

# MULTIDIMENSIONAL JEALOUSY

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Three studies were conducted to investigate the psychometric properties of the newly developed multidimensional jealousy scale (MJS), which provides separate assessments of cognitive, emotional and behavioural jealousy. Good reliability and validity data were obtained for the scale. It has high internal consistency, as well as a clear factor structure. The three components of jealousy correlate with established jealousy scales. The results also show that emotional jealousy is positively related to love, while cognitive jealousy is negatively related to love. All three components are negatively related to liking. Emotional and behavioural jealousy are negatively related to happiness. Thus, both convergent and discriminant validity are established. The MJS is useful in providing a clearer picture of the relationships between the components of jealousy and various psychological variables than traditional unidimensional measures of jealousy. Practical implications of the scale in detecting pathological jealousy are discussed.

Romantic jealousy is an important phenomenon which has only been experimentally investigated for the past 15 years. Aronson & Pines (1980) note a wide range of distressing events associated with jealousy, such as wife-battering, depression, suicide attempts and marital problems. Buunk & Bringle (1987) characterize jealousy as one of the most prevalent and potentially destructive emotions within love relationships. Thus, the study of jealousy has broad implications.

Although recent studies (Bringle et al., 1983; Radecki Bush et al., 1988) have involved the experimental induction of jealousy using imagery tasks, the majority of the research conducted on the

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construct has employed any number of jealousy scales to examine antecedent conditions and correlates (Bringle et al., 1983; Bringle & Williams, 1979; Buunk, 1982; Shettel-Neuber et al., 1978; White, 1984). Several questionnaires have been constructed to quantify the overall amount of jealousy experienced by a person (Bringle et al., 1979; Mathes & Severa, 1981; Rusch & Hupka, 1977; White, 1981a, b, c, d). However, little work has been conducted in the area of theoretical and empirical analysis of the qualitatively different aspects of the jealousy experience itself.

Jealousy has been described by Clanton & Smith (1977) as a 'Rorschach term' which evokes a wide variety of images and associations to different people. This holds true for researchers as well as laypeople. According to Mazur (1977), the word jealousy bears the burden of too many meanings and there is much semantic confusion surrounding its usage. Perhaps a better understanding of jealousy may be gained if the different aspects of the experience are identified and measured. The studies reported here are attempts to achieve this objective.

What constitutes romantic jealousy? The most popular conception is that it is primarily an emotional reaction (Bringle & Williams, 1979; Mathes & Severa, 1981). Most researchers believe that jealousy is not a single emotion, but a combination of negative emotions (Bringle & Buunk, 1985; Bringle & Williams, 1979; Buunk & Bringle, 1987; Clanton & Smith, 1977; Hatfield & Walster, 1977; Hupka, 1981). Some people might react with anger, while others may experience hurt feelings, for example.

Although individual differences exist in the combinations of emotions which constitute jealousy (Adams, 1980; Bringle & Williams, 1979; Constantine & Constantine, 1974), these different combinations can all be labelled as 'jealousy'. The important criterion in labelling is that a situation be perceived by the subject as threatening to a valued romantic relationship (Hupka, 1981). Therefore, any emotional reaction to this threat can be labelled a jealous reaction. It is for this reason that many researchers use the general term 'upset' when assessing various emotional reactions to jealousy provoking situations (Bringle et al., 1979).

The concept of jealousy as an emotional reaction has been expanded by White (1981a, b, c, d, 1984). According to his conceptual analysis, jealousy is composed of three components: thoughts, feelings and coping behaviours. White theorizes that the cognitive component of jealousy occurs when the person becomes aware of a

threat to a valued romantic relationship. Negative emotions follow the realization of such a threat and finally the individual engages in coping strategies designed to deal with the threats, thereby reducing the negative emotional component. Thus, White follows the position advanced by Lazarus (1984) that cognitive appraisal triggers emotional reactions, which in turn evoke coping behaviours.

Although we concur with White that jealousy is multidimensional, our theory concerning the nature of the underlying components is somewhat different (see Figure 1). White's theory is primarily a rational model: jealous emotions always follow cognitive appraisal of threat. Our theory, on the other hand, goes beyond this rational emphasis, and encompasses elements that appear to be irrational.

