a songwriter. Songwriters traditionally put love into measures. I set out to measure love. I think there may be a connection.

In further considering the process of studying love, I would like to focus on a single set of issues that may be of some wider interest both to researchers and to their subjects. The issues concern my relations with the subjects of my research.

**ONLY DATING COUPLES CAN DO IT!
—GAIN INSIGHT INTO YOUR RELATIONSHIP
BY PARTICIPATING IN A UNIQUE
SOCIAL-PSYCHOLOGICAL STUDY
. . . AND GET PAID FOR IT TOO!!**

• Who can participate? .

All Michigan student couples (heterosexual only) who are dating regularly, going together, or engaged. (Married couples are not eligible.)

• What do you have to do?

Simply show up with your boyfriend or girlfriend at one of the times and places listed. You will be asked to fill out a confidential questionnaire, and each of you will be paid \$1 for the one-hour session.

• Then what?

All those who fill out the questionnaire will have a chance to be selected as subjects for a subsequent experiment, which (if you agree to participate) should be both exciting and lucrative.

**BOTH MEMBERS OF A COUPLE MUST TAKE PART
TUESDAY, OCTOBER 29, 7:30 PM—AUDITORIUM C
WEDNESDAY, OCTOBER 30, 7:30 PM—AUDITORIUM C**

Recruiting dating couples for a study of their relationship proved to be easier than I had anticipated. My limited budget permitted me to pay each participant only \$1 for the initial questionnaire session. To induce couples to take part in spite of this low hourly wage, I launched a saturation campaign of posters and campus newspaper advertisements like the one in the accompanying illustration.

My advertising campaign was highly successful. On each of the two evenings, long lines of couples started forming outside Auditorium C by 7:00. By 7:30 they were snaking around the lobby of the auditorium complex, outdoing even the most popular features of the student cinema league. Approximately 400 couples showed up to take part. I had prepared questionnaires for about 180 couples, thinking this would be sufficient for the maximum conceivable turnout. As a result, each evening I had to make profuse apologies and send about 100 couples home. Although I do not have conclusive evidence on this, I do not think it was the \$1 inducement that motivated most of the couples to participate. Nor do I think that the key factor was my flamboyant rhetoric, traceable in part to my college summer as a Madison Avenue copywriter. Except perhaps for one line: *Gain insight into your relationship*. People are interested in coming to a better understanding of their relationships with others, especially relationships that may still be in their relatively uncertain, formative stages. They may be willing—and, in my experience, often eager—to take part in research as one approach toward such understanding.

This hope for self-understanding leads to a central question concerning my relations with my subjects: Did the study live up to its billing? Did the subjects in fact come away from their participation with increased insight into their relationship? Not all of them did. As part of a mail follow-up study I conducted six months after the initial questionnaire sessions, I solicited the subjects' reactions to their participation. In at least one or two cases, subjects were disappointed that they did not learn more about their relationship as a result of their participation. One woman wrote, for example:

Our participation had no effects on the relationship. I wanted to talk about it afterward but he refused to tell me anything he'd said or to listen to anything I had thought or felt about it. Not that I really had all that much to say. I was first interested in the questionnaire in the hope that it would give me some greater insight into our relationship, especially where my own, often ambiguous feelings were concerned. This did not occur. The questions seemed very matter of fact, external, etc. The objectives of the author of the test being different from my own as the taker of the test (or questionnaire), this is not too surprising.

I must agree with this subject's perception that my motives as investigator were different from hers, and probably from those of most other subjects as well. My primary motive was to develop a conceptual definition and measure of love, rather than to reveal anything to my subjects about their relationships. I was conducting basic research, whereas at least some of the

subjects may have been interested in more immediate applications. Nevertheless, a sizable number of the subjects indicated that they *had* learned something about their relationships by virtue of their participation. For example:

Mr. Rubin, when we got out of your experiment, we started comparing answers, or those which we could remember. We found out what we felt we knew before, but what you reinforced . . . that we *knew* each other.

The only comment I have is that your study raised a lot of questions which Tim and I then discussed and we probably would not have talked about these otherwise. It also raised the question of whether we would marry and we are now talking about getting married at the end of next summer.

Your questionnaire enabled my boyfriend and I to analyze our feelings about marriage. I have a very negative attitude toward marriage as a suburban, middle-class, split-level, station wagon, 2-3 kid institution and cannot envision myself in such a set-up. So I do not plan to marry unless I can work out a suitable arrangement. The subject of marriage had never come up between us before and it was definitely worth discussing, since we have rather disparate views to that subject on the original survey.

We are living together in Berkeley, California. The experiment really made me think about the strength and motivation behind the relationship. Love & peace from sunny California.

