

The Allure of Secret Relationships

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Two surveys and a laboratory experiment examined the role of secrecy in attraction to relationships. In the first survey, respondents reported that past relationships they currently continued to think about were more likely to have been secret than ones they no longer pondered. In the second survey, those respondents who indicated that a past relationship had been secret also reported that it continued to be a target of their obsessive preoccupation. The laboratory experiment explored attraction between mixed-sex couples who were induced to play footsie under a table in the presence of another couple. When this was secret, greater attraction for the partner was reported than when it was not.

The commonest thing is delightful if only one hides it.
—Oscar Wilde, *The Picture of Dorian Gray*

When people become involved in a secret relationship, they often must engage in deceptive practices to maintain the secrecy. These practices involve an almost obsessive degree of thought about the partner, the continuous invention of wiles to deceive others about the existence of the relationship, and the intentional control of both thought and emotion about the relationship whenever those from whom it is secret are present. Could it be that this intense activity leads the partners to become obsessively preoccupied with the relationship and, at times, to become more attracted to it than they might be without the secrecy? Our studies examined this by exploring whether the past secrecy of a person's relationships and crushes might be linked with subsequent longing for those lost loves—and whether the imposition of secrecy on a physical relationship in impromptu laboratory couples might induce attraction as well.

The Nature of Secret Relationships

A secret relationship occurs when at least one member of a pair intends that knowledge of some link between the pair is hidden from one or more people. This minimal definition recognizes that a relationship may be secret in a number of ways

and for a variety of reasons. To begin with, the definition distinguishes secrecy from related conditions such as ignorance (W. E. Moore & Tumin, 1949) or privacy (B. M. Moore, 1984). A secret is more than a mere disparity in knowledge between people, or even a bit of information that is consensually granted to be private. Secrets involve the interests of those who are excluded and so should be understood as socially targeted. A secret relationship is intentionally kept from someone, and as a rule this target would be at least minimally offended by the existence of the secret if it were disclosed (Shils, 1956; Warren & Laslett, 1980).

Our definition of a secret relationship as hiding "some link between" the pair allows us to observe that secrecy can be imposed on any aspect of a relationship. There are, after all, a variety of facts about a social relationship that might be kept secret from social targets. In his study of secret societies, for instance, Simmel (1950) distinguished between societies whose existence is unknown and those whose existence is known but whose membership, purpose, or rules remain unknown. For dyads, this distinction suggests that there are those relationships whose entire existence is kept secret from a social target and those whose existence is known, but whose specific activities include at least one that remains intentionally unknown. The secret activities shared by the relationship could range from the trivial (e.g., flirtation or public interaction) or mercurial (e.g., a single touch) to the intimate (e.g., sex, friendship, cohabitation, or marriage) or consequential (e.g., criminal conspiracy or sexual or physical abuse).

We wish to include in this definition even relationships that merely exist in the mind of one partner. Secret crushes, for example, should qualify if the individual having the crush intends to keep this knowledge from others, as there is certainly a "link" between partners in the individual's mind. In fact, even the intent to keep the existence of the crush from the partner would create a secret relationship. So, when one person observes another from a distance without the target's knowledge, the relationship is secret for the first person. This means, too, that the intensity, longevity, or interdependency of the relationship is not

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a precondition of its secrecy. Even the most minimal relationship—formed, perhaps, as two strangers stand together in an elevator—is a candidate for secrecy. We understand secret relationships, in sum, as defined by the perspective of the person who is intentionally keeping the secret.

Cognitive Consequences of Secrecy

The reason for our very personal definition of secret relationships is our focus on the intrapsychic activity involved in the act of secret keeping. We believe that secrecy is often on the minds of the relationship partners (see Wegner & Erber, 1993) and that its influence on attraction to the relationship occurs by way of its cognitive consequences. In particular, we see two cognitive consequences of secrecy that combine to produce a troubled state of mind. First, the person who has a secret must continue to think about it to remember what should not be revealed. At the same time, the person who has a secret must be careful not to think about it in those circumstances when having it in mind might hasten its revelation. These two inclinations combine to produce an obsessive preoccupation with the secret.

Analyses resembling this one have been offered by a number of theorists in explaining the mental burdens that accompany deception and secrecy (DePaulo, 1992; Gilbert, Krull, & Pelham, 1987; Girodo, 1991; Pennebaker, 1988, 1990; Pennebaker & Chew, 1985; Wegner, 1989, 1992). These commentators have recognized in various ways that the decision to withhold information from others requires an investment in the management of one's thought processes. Expressions of the secret in word, gesture, or emotion must be inhibited, and the only way to do this is to hold back relevant thoughts that might prompt the unwanted expressions. One cannot think of kissing one's clandestine lover in the presence of one's spouse, for instance. Yet one must always be aware that this is one's lover and that the relationship is secret.

People are not easily capable of the dual awareness that such a response to secrecy would require, and for this reason obsessive preoccupation develops in which obsession and suppression both occur—but cyclically, each in response to the other. Recurrences of the secret thought are suppressed, particularly when circumstances conspire to make leakage of the secret a danger, and thoughts of the secret are rehearsed and ruminated on, particularly in those private moments when there is no imminent danger of disclosure. The secret must be remembered, or it might be told. And the secret cannot be thought about, or it might be leaked.

This complicated state of mind is difficult to examine in the laboratory, but some of its features can be produced by asking people to stop thinking about something. Wegner and Erber (1992) have found that thought suppression instructions increase the degree to which the to-be-suppressed thought automatically returns to mind. When a person is making word associations under time pressure, for instance, suppressed thoughts appear as associations more readily than do thoughts on which a person is actively concentrating. And, suppressed thoughts are accessed so easily that they interfere with the task of naming colors in which the words are printed.