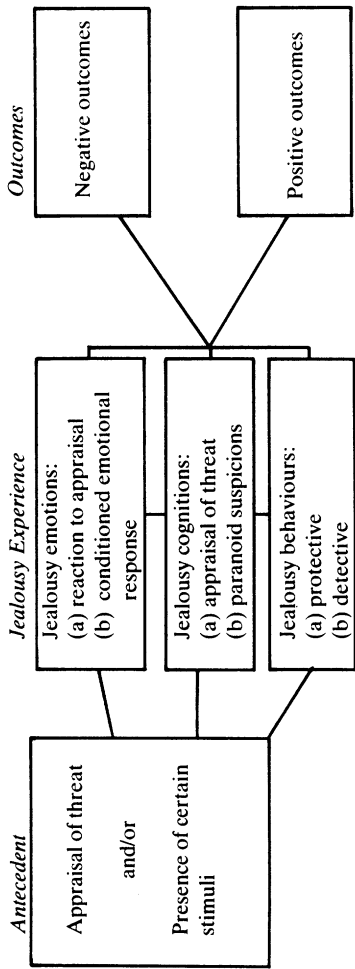
While we believe that in most cases, emotion *does* follow cognitive appraisal, our theory also encompasses the position that jealous emotion may occur as a conditioned response to certain stimuli. For example, a divorced woman may still feel the pangs of jealousy at the sight of her ex-husband with another woman, even though she repeatedly tells herself that she is now happily remarried and has no intention of going back with her ex-husband. In this case, the feelings of jealousy occur in the absence of perceived threat to a relationship. The notion that emotion is primary and that it can take place without cognitive mediation has been proposed by Zajonc (1980).

Secondly, with respect to cognitive jealousy, White emphasizes the appraisal of an actual situation, whereas we emphasize the subject's paranoid *worries and suspicions* concerning his or her partner's infidelity. These suspicions do not have to follow the appraisal of threat; it is possible for one to dream up 'out of thin air' the existence of relationship rivals.

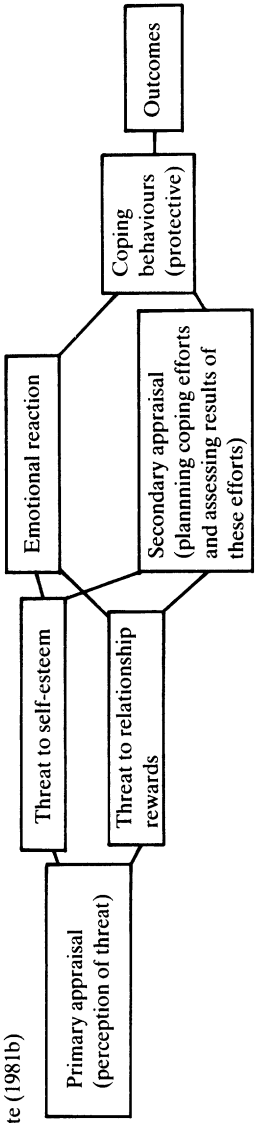
Thirdly, although White conceptualizes jealous behaviours as the cognitive and behavioural strategies used to cope with emotional upset, we conceptualize behaviours as the *detective/protective* measures a person takes when relationship rivals (real or imaginary) are perceived. Detective actions include questioning, checking up on the partner and searching the partner's belongings. Protective strategies typically consist of some kind of intervention to ensure that intimacy between the partner and a relationship rival does not occur. They may take the form of derogation of the rival, or introjecting oneself between the partner and a rival when the two are engaged in a conversation.

**FIGURE 1**  
A comparison of two models of jealousy

Pfeiffer & Wong 1989



White (1981b)



Finally, our theory differs from that of White in that, while he conceptualizes jealousy as a sequential process of cognitions to emotions to behaviours, ours is a parallel interactive model. We believe that cognitions, emotions and behaviours can occur simultaneously, and that these components can interact with one another.

Each of the components of jealousy in our model may encompass pathological as well as normal jealousy. Normal jealousy follows the appraisal of a real threat and involves some degree of emotional upset, as well as protective behaviours designed to maintain the relationship in the face of threat. Pathological jealousy, on the other hand, might involve imagined threats, paranoid suspicions, a high degree of emotional upset and/or detective behaviours designed to check up on the suspected partner. This concurs with the reasoning of Mullen & Maack (1985) who propose that pathologies of jealousy may involve delusional thinking, feelings of an abnormal intensity and/or extensive checking up on and questioning of the partner.