The effect of such increased understanding, when it emerged, was not necessarily to strengthen the couples' relationships. In at least several cases participation in the study brought central conflicts to the surface and thus precipitated a weakening of the couple's tie. The general impression conveyed by several subjects' comments was that participation caused an acceleration of movement either toward or away from a permanent relationship that otherwise would have taken place over a longer period of time. "Your study was not the initial cause of the breakup," one respondent wrote, "just a little pusher. . . ."

If we acknowledge that completing a questionnaire about one's relationship can in some cases have a real impact upon the relationship, several new questions emerge. Can an investigator presume to intervene in people's relationships in this way, in the name of his research enterprise? Can we assume that subjects were fully aware of the possible impact of participation on their relationships? And if they were not, has the investigator violated the basic principle that he must obtain the *informed* consent of his subjects before commencing the research? These are ethical questions of considerable importance, and in the case of my initial study I am not certain of the answers to them. In my more recent research I have taken care to inform prospective subjects of possible effects and risks in advance of their actual participation. In practice, I have found that this information rarely if ever surprises or dissuades prospective subjects. Nevertheless, such a briefing seems a necessary ethical precaution.

As already suggested by these issues, the researcher-subject relationship

is a fundamentally *asymmetrical* one.² Whereas the subjects provide to the researcher a great deal of personal information about themselves, the researcher gives them rather little in return, beyond a token monetary payment. In defiance of the generally held norm that self-disclosure should be reciprocal (Rubin, 1974), the researcher almost never reveals to the subject more than the most superficial sort of information about himself. And even though subjects may often desire specific feedback on their performance, the researcher rarely provides any. Many of my subjects, for example, may have entertained such questions as "Are we right for one another?" But they were never given any answers to such questions. Indeed, at the present stage of our knowledge about close relationships, the answers to such questions are far from certain. Thus, any attempt by the researcher to give his subjects a diagnosis of their relationship would run the risk of having an entirely unwarranted impact. The net result, however, was that my subjects gave me a great deal more information than I gave them.

My relationship to the subjects in this study was also quite *impersonal*. I had begun work on developing the love and liking scales in May 1968, administered the questionnaire to the sample of dating couples in October, and conducted the laboratory sessions in November and December. During this time I rarely interacted with subjects in ways that were not directly related to the tasks at hand, such as answering routine questions about the meaning of particular questionnaire items or scheduling laboratory sessions on the phone. During the first four months of 1969 I devoted myself to analyzing the large mass of data I had collected. In the process, I completely lost touch with the people who had provided the data in the first place. Symbolically they were close at hand in the form of identification numbers, love and liking scores, clock readings, and other such relics. But I almost never saw or spoke to any of them, nor have I since that time. (One exception was the student who appeared in my office early in 1969 and asked to see his girlfriend's questionnaire. He became rather upset when I told him that in accord with the guarantee of confidentiality I had given when the couples filled out the questionnaire, he could not see her responses.)

So we have a paradox. The researcher sets out to study relationships that are typically symmetrical and personal, and he does so in the context of a relationship that is asymmetrical and impersonal. The paradox is not, of course, peculiar to my study. It is characteristic of a great deal of social and psychological research. What I am describing is not an altogether undesirable state of affairs. Much important information about love may best be obtained in an impersonal atmosphere which stresses objectivity and anonymity. Just as people are sometimes able to disclose most about themselves to a passing stranger whom they know they will never see again

2. For a thoughtful discussion of the researcher-subject relationship, including consideration of ways to make it more symmetrical, see Kelman (1972).

(Rubin, 1974), subjects may be able to reveal most about their relationships to an impersonal researcher who will never again cross their path.

I do confess to some misgivings about the impersonal researcher-subject relationship, however. In my more recent research I have supplemented questionnaires with intensive interviews and find that these more personal (though still asymmetrical) encounters provide invaluable information which could not be gained through questionnaires. I have also made efforts to explain to subjects the goals and initial results of our research, in postsession face-to-face discussions as well as in written research bulletins. I have tried to be approachable, and subjects have taken the opportunity to call me to ask questions about the research or even to seek help with personal problems. Further efforts to personalize the researcher-subject relationship without sacrificing scientific rigor seem desirable. The basic goal here is not researcher-subject equality, intimacy, or chumminess, but rather the establishment of mutual trust and respect.³ The subject should know enough about the researcher's goals to be convinced of their legitimacy and should be assured of his candor, honesty, and willingness to entertain questions or complaints. It seems to me that such trust and respect, as facilitated by two-way communication between researcher and subject, makes for both satisfied subjects and good research. In the long run it may help all of us "gain insight into our relationships."

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3. For elaboration of these ideas, see Rubin, Z. & Mitchell, Cynthia (1976).