Wegner and Lane (1993) have found that instructions to keep an item secret from an experimenter can have the same effect

on experimental subjects, making the item highly accessible to consciousness. In one experiment, they found that making a word secret interfered with subjects' ability to name the color in which it was printed, and in another, they found that secret words to be remembered along with nonsecret words were subsequently recalled first when all words were retrieved. In a third study, Wegner and Lane found that subjects' self-reports of intrusive thoughts of a variety of personal topics, as well as reports of suppression of thoughts of those topics, were significantly correlated with subjects' judgments of the degree to which their thoughts on those topics were secret from others. Secrecy, then, appears to be associated with both suppression and obsession—the two components of obsessive preoccupation.

In the case of budding romances, it may sometimes be just a short step from obsessive preoccupation to attraction. If the partners are indeed both eligible and even moderately attractive, Tesser's (1978) research on attitude polarization suggests that any increased thinking that results from obsessive preoccupation will have the effect of creating an intensification of attraction between partners. Tesser and Paulhus (1978) found that the more an individual thought about the person he or she had dated, the greater the love that was indicated for that person (but see Smith, 1978). In most cases of secret relationships, a modicum of initial attraction would be expected, and the intensification of that attraction through obsessive preoccupation could then ensue. Attraction might even be developed as the result of the attempts to suppress the thought of the partner, as the suppression of emotional thoughts can increase subsequent emotional reactivity to those thoughts (Wegner & Gold, 1993; Wegner, Shortt, Blake, & Page, 1990).

If obsessive preoccupation mediates the influence of secrecy on attraction, it could also be expected that people might become attracted to others even when their relationship to the other is secret from the other. So, for example, an individual who is asked to spy secretly on another person could become attracted to that person. Such an effect of surveillance has been observed by Olson, Barefoot, and Strickland (1976). These researchers asked subjects to follow a person around and keep the person under surveillance. Some subjects were led to believe that their spying was secret, whereas others were told that this surveillance was known to the target. As it turned out, the observers watching someone in secret became more attracted to the person than did observers who watched overtly and than did subjects who did not engage in the surveillance at all.

Other Theoretical Approaches

There are other theoretical paths from secrecy to attraction that do not travel by way of obsessive preoccupation, and these deserve some elaboration here. One path is through the theory of self-disclosure in the formation of intimate relationships (Chaikin & Derlega, 1974; Cozby, 1973; Jourard, 1959). According to this theory, self-disclosure is both a cause and an effect of intimacy. Thus, people who self-disclose are seen as likable by others (e.g., Worthy, Gary, & Kahn, 1969), and people who are intimate engage in greater self-disclosure than do those who are not (e.g., Adams & Shea, 1981). In short, shared secrets are associated with attraction. The self-disclosure literature traces this attraction to the disclosure of each individual's

personal secrets to the other, however, not to any conspiracy between the individuals or to the mutual production of secret activities (see, for an example, Berg & Archer, 1983). For this reason, self-disclosure theories do not offer specific mechanisms for our hypothesis.

Another theory with implications for the understanding of secret relationships traces their power to the cognitive influence of social categorizations. Simmel (1950) called attention to this idea when he observed that secrets set the "us" apart from the "them." He held that secrets determine the boundaries of social groups, forge alliances and partitions, and define groups of insiders and outsiders. According to social categorization theories, a partition need not be especially salient or deserved in any way, but it may nonetheless serve as the basis for cognitive differentiation, in-group favoritism, and out-group rejection (Billig & Tajfel, 1973; Wilder, 1986). The "we" feeling that follows on categorization into a group, then, could explain a tendency for secrecy to engender attraction. Social categorization would not necessarily predict that a secret relationship would be more cohesive than any salient relationship, however, as social categorization theory has no special theoretical account of secrecy *per se*.

The analysis of why secrecy might yield exceptional psychological effects comes from yet other lines of theory. One such way of understanding the influence of secrecy on attraction is provided by the theory of psychological reactance (Brehm, 1966). This idea holds that people who feel that their freedom to engage in a relationship is threatened are likely to behave so as to reinstate that freedom. Their attitudes toward the denied relationship become more positive to the degree that the relationship is forbidden. Relationships are seldom kept secret arbitrarily, of course, and this means that there may be powerful sanctions lying in wait if the secret is told. In some cases, partners could lose this or other relationships, their jobs, children, or reputations, and these costs are often anticipated before the inception of secrecy and motivate its imposition (Richardson, 1988). Driscoll, Davis, and Lipetz (1972) found that those relationships suffering the greatest parental interference were the ones to which individuals had the greatest allegiance. To the degree that secrecy is a concomitant of forbidden relationships, it should be found that secret relationships are attractive.

Another plausible mechanism for special effects of secrecy comes from the observation that the category of secrets is often occupied by interesting and newsworthy items. It is usually the case that people's secrets are somewhat sordid, if not downright unseemly (e.g., Norton, Feldman, & Tafoya, 1974). This tendency for secret keeping to center on information that is interesting might, then, work in reverse by associative learning principles. People might come to assume that anything relegated to secrecy must, by nature, be of some interest to everyone from whom the secret is kept. This explanation draws on the notion that an air of mystery is created by secrecy that constantly draws people to secret information even when the secret information is not intrinsically fascinating. It may also be the case, though, that secrets harbor rude surprises as often as they seclude happy ones, and for this reason a broad attraction to all secret information seems a doubtful prospect.

In summary, we expected in this research that obsessive pre-

occupation might be important in the link between secrecy and attraction. However, we were aware of other relevant theoretical bases for such effects and so arranged the present studies not only to test whether secrecy causes obsessive preoccupation and attraction but also to give evidence, when possible, that bears on the relevance of the other theoretical frameworks to this relationship.