Pathological jealousy may lead to a variety of negative outcomes. For instance, one may begin to dislike the partner for evoking such a negative reaction. One may become unhappy and, if the jealousy is extreme, the relationship itself may be put in jeopardy. One may even be driven to violence, as in the morbidly jealous murderers described by Mowat (1966).

Normal jealousy may have either positive or negative consequences depending upon its frequency. A small degree of normal jealousy may actually improve relations between the partners if it is perceived as an indication of caring. It may lead to increased attraction for the partner, if she or he is perceived to be desirable to rivals. However, a high frequency of normal jealousy, where one partner is constantly flirting with rivals may indeed have similar negative consequences to those evoked by pathological jealousy.

While many existing scales tap normal jealousy, a multidimensional scale would best assess pathological jealousy in addition to normal. Such an instrument which provides separate assessments of each of the three components would allow researchers to look into the interrelationships between components as well as their relationships with correlates of jealousy.

The scale might also help to clarify some of the inconsistent findings which emerge using unidimensional scales of jealousy. For instance, although Mathes & Severa (1981) and White (1984) found jealousy to be positively related to love, Mathes et al (1982) found

no correlation between love and five out of six measures of jealousy. Perhaps only certain aspects of jealousy are related to love; something unidimensional measures cannot tap.

Although White conceptualizes jealousy in terms of the three separate components, he has not yet developed an instrument to provide separate assessments of them. The two jealousy scales constructed by White (1981a, b, c, d) ask subjects to indicate the extent to which they experience 'jealousy' without specifying any dimensions.

Bringle & Buunk (1985) and White (1984) have suggested that when a detailed analysis of jealous responses is desired, a scale with specific cognitive, emotional and behavioural dimensions should be used. The present paper introduces the multidimensional jealousy scale (MJS) which has been developed for the purpose of providing separate assessments of the three dimensions of jealousy.

### **The Multidimensional Jealousy Scale (MJS)**

Six psychology students enrolled in a Research Methodology course together with the authors of this paper spent several brain-storming sessions generating items that describe cognitive, emotional and behavioural jealousy based on the theoretical orientation described above. An item was retained only when all eight judges reached a consensus that it was representative of the dimension it was purported to measure. Eight items were included per subscale to ensure an adequate sample of items for each dimension. The resulting scale is shown in Table 1.

A seven-point rating scale was provided for each item. The cognitive and behavioural subscales ranged from 1 (never) to 7 (all the time), while the emotional subscale ranged from 1 (very pleased) to 7 (very upset). The rating scale for the cognitive component was reversed in order to control for the response-aquiescence bias.

Cognitions are assessed by asking the subject how often he or she has various suspicions concerning his or her partner and a rival. For instance, the subject may think about his or her partner becoming interested in a rival, or a rival trying to win the attentions of the partner. Thus, this subscale is designed to measure an integral component of pathological jealousy.

Using the same approach as Bringle et al. (1979), emotional jealousy is assessed by asking subjects how 'upset' they would feel in response to various hypothetical jealousy-evoking situations. Finally, the behavioural jealousy scale asks subjects how often they engage in various detective behaviours (e.g. going through a partner's belongings) and protective behaviours (e.g. verbal attack of potential relationship rivals). A low score on any subscale indicates normal jealousy, while a high score is indicative of pathological jealousy.

### *Study one*

The purpose of this study was to examine the internal consistency, test-retest reliability and factor structure of the MJS.

**TABLE 1**  
**Multidimensional jealousy scale**

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*Cognitive:*

How often do you have the following thoughts about X?

1. I suspect that X is secretly seeing someone of the opposite sex.
2. I am worried that some member of the opposite sex may be chasing after X.
3. I suspect that X may be attracted to someone else.
4. I suspect that X may be physically intimate with another member of the opposite sex behind my back.
5. I think that some members of the opposite sex may be romantically interested in X.
6. I am worried that someone of the opposite sex is trying to seduce X.
7. I think that X is secretly developing an intimate relationship with someone of the opposite sex.
8. I suspect that X is crazy about members of the opposite sex.

*Emotional:*

How would you emotionally react to the following situations?

1. X comments to you on how great looking a particular member of the opposite sex is.
2. X shows a great deal of interest or excitement in talking to someone of the opposite sex.
3. X smiles in a very friendly manner to someone of the opposite sex.
4. A member of the opposite sex is trying to get close to X all the time.
5. X is flirting with someone of the opposite sex.
6. Someone of the opposite sex is dating X.
7. X hugs and kisses someone of the opposite sex.
8. X works very closely with a member of the opposite sex (in school or office).