Study 1: The Secrecy of Obsessive Past Relationships and Crushes

A survey was conducted to gather reports on people's romantic histories. Subjects were asked to answer questions about four relationships—the actual past relationships about which they now thought the most and the least and the unfulfilled past crushes about which they now thought the most and the least. Reports were solicited of the degree to which each actual relationship and each crush had been secret while it was ongoing. We predicted that the past relationship that was still thought about more often for each subject would be reported as having involved greater secrecy as it was ongoing than the one now thought about less. Similarly, we expected that the past crush that is the more frequent topic of obsessive preoccupation would be more likely to have been secret when it was ongoing.

A more limited set of questions on the case of the unrequited crush was included here as a means of testing the idea that secrecy yields obsessive thinking even in the absence of an actual relationship. Some of the theoretical ideas for why secrecy might cause attraction trade on the notion that an actual relationship forms and that individuals become attracted to it by social processes involved in sharing or keeping their secret liaison. Self-disclosure theories require sharing, for example; and some forms of a social categorization hypothesis would similarly hold that any influence of secrecy on attraction would occur through the formation of a coacting dyad. But such shared activities could not apply when there is no actual interaction. If secrecy of nonexistent relationships enhances obsessive preoccupation, processes arising in social interaction are undermined as plausible causes of the link between secrecy and attraction and more individual, intrapsychic processes are suggested.

It should be noted that we chose the present research strategy in preference to other more obvious strategies for two reasons. We opted to gather data on the comparison of pairs of relationships from each subject, first of all, as a way of avoiding the influence of individual differences in the relationship between secrecy and obsession. Because there might be individuals who are generally more secretive and more obsessed about almost everything, we opted to eliminate the contribution of such variance to our findings by calling on each person to volunteer two experiences and compare them. Second, we also sidestepped the direct approach of having subjects elect their most and least secret relationships and rate them on obsessiveness. We reasoned that asking subjects to select past relationships on the basis of secrecy could sensitize them to the key causal variable in our hypothesis and so enhance the impact of any implicit theories they might have about the nature of secret relationships. In contrast, asking for subjects to select relationships on the basis of obsessive preoccupation and then questioning them further

about several features of the relationships, including secrecy, should minimize such effects by obscuring the direction and nature of our hypothesis.

Method

Subjects. The first 1,000 people on an alphabetical list of living Trinity University alumni in Bexar County, Texas, were sent a questionnaire regarding past romantic relationships and crushes. The 132 respondents who returned the questionnaire were 50 men and 77 women ranging in age from 22 to 92. The mean age was 37.2 and median age was 33. Of those who indicated marital status, 48 reported they were currently single, 56 married, 1 separated, 17 divorced, and 4 widowed. Some questionnaires returned were incomplete. An informal sampling of subjects who did not return the questionnaire indicated that their reason for doing so (beyond simple disinterest) was that they did not have past relationships or crushes that fit all the rather restrictive criteria for the questionnaire.

Survey. The first part of the questionnaire asked the respondent to list past "significant relationships"—those that had lasted at least 3 months, and to which both partners were at least somewhat committed, but that were now over. The respondent was encouraged to think of as many as five such past relationships and then to rank these from the one he or she still thought about most to the one he or she now thought about least. The past partner who was most frequently thought about was identified for the survey as Person A, and the past partner least thought about was identified as Person B. For this article, we refer to these targets as the hot flame and cold flame, respectively. The questionnaire called for reports of the length of each relationship and time since it ended and then gave 30 items to be rated on 5-point Likert scales about the relationship with the hot flame and 30 items again to be rated regarding the cold flame. The items were intended to assess two groups of variables: those relating to desire for the relationship and those relating to the past secrecy of the relationship.

Factor analyses of the 24 items tapping desire for the relationship were conducted separately for the hot flame ratings and cold flame ratings and yielded very similar structures. Rotated to a varimax solution, four factors were extracted in each analysis, accounting for 63% and 62% of the variance for hot and cold flame ratings, respectively. The items comprising these factors (with a factor loading criterion of .50) were treated as separate scales measuring obsessive preoccupation, desire to undo the loss, past love, and continued admiration. The items relevant to secrecy were partitioned into those tapping secrecy proper and those tapping constraints on the relationship. Items and scale reliabilities (Cronbach's alpha averaged for the hot flame and cold flame groups) for all the measures are shown in Table 1.

The second part of the questionnaire used a selection procedure like that of the first, this time to find the objects of past crushes that the respondent currently thought about most and least often. The respondent began by selecting people who qualified as past "fantasy romances." The instructions said

The object of your fantasy may have been a famous person, a stranger, or someone you saw or interacted with often. Your fantasies, desires, or daydreams about this person need not have been sexual, although they may have been. It is only necessary that they were romantic—in that you wished or wanted to have a romantic relationship with that person—but never did have such a relationship. It is important that the fantasy romances you choose are now over, but that you once thought about them frequently for at least one month. Bring to mind people you once had a "crush" on. Try to think of as many as 5 if you can.

The persons the respondent chose from among these targets as having been the most- and least-frequent current thought targets were labeled

Person X and *Person Y*, respectively. These are called the hot crush and cold crush here. Questions followed about each crush to assess time elapsed since the crush and duration of the crush. Factor analyses of five items about the desire for the crush were conducted separately for the hot and cold crushes and yielded parallel solutions. Varimax rotations of two-factor solutions accounted for 73% and 69% of the variance for hot and cold crush ratings, respectively. The items comprising the two factors (with a factor loading criterion of .50) were treated as individual scales for obsessive preoccupation and past love. Secrecy of the crush was assessed with three items. Items and reliabilities for the scales are shown in Table 2.