*Behavioural:*

How often do you engage in the following behaviours?

1. I look through X's drawers, handbag, or pockets.
  2. I call X unexpectedly, just to see if he or she is there.
  3. I question X about previous or present romantic relationships.
  4. I say something nasty about someone of the opposite sex if X shows an interest in that person.
  5. I question X about his or her telephone calls.
  6. I question X about his or her whereabouts.
  7. I join in whenever I see X talking to a member of the opposite sex.
  8. I pay X a surprise visit just to see who is with him or her.
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One hundred and seventy eight subjects ranging in age from 19 to 88 years were recruited for this study. Their mean age was 44.83 years, and their median age, 40.5 years. There were 87 males and 91 females. Such a broad sample was selected so that the results would be generalizable beyond young adults to the wider population. Most subjects were connected in some way with an educational setting: many of the younger subjects were enrolled in an introductory psychology course, while the middle-aged subjects were largely professors and the elderly were enrolled in university or general interest courses. Subjects were approached either in person by one of the experimenters, or through the mail. When solicited through the mail, subjects were provided with stamped envelopes in which to return the questionnaire.

Subjects were asked to think of a person with whom they were having, or had had in the recent past, a strong romantic relationship. This person was referred to as X in the remaining questions. Subjects completed the questionnaire in their own time and anonymously returned it to the experimenters. Those enrolled in the introductory psychology course received extra credit for participating, while the remaining subjects were not reimbursed for their time. A subsample of 30 subjects completed the

MJS again one to two months later, so that the experimenters could test the stability of the scale.

**Results.** Each subscale of the MJS was computed separately, to yield three individual scores. All items in each subscale were retained because of the high item-total correlations (all higher than 0.60). The reliability of the MJS was computed by means of Cronbach's alpha. The cognitive, emotional and behavioural subscales reached alphas of 0.92, 0.85 and 0.89 respectively. The stability of the subscales was assessed by correlating the scores at Time One with those at Time Two, using Pearson's correlation coefficients. The cognitive subscale at Times One and Two was significantly correlated ( $r=0.75$ ,  $p < 0.001$ ), as were the emotional ( $r=0.82$ ,  $p < 0.001$ ) and behavioural ( $r=0.34$ ,  $p < 0.05$ ) subscales. *T*-tests for the difference between dependent correlations showed that the behavioural correlation was smaller than the cognitive  $t=2.72$ ,  $d.f.=1,27$ ,  $p < 0.01$  or the emotional  $t=3.12$ ,  $d.f.=1,27$ ,  $p < 0.01$  correlations, perhaps suggesting that this aspect is more situationally influenced than the others.

Principal components factor analysis using Varimax rotation revealed three factors with eigenvalues of 7.95, 3.27 and 2.82 respectively. The first factor (cognitive) accounted for 33.1 per cent of the variance, the second factor (behavioural) accounted for 13.6 per cent of the variance and the third factor (emotional) accounted for 11.7 per cent of the variance. All items were loaded in the appropriate theoretically derived subscale and no items had shared loadings. The resulting factor structure is presented in Table 2.

Pearson's correlations were performed on the three subscales. Cognitive jealousy was moderately correlated with emotional ( $r=0.31$ ,  $p < 0.001$ ) and behavioural ( $r=0.37$ ,  $p < 0.001$ ) jealousy, and emotional and behavioural jealousy were also moderately correlated ( $r=0.34$ ,  $p < 0.001$ ).

**Discussion.** The results of this preliminary study provide evidence for the internal consistency of the MJS, as shown by the high alphas. The clean factor structure indicates that the scale does indeed measure three separate dimensions. The finding that the subscales are only moderately correlated with one another further corroborates the fact that separate dimensions are being measured. Finally, the subscales are also relatively consistent over a one to two month interval.

These results demonstrate that the MJS, designed to measure the three dimensions of jealousy, has good reliability and a clear factor structure. The moderate correlations among the factors suggest that jealousy is indeed a combination of interrelated but separate cognitions, emotions and behaviours. Perhaps these components are differentially related to other constructs. The next study will investigate the validity of the MJS.

### *Study two*

The purpose of this study was to examine multidimensional jealousy in the context of a number of potentially related constructs, such as love, happiness and depression, in order to test the validity of the MJS.

Jealousy has long been thought to be an aspect of romantic love. Berscheid & Fei (1977) theorize that a sense of psychological dependence grows with romantic love. The more deeply two partners become involved with each other, the more they have to lose should the relationship fail. Therefore, the more emotional upset they should express in hypothetical or real situations that threaten their love bond. Mathes & Severa (1981) and White (1984), using unidimensional jealousy scales, indeed found



**TABLE 2**  
**Factor structures of the MJS**

	Study 1			Study 2			Study 3		
	Factor Loadings*			Factor Loadings*			Factor Loadings*		
	1	2	3	1	2	3	1	2	3
Cog 1	<b>0.80</b>	0.15	0.15	<b>0.87</b>	0.19	0.10	<b>0.80</b>	0.32	0.03
Cog 2	<b>0.79</b>	0.18	0.26	<b>0.70</b>	0.12	0.24	<b>0.72</b>	0.25	0.23
Cog 3	<b>0.77</b>	0.16	0.25	<b>0.84</b>	0.12	0.02	<b>0.80</b>	0.15	-0.03
Cog 4	<b>0.83</b>	0.13	-0.01	<b>0.78</b>	0.03	0.04	<b>0.85</b>	0.20	0.19
Cog 5	<b>0.70</b>	0.09	0.08	<b>0.62</b>	-0.02	0.05	<b>0.70</b>	0.11	0.10
Cog 6	<b>0.81</b>	0.18	0.14	<b>0.77</b>	0.10	-0.01	<b>0.84</b>	0.11	0.11
Cog 7	<b>0.82</b>	0.10	0.02	<b>0.85</b>	0.08	0.01	<b>0.85</b>	0.21	0.15
Cog 8	<b>0.68</b>	0.08	0.03	<b>0.61</b>	0.25	-0.10	<b>0.56</b>	0.16	-0.02
Emo 1	0.23	0.06	<b>0.70</b>	0.14	0.28	<b>0.61</b>	0.35	0.20	<b>0.57</b>
Emo 2	0.36	0.09	<b>0.70</b>	0.10	0.16	<b>0.83</b>	0.22	0.18	<b>0.67</b>
Emo 3	0.22	0.10	<b>0.67</b>	0.14	0.16	<b>0.63</b>	0.23	0.09	<b>0.76</b>
Emo 4	0.07	0.22	<b>0.72</b>	0.03	0.22	<b>0.75</b>	0.03	0.14	<b>0.74</b>
Emo 5	0.09	0.13	<b>0.77</b>	0.01	0.16	<b>0.74</b>	0.03	0.00	<b>0.73</b>
Emo 6	-0.22	0.15	<b>0.56</b>	-0.17	0.04	<b>0.53</b>	-0.14	-0.05	<b>0.55</b>
Emo 7	0.06	0.03	<b>0.76</b>	0.01	0.01	<b>0.64</b>	0.06	0.10	<b>0.68</b>
Emo 8	0.05	0.10	<b>0.56</b>	0.09	0.18	<b>0.61</b>	0.31	0.37	<b>0.34</b>
Beh 1	-0.13	<b>0.72</b>	0.04	0.04	<b>0.51</b>	0.17	-0.04	<b>0.77</b>	0.21
Beh 2	0.26	<b>0.75</b>	0.08	0.32	<b>0.76</b>	0.09	0.11	<b>0.83</b>	0.05
Beh 3	0.30	<b>0.60</b>	0.14	0.13	<b>0.62</b>	0.27	0.40	<b>0.60</b>	0.14
Beh 4	0.21	<b>0.73</b>	0.21	0.12	<b>0.78</b>	0.27	0.35	<b>0.67</b>	0.25
Beh 5	0.03	<b>0.84</b>	0.11	0.11	<b>0.81</b>	0.14	0.25	<b>0.78</b>	0.07
Beh 6	0.17	<b>0.73</b>	0.23	-0.01	<b>0.71</b>	0.21	0.19	<b>0.76</b>	0.07
Beh 7	0.07	<b>0.61</b>	0.09	0.02	<b>0.58</b>	-0.05	0.17	<b>0.71</b>	0.04
Beh 8	0.30	<b>0.79</b>	0.08	0.14	<b>0.68</b>	0.18	0.28	<b>0.79</b>	0.05

*Note:* Loadings > 0.40 are in bold type

positive but small correlations between love and jealousy. It is hypothesized that love and emotional jealousy will be positively related to each other in this study. Behavioural and cognitive jealousy, which primarily reflect distrust, are not expected to be positively correlated with love.