Results and Discussion

Past relationships. Analysis of the past relationships portion of the survey included complete data from 115 of the 132 subjects. The past relationships that were reported had lasted an average of 35.1 months. Respondents indicated that their relationships with hot flames had been significantly longer than their relationships with cold flames ($M = 48.7$ months vs. 21.4 months), $t(114) = 4.32, p < .001$. Although both kinds of relationships tended to be in the distant past ($M = 127.7$ months since ending), the relationships with hot flames had been significantly more recent than those with cold flames ($M = 105.4$ months vs. 150.0 months), $t(114) = 4.32, p < .001$.

The scales assessing each of the composite rating variables for the hot and cold flames were analyzed in a multivariate analysis of variance (MANOVA). Sex of respondent did not participate in any significant effects in preliminary analyses, so it was not included in the design. A significant multivariate main effect was found for hot versus cold flame, $F(6, 109) = 46.85, p < .001$. Separate univariate analyses of variance (ANOVAs) were conducted for the composite scales; the means are shown in Table 3.

As should be expected, it was found that hot flames were the target of greater obsessive preoccupation than cold flames, $F(1, 114) = 190.14, p < .001$. This can be considered a manipulation check of sorts, and it indicates that the hot and cold flames the respondents selected indeed differed strongly in their focus as current targets of obsessive thought. Hot flames also stirred the desire to undo the loss more than cold flames, $F(1, 114) = 52.99, p < .001$, and respondents reported greater past love for hot than cold flames, $F(1, 114) = 80.29, p < .001$. Respondents also reported greater continued admiration for the hot flame than for the cold flame, $F(1, 114) = 23.28, p < .001$.

Estimates of the past secrecy of the two relationships were found to differ significantly. Hot flames were reported to have been more secret at the time of the relationship than cold flames, $F(1, 114) = 5.54, p < .02$. This finding supports our general hypothesis regarding the role of secrecy in attraction in that it suggests a role for secrecy in the development of obsessive preoccupation with past relationships. However, it is important to note that this finding could also be explained in other causal terms—such as a causal role for attraction in the initiation of secrecy. It could be that when people find a relationship to be highly attractive, they cover it up. This seems unlikely in view of the more common tendency people have to communicate good news (e.g., Tesser & Rosen, 1975), but it cannot be ruled out with the present data.

It is noteworthy that estimates of past constraints on the rela-

Table 1
Measures for Old Flames in Study 1

Scale	Reliability	Items
Obsessive Preoccupation	.84	I still think about ____ a lot. The thought of ____ still pops into my head for no reason at all. I have to try at times not to think about ____. Sometimes I get sort of an aching feeling in my heart in thinking of ____. I'm still in love with ____.
Desire to Undo Loss	.73	I continue to have vivid daydreams about ____. If ____ could come back into my life, I would immediately leave my other relationships. I'm still trying to figure out why things didn't work between me and ____.
Past Love	.67	Losing ____ was the worst thing that ever happened to me. I was in love with ____ during our relationship. I had a hard time getting over my relationship with ____. It took a long time before my relationship with ____ was completely over.
Continued Admiration	.57	There were many good things about ____ that I admired. I think my relationship with ____ was a mistake. ^a I haven't thought about ____ at all since we parted. ^a
Past Secrecy	.88	My relationship with ____ was secret from someone for a while. At the time, ____ wanted to keep our relationship secret from others. I hid some things about my involvement with ____ from some people. My relationship with ____ could be described as a "secret affair." I still keep my relationship with ____ a secret from someone. I told many people about my relationship with ____ from the very beginning. ^a
Past Constraint	.58	I couldn't tell people I was involved with ____. My friends or family didn't approve of my relationship with ____. If people had known about our relationship, it would have caused problems.

^a Item reverse scored.

tionships did not differ significantly between hot and cold flames, $F(1, 114) = 1.29, p > .25$. Thus, it does not appear that the same reactance-based forces discovered by Driscoll et al. (1972) were at work in producing the present secrecy findings.

To check this possibility further, an analysis of covariance (ANCOVA) was conducted in which the constraint ratings were treated as a covariate in a test of the difference in secrecy between the hot and cold flames. This ANCOVA showed that the secrecy difference between hot and cold flames remained significant even when the effect of constraint was held constant in this way, $F(1, 113) = 4.91, p < .03$.

Correlations were computed among the composite variables

Table 2
Measures for Old Crushes in Study 1

Scale	Reliability	Items
Obsessive Preoccupation	.67	I still think about ____ often. I still have to try to keep ____ off my mind. My fantasy about ____ still makes me excited.
Past Crush	.76	I used to think about ____ all of the time. I had a very strong crush on ____.
Past Secrecy	.88	I have never told anyone of my fantasies about ____. I kept my fantasies about ____ a secret at the time I had them. It was important to me to keep my feelings about ____ private.

Table 3
Means for Measures of Hot and Cold Flames in Study 1

Scale	Condition	
	Hot flame	Cold flame
Obsessive Preoccupation	2.93	1.66
Desire to Undo Loss	2.02	1.36
Past Love	3.67	2.73
Continued Admiration	4.10	3.66
Past Secrecy	2.45	2.16
Past Constraint	2.44	2.30

Note. Measures could vary from 1 to 5. N was 115.

separately for the hot flame and cold flame. This analysis indicated that the measures of obsessive preoccupation, desire to undo the loss, past love, and continued admiration were all significantly intercorrelated for both hot flame and cold flame targets, with $r(114)$ ranging between .21 and .75. Past secrecy was significantly correlated with obsessive preoccupation for hot flames, $r(114) = .27, p < .01$, and for cold flames, $r(114) = .35, p < .01$, but was not correlated significantly with past love, desire to undo the loss, or continued admiration in either case. Past constraint showed a similar pattern, but with slightly smaller correlations. It was significantly correlated with obsessive preoccupation for hot flames, $r(114) = .20, p < .05$, and for cold flames, $r(114) = .28, p < .01$, but was not correlated significantly with the other attraction measures in either case. Past secrecy and constraint were highly correlated for hot flames, $r(114) = .77, p < .001$, and for cold flames, $r(114) = .85, p < .001$.