Another potential correlate of jealousy which merits investigation is liking. Rubin (1970) conceptualizes liking as the favorable evaluation of, and respect for another person, as well as the perception that the other is similar to oneself. These attitudes are closely akin to friendship. Rubin's conception of love, on the other hand, consists of affiliative and dependent need, exclusiveness and absorption, and a predisposition to help. The characteristics of love (specifically the first two which involve dependency and exclusivity) make it likely that this construct will be related to jealousy in a different way from that in which liking is related to jealousy.

Mathes & Severa (1981) found no relationship between liking and jealousy in dating couples. However, it would seem plausible that jealousy (a negative experience) should be related to decreased liking for the partner, since we dislike those

who cause us pain. Love, however, may not be affected — Hatfield & Walster (1981) noted that one can love one's partner without liking him or her. Thus, it is hypothesized that liking will be negatively related to all three components of jealousy. We will like those less who cause us to be suspicious and to engage in detective behaviours, and those who cause us emotional pain.

Research has shown that those people reporting high incidences of jealousy express more unhappiness with their lives than do those reporting less jealousy (Aronson & Pines, 1980). To further investigate this finding, the present study employs the MUNSH — Memorial University of Newfoundland Scale of Happiness (Kozma & Stones, 1980). Because the components of jealousy are negative experiences, it is predicted that all three subscales of the MJS will be negatively related to happiness. Finally, WRJS — White's Relationship Jealousy Scale (White, 1981c) — was employed in an effort to test the convergent validity of the MJS.

*Method.* One hundred and twenty-three subjects were recruited for this study, ranging in age from 18 to 50 years. The mean age was 30.08 and the median, 27 years. There were 65 females and 58 males. Most subjects were enrolled in summer university courses, although some were approached in the surrounding community.

Five scales were utilized in this study: the MJS, Rubin's Love and Liking scales, the MUNSH and WRJS. Preliminary data in Study One indicate that the MJS is reliable, and this study attempts to replicate that reliability and the factor structure, as well as providing evidence of validity. Rubin's Love and Liking scales have been widely used throughout the literature. They are psychometrically reliable, and show convergent and discriminant validity with a wide variety of external measures (Rubin, 1970).

The MUNSH deals with both the past months of a subject's life and his or her more general life experiences. The authors of the scale have demonstrated its reliability and validity in a number of studies (Kozma & Stones, 1980; 1983a, Kozma et al., 1985) and the results indicate that the scale measures trait or dispositional happiness.

Finally, WRJS (White, 1981c) is a brief quantitative measure of the jealousy in a specific love relationship. WRJS asks subjects directly about the degree of 'jealousy' experienced, rather than presenting subjects with hypothetical situations. The scale has been shown to be internally consistent (White, 1981c) and to correlate moderately to highly with other measures of jealousy (Mathes et al., 1982; White, 1984).

*Procedure.* The scales were randomly arranged and compiled into packages such that each contained the MJS, Rubin's Love and Liking scales and the MUNSH. A subsample of 59 subjects received WRJS in addition to the other scales. Subjects were instructed that the study dealt with different aspects of romantic relationships. They were to think of someone with whom they had had, or were having, a strong romantic relationship and to answer the questions with regard to this person. Subjects completed the package in their own time and anonymously returned it to the experimenters.

*Results.* Cronbach's alphas of the MJS again revealed good internal consistency. The cognitive, emotional and behavioural subscales had alphas of 0.89, 0.83 and 0.86 respectively. Principal components factor analysis using Varimax rotation replicated the factor structures found in Study One. The first factor, accounting for 28.7 per cent of the variance was a cognitive factor; the second factor, which accounted for 16.2 per cent of the variance was a behavioural factor, and the third factor, accounting for 9.4 per cent of the variance was an emotional factor (see Table 2). The eigenvalues of the three factors were 6.89, 3.89 and 2.25 respectively.

Pearson's correlation coefficients revealed several significant *rs* (see Table 3). Cognitions and emotions were both related to behaviours and their relationship to one another approached significance ( $r=0.14$ ,  $p=0.06$ ). The three subscales of the MJS each correlated significantly with WRJS.

**TABLE 3**  
**Correlation coefficients involving jealousy, love, liking and happiness for study two**

	Cog	Emo	Beh	MUNSH	Rubin Love	Rubin Like	WRJS
Cog		0.14	0.30***	-0.08	-0.20**	-0.37***	0.38**
Emo			0.42***	-0.24**	0.20**	-0.15*	0.53***
Beh				-0.17*	-0.06	-0.43***	0.56***
MUNSH					-0.02	0.26**	-0.03
R. Love						0.45***	-0.09
R. Like							-0.30**

\*  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$

Emotional and behavioural jealousy were negatively related to the MUNSH. Cognitive jealousy was negatively related to love, while love and emotional jealousy were positively related. All three components of the MJS were negatively related to liking, as was WRJS.

*Discussion.* This study replicates the internal consistency and factor structure of the MJS found in Study One. Given the moderate correlations between the three subscales, and the stability of the factor structure across different samples, there is convincing evidence that the MJS indeed measures three orthogonal dimensions.

All three components were correlated significantly with WRJS, providing evidence of concurrent validity. WRJS has been shown to be a valid measure of jealousy which correlates with other jealousy scales (Mathes et al., 1982; White, 1984).

The components of jealousy show different patterns of correlations with the remaining variables of interest, providing evidence of discriminant validity. Emotional jealousy is negatively related to happiness, replicating the finding of Aronson & Pines (1980). Behavioural jealousy is also negatively related to happiness. This provides evidence of the concurrent validity of the MJS. Happiness, however, is not related to cognitive jealousy.

The subscales of the MJS are related somewhat differently to loving. Emotional jealousy is positively related to love, as was found by Mathes & Severa (1981) and White (1984). The more one loves one's partner, the more upset one will become in response to various jealousy-evoking situations. This fits into the theoretical model of Berscheid & Fei (1977): as one loves one's partner more strongly, one invests more in the relationship and will be more likely to show jealous reactions should it be threatened.

Cognitive jealousy, on the other hand, is negatively related to love. To the authors' knowledge, no study has examined the relationship between jealous suspicions and love. The present study indicates that the more 'in love' a person is, the less likely it is that he or she will have suspicious thoughts concerning his or her partner

and a romantic rival. Jealous behaviours, however, are not related to love. The differential correlates between love and the subscales of the MJS provide evidence of the discriminant validity of the MJS. This finding also argues for the advantages of the MJS over unidimensional measures of jealousy.

Although Mathes & Severa (1981) found no relationship between liking and jealousy using their Interpersonal Relationship Scale and Rubin's Liking Scale, WRJS and each of the components of jealousy are negatively related to liking in this study. The more cognitive, emotional and behavioural jealousy one experiences, the less one will like one's partner for causing these negative reactions. The reasons for the discrepancy between the Mathes & Severa study and the present findings should be pursued in further research.

The present study provides support for both the reliability and the validity of the MJS. The scale correlates with a previously established scale, but is more sensitive than the unidimensional measure in tapping the relationship between the different components of jealousy with other variables. In fact, our findings indicate that the underlying components are differentially related to love, liking and happiness.

### *Study three*

This study further investigates the psychometric properties of the MJS. Bringle et al.'s (1979) Self Report Jealousy Scale—Sexual (SRJS—S) is employed to provide additional convergent validity data on the MJS. The SRJS—S presents subjects with a number of hypothetical situations and asks them to gauge their upset according to their likely feelings if confronted with these situations in their own lives. Because the SRJS primarily measures jealous feelings, it is predicted that emotional jealousy will correlate more strongly with the SRJS—S than will cognitive or behavioural jealousy. Finally, the alpha and factor structure of the MJS are examined once more, using a new sample of subjects.

*Method.* Seventy-six subjects took part in this study, of whom 37 were male and 39 were female. Subjects ranged in age from 19 to 58, with a mean age of 26.85 years and a median age of 22.0 years. As in the previous two studies, subjects were volunteers recruited from a university campus and the surrounding community.

The package given to all subjects consisted of the MJS and the SRJS—S. The package contained a cover page identical to those used in the previous two studies, instructing subjects to respond to all questions concerning one recent strong romantic relationship. Subjects completed the questionnaires in their own time and anonymously returned them to the experimenters.