The length and recency of the relationship were uncorrelated with each other for both hot and cold flames. For both hot and cold flames, negligible correlations indicated that longer relationships and recent relationships were no more likely to be secret than shorter or less recent ones. Length and recency of relationship were generally uncorrelated with the attraction measures, except that for hot flames, past love was greater for relationships that were more recent, $r(114) = .23, p < .05$, and for cold flames, past love was greater for relationships that had lasted longer, $r(114) = .23, p < .05$. No other correlations were significant. When length and recency of the relationship were used as covariates in the ANOVA for the effect of hot versus cold flame on secrecy, the significant effect of secrecy remained, $F(1, 112) = 3.95, p < .05$.

Past crushes. Analysis of the portion of the survey devoted to past crushes included data from 92 of the 132 subjects. The past crushes that were reported had lasted an average of 36.6 months. Respondents indicated that their hot crushes had been significantly longer than their cold crushes ($M = 46.4$ months vs. 26.8 months), $t(91) = 2.46, p < .002$. Both kinds of crushes tended to be in the distant past ($M = 121.3$ months since ending), with hot crushes marginally more recent than cold crushes ($M = 110.3$ months vs. 132.3 months), $t(91) = 1.98, p < .06$.

Scales assessed each of the composite rating variables separately for the hot and cold crush (see Table 4). Sex of respondent did not participate in any significant effects in preliminary analyses, so it was not included in the design. A MANOVA for the rating scales indicated a significant multivariate effect of hot versus cold crush, $F(3, 89) = 27.97, p < .001$. Univariate tests

indicated that obsessive preoccupation was greater for the hot crush than for the cold crush, $F(1, 91) = 77.94, p < .001$. Thus, the key variable on which the crushes were selected indeed differentiated them. Reports of the strength of the past crush were also greater for the hot crush than for the cold crush, $F(1, 91) = 5.96, p < .02$. And although the effect was only marginally significant, estimates of the secrecy of the hot crush tended to exceed those for the cold crush, $F(1, 91) = 3.16, p < .08$.

Correlations were computed between variables separately within the hot and cold crushes. Significant relationships emerged between recency of the crush and obsessive preoccupation for the hot crush, $r(91) = .43, p < .01$, and for the cold crush, $r(91) = .29, p < .01$. Also, for the hot crush, strength of the past crush was related to obsessive preoccupation, $r(91) = .25, p < .05$. Secrecy was slightly but not significantly correlated with obsessive preoccupation for the hot crush, $r(114) = .13$, and negligibly for the cold crush, $r(114) = .03$.

Summary and implications. These results suggest an association of secrecy with continued preoccupation with relationships, real or imagined. The past relationships that respondents elected as ones that they still harbored thoughts about were recalled as having been the targets of greater secrecy, and a similar tendency was found for past crushes. The findings indicate that secrecy is related to subsequent romantic obsessions.

These results suggest that psychological reactance may not be a necessary part of the link between secrecy and preoccupation. Judgments of the constraint on past relationships were not found to differ between those relationships that remained the target of thought and those that did not. Constraint and secrecy were highly correlated, however, and for this reason the operation of reactance cannot be firmly ruled out. Still, the results for crushes seem to argue against reactance as well. After all, a fantasy romance is one that did not happen at all. The freedom to engage in these relationships was entirely eliminated (for whatever reason), and psychological reactance would seem to have been at some theoretical maximum in all of these cases of unrequited love. The observation that secrecy still had some minimal association with obsessive preoccupation suggests that secrecy might function without the aid of constraint.

This survey is subject to all the usual problems associated with volunteer self-report data and must be interpreted with caution as a result. The survey method must be counted, in particular, as the potential source of selection biases that could have influenced our findings. Volunteers for this survey were obviously people who had more rather than fewer relationships and crushes—as the questionnaire called for the selection of several for report. These volunteers were also likely to have been people with serious interest in relationships and who were not put off by a request to reveal information about past loves, even secret ones, to psychologists. It is not obvious precisely how such selection biases might have produced the pattern of results we observed. And it is of interest that one source of selection bias was sidestepped by the method we used for this survey. Because each subject provided data for both comparison relationships (e.g., hot and cold flame), differential characteristics of subjects who had experienced one or the other kind of relationship did not contribute to the differences between target ratings that we observed. Still, it would be useful to learn whether the

Table 4
Means for Measures of Hot and Cold Crushes in Study 1

Scale	Condition	
	Hot crush	Cold crush
Obsessive Preoccupation	3.00	2.05
Past Crush	3.67	3.44
Secrecy	3.58	3.34

Note. Measures could vary from 1 to 5. N was 92.

relationship between secrecy and obsessive preoccupation occurs in other samples that are not so severely restricted by a volunteering bias. This was the task of the next study.

Study 2: Individual Variation in Relationship Secrecy and Preoccupation

The strategy used for this research was to measure the covariation in individuals' reports of the secrecy of their past relationships and their reports of current preoccupation with those relationships. This plan allowed the assessment of the degree to which secrecy and preoccupation are associated across individual subjects' recollected relationships.

Method

Subjects. Undergraduate students at the University of Virginia (117 women and 120 men) served as subjects in return for credit in their introductory psychology classes.