*Results.* Cronbach's alphas were again performed on the subscales of the MJS. The cognitive component had an alpha of 0.91, the emotional component an alpha of 0.82 and the behavioural component reached an alpha of 0.90. Principal components factor analysis using Varimax rotation revealed three factors with eigenvalues of 8.70, 2.87 and 2.62. The cognitive factor accounted for 36.3 per cent of the variance, the behavioural factor for 12.0 per cent and the emotional factor for 10.9 per cent (see Table 2).

Each of the components of the MJS correlated moderately with the others. The cognitive — emotional correlation was 0.34 ( $p < 0.01$ ), the emotional — behavioural correlation was 0.35 ( $p < 0.01$ ) and the cognitive — behavioural correlation was 0.50 ( $p < 0.001$ ). The SRJS—S correlated significantly with cognitive jealousy ( $r = 0.27$ ,  $p < 0.01$ ), with emotional jealousy ( $r = 0.74$ ,  $p < 0.001$ ) and with behavioural jealousy ( $r = 0.52$ ;  $p < 0.001$ ). The SRJS—S correlated more strongly with emotional

jealousy than with cognitive  $t=5.20$ , d.f.=73,  $p < 0.001$  or behavioural  $t=2.69$ , d.f.=73,  $p < 0.01$  jealousy, as indicated by  $t$ -tests for differences between dependent correlations.

*Discussions.* This study provides further evidence of both the reliability and the validity of the MJS. A high degree of internal consistency was once again demonstrated. The moderate correlations between the three subscales and the stability of the factor structure again indicate that the MJS measures three dimensions. The significant correlations between the SRJS-S and the subscales of the MJS provide further support for the convergent validity of the MJS. Finally, the significantly different magnitudes of these correlations provide evidence of discriminant validity.

## General discussion

Since none of the available jealousy scales provides separate measures of all three components of jealousy, we have developed a Multidimensional Jealousy Scale. Factor analysis and Cronbach's alphas provide compelling evidence that the three factors are stable and internally consistent. The subscales also appear to be stable across a one to two month period of time. Significant correlations with other jealousy scales demonstrate the convergent validity of the MJS. The components of jealousy are differentially related to love, liking and happiness, demonstrating the discriminant validity of the MJS.

Each of the studies reported here used both those presently involved in relationships and those describing terminated relationships. One reviewer noted that the status of the relationship might prove to be a confound to the validity of the MJS. In order to investigate this, the subjects from all three studies were combined, resulting in a total of 377 subjects. Of these, 319 had reported the status of their relationship: 247 subjects were presently involved, while 72 were describing a past relationship. When data from each of these two groups was submitted to correlational analysis using each of the scales in these studies, similar patterns emerged, suggesting that the validity of the MJS is independent of the status of the relationship.

Since the MJS provides separate means of the three components of the jealousy experience, it is possible to study how each jealousy component is differentially correlated with other variables. Such analyses are not possible with unidimensional measures. The more comprehensive MJS should therefore yield information which other scales cannot tap.

Previous studies on love and jealousy have found weak and inconsistent correlations between the two constructs (Mathes et al., 1982; White, 1984). In this study, WRJS was not related to love. However, the MJS revealed an interesting relationship, whereby cognitive jealousy is negatively related to love, while emotional jealousy is positively related to love.

The MJS also highlights the negative relationship between happiness and emotional/behavioural jealousy, while WRJS is not sensitive to this relationship. This again argues for the use of a multidimensional scale of jealousy. Thus, the MJS gives a much clearer picture of the relationships between various psychological variables and jealousy.

Such a scale might be particularly useful in detecting pathological jealousy. Although emotional jealousy is a fairly common experience in reaction to threats from rivals to a valued relationship, cognitive and behavioural jealousy may be pathological, especially when they are not justified by reality.

To be obsessed by threats to one's relationship can result in considerable anxiety. Similarly, to be engaged in ethically questionable behaviours such as searching a partner's belongings can also generate a high level of distress. Cognitive and behavioural jealousy become pathological to the extent that they cause obsessive or anxiety disorders and interfere with the individual's daily functioning. Mowat (1966) describes several cases of extreme pathological jealousy which have driven people to murder their partners and/or relationship rivals.

It is unfortunate that the aspects of pathological jealousy have been under-researched despite the important practical implications. Perhaps the MJS might serve as the impetus to such research.

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