Survey. Subjects began by reading a set of instructions that asked them to think about an old flame—a "significant past romantic relationship"—and to jot down the initials of this person. The subject then completed a questionnaire that began by asking how long the relationship lasted and how long ago it ended. The survey then included 12 items addressing the subject's attraction to the past relationship and 6 items tapping the secrecy of the relationship. Subjects rated these on 5-point Likert-type scales, with 5 indicating *strongly agree*.

The items assessing attraction to the relationship were factor analyzed with varimax rotation to a three-factor solution that accounted for 71% of the rating variance. The factors captured themes similar to those in the prior study and with items loading above .50, included Desire to Undo Loss ("If ___ could come back into my life, I would immediately leave my other relationships," "I am still in love with ___," and "Losing ___ was the worst thing that ever happened to me"), Obsessive Preoccupation ("The thought of ___ still pops into my head for no reason at all," "I'm still trying to figure out why things didn't work between us," and "I have to try at times not to think of ___"), and past love ("I was in love with ___ during our relationship," "I had a hard time getting over my relationship with ___," "It took a long time before my relationship with ___ was completely over," and, "I haven't thought about ___ at all since we parted" [reverse scored]). The main departure from the scales in the prior study was the movement of the item "I'm still trying to figure out why things didn't work between us" from the Desire to Undo Loss to the Obsessive Preoccupation scale. Scales computed as mean item ratings had reliabilities (Cronbach's alpha) of .78, .71, and .72, respectively. The items tapping secrecy were all positively intercorrelated and formed a reliable scale (Cronbach's $\alpha = .89$).

Results and Discussion

The relationships that subjects selected had lasted a mean of 11.1 months and had ended a mean of 19.1 months before the survey. As compared with the relationships reported by adults in the prior survey, the college students' past relationships were shorter and more recent.

The analysis of the role of secrecy in subjects' rated thoughts and feelings about these relationships was accomplished by means of hierarchical multiple regression of all the variables on secrecy. The purpose of this analysis was to determine whether any of the rating variables would aid significantly in the prediction of secrecy beyond prediction on the basis of the demo-

graphics of the relationship. Table 5 displays the correlations between the variables, the unstandardized regression coefficients (B), standardized regression coefficients (β), semipartial correlations (sr^2), and the multiple correlation (R), squared multiple correlation (R^2), and adjusted squared multiple correlation after entry of all independent variables. The regression began with entry of the block of demographic variables—subject sex, length of the relationship, and how long ago the relationship ended. The resulting equation was only marginally significant, $F(3, 227) = 2.61, p < .06$, indicating that demographics were only somewhat useful for predicting secrecy. The next step in the regression entered the Desire to Undo Loss scale and again yielded a marginally significant equation, $F(4, 226) = 2.12, p < .08$. The third step entered the Past Love scale, and this once more produced a marginally significant equation, $F(5, 225) = 1.89, p < .10$. The final step entered the Obsessive Preoccupation scale, and this yielded a significant equation, $F(6, 224) = 2.43, p < .03$. The change in R^2 at this step (.019) was significant, $F(1, 224) = 4.96, p < .03$. Tolerance level was sufficiently high at this step to indicate that the effect was not due to multicollinearity.

These results substantiate those of the prior survey by showing that obsessive preoccupation and secrecy are linked at the level of individual variation. Although the regression indicates that these effect sizes are not large, it is still the case that obsessive preoccupation with a past relationship significantly predicted reports that the relationship was secret. Obsessive preoccupation was unique in this regard, as it contributed significantly beyond the prediction afforded by all the demographic variables and the other rating variables. Secrecy, then, does not seem to engender long-term desire to undo the loss and return to the relationship, and it does not appear either to intensify reports that the relationship was difficult to get over (as assessed by the Past Love scale). Rather, it inspires thoughts of the relationship popping to mind, a continued search for why the relationship ended, and the tendency to try to stop thinking about these things—in short, obsessive preoccupation.

Study 3: Secret Physical Relationships in the Laboratory

The survey methods used in our first two studies measured people's responses to real relationships and experiences and so make a strong case for an association between secrecy and romantic obsession in everyday life. The downfall of such surveys is that the associative data they afford do not make a causal case. Thus, the data do not ensure that secrecy yields preoccupation. Although it seems unlikely that later preoccupation might have created earlier secrecy, it remains possible, for example, that people associate some air of mystery or social opprobrium with those relationships and crushes that continue to preoccupy them and so overestimate the secrecy of the more memorable ones. This would suggest a causal direction opposite the one we propose. It is also possible that both past secrecy and present preoccupation were caused by some (as yet unknown) third variable and that the link we are suggesting is in fact only secondary to other processes. One way to examine these possibilities is through the experimental manipulation of a secret relationship, and this was our method here.

The experiment was designed in an attempt to capture some

Table 5
Hierarchical Regression of Demographic and Rating Variables on Secrecy in Study 2

Variable	DV	1	2	3	4	5	B	β	sr^2 (incremental)
1. Subject sex ^a	-.01						.01	.00	
2. How long ago was relationship	-.13	.01					.00	-.07	
3. Length of relationship	-.12	.01	-.04				-.01	-.13	.033
4. Desire to undo loss	.08	.06	-.24	.40			.04	.03	.006
5. Past love	-.04	.02	-.15	.53	.50		-.12	-.11	.001
6. Obsessive preoccupation	.17	-.03	-.37	.27	.57	.53	.20	.19	.021*
									$R^2 = .061$
									Adjusted $R^2 = .036$
									$R = .25^*$

Note. DV = secrecy.

^a For subject sex, women were coded 0 and men were coded 1.

* $p < .05$.

of what happens at the height of intrigue at the inception of a secret affair. Picture this: The couple have just brushed ankles under the table, and a look flashes between them as they both recognize the precarious situation they have encountered. Others at the table do not know of their relationship—and they obviously must not know. But the touch continues. The partners must put on a show of indifference to each other and feign interest in the above-board conversation, all the while trying not to let their continuing covert activities seep into their minds and actions. Our prediction was that this prototypical secret liaison has the effect of producing in each partner a preoccupation with and attraction toward the other.

Method

Overview and design. Unacquainted subjects were assembled in groups of 4, with mixed-sex pairs forming teams to play a card game. Members of one team received written instructions indicating that they were to play while touching a partner's feet with their own, whereas members of the other team received no such instructions. The team making foot contact during play was either to do this secretly or with the full knowledge of the other team. After playing the game for 10 min, subjects were separated and completed questionnaires assessing attraction to their partner and to the opposite-sex member of the other team. With the 4-subject group as the level of analysis, the design was a 2 (secret contact in the group vs. nonsecret contact) \times 2 (subject in contact couple vs. subject in noncontact couple) \times 2 (male vs. female subject) with repeated measures on the last two variables. For some measures (attraction, impressions, and obsessive preoccupation), subjects made ratings of both the partner and the opposite-sex person in the other couple. In these cases, the design was expanded to include rating target as an additional repeated measure.

Subjects. University of Virginia undergraduates (58 men and 58 women) participated in fulfillment of a requirement for an introductory psychology course. Subjects of each sex were randomly assigned to conditions, with foursomes equally divided with respect to sex in each lab session. Data for 20 subjects were discarded from this sample—1 because of illness and the remainder because they were previously acquainted with 1 or more subjects in their group.

Procedure. A female experimenter and a male or female assistant ran subjects in each session. The 4 subjects were seated at a rectangular table with two chairs on each long side, with same-sex subjects sitting diagonally from each other. Everyone was asked to complete a consent form before continuing. The experimenter then told the subjects that

they would be partners with the person directly across the table from them, thus creating opposite-sex teams, to play the "Communication Game." At this point, subjects were each given a short questionnaire assessing initial reactions to their partners. They indicated their level of agreement on a 5-point scale with the statements "My partner seems nice" and "I feel my partner and I will get along."

Next, the research assistant gave subjects a set of written instructions on what they should be doing during the ensuing card game, making sure that team members had identical instructions. Subjects in the contact condition read that their job was to play the game using "natural nonverbal communication." They were to keep their feet in contact with their partner's feet the entire game and were to try to work out some pattern to win the game. The contact pairs in the secret condition were told in addition that they were not to let the other team know what they were doing. In the nonsecret condition, contact subjects received instructions that read the same except to note that it was perfectly acceptable for them to let the other team know what they were doing. For the noncontact pairs, instructions read that the other team would be using some method of natural nonverbal communication assigned by the experimenter and that all the pair needed to do was to play the game.

After the instructions were read, the assistant collected them and left the room. The experimenter told subjects the rules of the card game they would be playing. Each subject was given five cards, with team members given the same five cards. For each hand, everyone laid two cards face down on the table. When all had done this, they turned them over and compared them with their partner's, with the intent of matching both their cards. For two cards matched, a team received 2 points; for one card, 1 point; and for no cards matched, -1 point. One subject was selected to keep score of the game. Once it was certain that the instructions were understood by everyone, the experimenter said she would return in 10 min to see who had won.

The 10 min of game time were videotaped without subjects' knowledge by a hidden camera to check whether foot contact occurred as instructed. When time was up, the experimenter returned and asked who had won. She told subjects that for the second part of the experiment they would complete questionnaires and that she would need to separate them to ensure privacy. She passed out the questionnaire to the women and took the men to an adjoining room where she gave them the same forms. When they were done, subjects were debriefed and their written consent for the research use of the videotape was requested and secured. To reduce the likelihood of encounters between subjects immediately following the session, the women were dismissed first, and it was suggested that they leave the laboratory area.

Questionnaire measures. The questionnaires given subjects after the game included a variety of relevant measures. For an attraction mea-

sure, we used the mean of the subject's ratings of the partner on four 5-point Likert-type items assessing attraction ("I could see myself going out socially with my partner in the future," "I think my partner would make a good romantic partner," "I felt close to my partner during the game," and "If I participate in more experiments, I would like to do so with my partner"). This composite attraction measure was reliable (Cronbach's $\alpha = .89$). A parallel measure tapped subjects' attraction to the opposite-sex member of the other team. For an impression measure, the subject made 7-point ratings of his or her partner on evaluative traits (trustworthy, attractive, friendly, intelligent, and sincere), and the mean of these yielded an index with acceptable reliability (Cronbach's $\alpha = .76$). Again, a parallel measure was made for subjects' impressions of the opposite-sex member of the other team.

The measure of the subject's obsessive preoccupation with the partner was the mean of 5-point ratings of "I thought about my partner a lot during the game," "I tried not to think about my partner during the game," and "Even now, thoughts of my partner keep popping into my mind." This measure reached only low levels of reliability (Cronbach's $\alpha = .20$) but was retained for its information value in light of the prior studies. A similar measure was included for subjects' thinking about the opposite-sex member of the other team.

Other individual items to be rated on 5-point scales assessed various perceptions of the experimental situation. A manipulation check item assessed the perception of secrecy: "During the game, my partner and I kept a secret from the other team." Items also assessed discomfort ("I felt uncomfortable during the game"), nervousness ("Playing the game with my partner made me feel nervous"), and fun ("I had a fun time during the experiment").

Results

Initial attraction. The initial attraction measures taken after groups were formed, but before the experimental manipulations, were analyzed to investigate any attraction effects that might have accrued from random assignment. No such effects were found.

Secrecy manipulation check. The manipulation check confirmed the effectiveness of the secrecy manipulation (see Table 6). There was a significant interaction of secrecy and contact, $F(1, 22) = 14.89, p < .001$. The contact pair's reports of secrecy were greater in the secret condition ($M = 3.89$) than in the nonsecret condition ($M = 2.83$), simple main effect $F(1, 22) = 4.56, p < .04$. Subjects who were asked to keep their contact with their partner a secret from the other team did indeed report that this was secret more than did subjects who were not asked to keep contact a secret. Noncontact teams' ratings were low overall (M

Table 6
Means for Ancillary Measures in Study 3

Measure	Condition			
	Secret contact	Secret noncontact	Nonsecret contact	Nonsecret noncontact
Secrecy	3.89	1.61	2.83	2.30
Discomfort	1.78	2.11	2.37	1.53
Nervousness	2.00	1.94	1.97	1.67
Fun	3.94	3.50	3.97	3.93

Note. Measures could vary from 1 to 5. Cell n s were 30 for nonsecret contact and nonsecret noncontact and 18 for secret contact and secret noncontact.

Table 7
Means for Attraction Measures in Study 3

Target	Condition			
	Secret contact	Secret noncontact	Nonsecret contact	Nonsecret noncontact
Attraction Partner	3.43	2.43	2.88	3.20
Other team member	2.26	2.37	2.25	2.54
Impression Partner	5.41	4.89	5.07	5.28
Other team member	4.51	4.66	4.66	4.59
Obsessive preoccupation Partner	2.80	2.35	2.71	2.73
Other team member	2.09	2.46	2.12	2.30

Note. Measures of attraction and obsessive preoccupation could vary from 1 to 5, and the measure of impression could vary from 1 to 7. Cell n s were 30 for nonsecret contact and nonsecret noncontact and 18 for secret contact and secret noncontact.

$= 2.04$), as would be expected, and showed no significant difference between the two conditions.

Contact manipulation check. We reviewed the videotapes of the sessions with the intent of examining whether subjects in the contact conditions indeed participated in the foot contact. All but 4 couples in the contact condition did touch repeatedly or continuously for the game session; the nontouching pairs were in the nonsecret condition. Those who did not touch were retained in the analyses, and the results do not differ substantively if they are eliminated. As partners always sat opposite one another, the typical contact we observed was for partners to place their feet on the floor such that each partner had one foot between the other's two feet.

Attraction, impression, and obsessive preoccupation. These measures were examined in a MANOVA with secrecy, contact, subject sex, and target rated (partner vs. opposite-sex member of the other team) as independent variables. No sex main effects or interactions were observed in this analysis.

The most general statement of our hypothesis is that subjects should be more attracted to their partner (by these measures) in the secret contact condition than they are in other conditions. The means (shown in Table 7) conform to this prediction in some detail. The multivariate effect of this form is the interaction of secrecy, contact, and target rated, and this effect was significant, $F(3, 20) = 3.17, p < .05$. The univariate effects were significant individually for attraction, $F(1, 22) = 7.44, p < .02$, impression, $F(1, 22) = 6.49, p < .02$, and obsessive preoccupation, $F(1, 22) = 5.70, p < .03$.

Simple interaction effects were computed for Secrecy \times Contact within each of the two rating targets, as our hypothesis would suggest interactions of these variables for ratings of the partner but not for ratings of the opposite team member. The multivariate simple interaction of secrecy and contact for ratings of the opposite team member was indeed nonsignificant ($F < 1$), and the univariate effects were also nonsignificant ($F < 1$

in each case). The multivariate simple interaction of secrecy and contact for ratings of the partner was significant, $F(3, 20) = 4.52, p < .02$. The univariate effect was significant for attraction, $F(1, 22) = 12.66, p < .005$, and showed marginally significant trends for impression, $F(1, 22) = 3.12, p < .09$, and obsessive preoccupation, $F(1, 22) = 3.37, p < .08$.

Specific tests of the joint effects of secrecy and contact for ratings of the partner were conducted as tests of simple main effects in the univariate ANOVAs. These indicated that subjects who made secret contact with their partner, as compared with those who made nonsecret contact, were significantly more attracted ($M = 3.43$ vs. 2.88), $F(1, 22) = 4.77, p < .04$, but had nonsignificantly better impressions ($M = 5.41$ vs. 5.07), $F(1, 22) = 2.06, p < .17$, and showed no greater obsessive preoccupation ($F < 1$). The subjects who made secret contact with their partner, as compared with those who did not make contact while their opponents shared a secret, were significantly more attracted to their partner ($M = 3.43$ vs. 2.43), $F(1, 22) = 11.69, p < .005$, nonsignificantly more positive in their impressions of their partner ($M = 5.41$ vs. 4.89), $F(1, 22) = 2.52, p < .13$, and significantly more inclined toward obsessive preoccupation with their partner ($M = 2.80$ vs. 2.35), $F(1, 22) = 4.89, p < .05$.

Another way to view these effects is through comparisons in the various conditions between ratings of the partner and the opposite-sex member of the other team. Such comparisons are not particularly informative, however, in light of a multivariate main effect for target rated, $F(3, 20) = 38.30, p < .001$, indicating a generally greater preference for the partner than the opposite-sex member of the other team. Significant univariate effects showed overall greater attraction to the partner, $F(1, 22) = 84.70, p < .001$, more positive impressions of the partner, $F(1, 22) = 73.31, p < .001$, and more obsessive preoccupation with the partner, $F(1, 22) = 47.23, p < .001$. Simple effects tests in the univariate analyses showed that this effect was significantly evident in all comparisons except those in the secret noncontact conditions.

For couples who were not in contact, awareness of the other couple's contact appeared to spur attraction. Those who were not in contact but who knew of the other team's nonsecret touching showed greater attraction to their partners ($M = 3.20$) than did the noncontact subjects who were unaware of the other couple's touching ($M = 2.43$), $F(1, 22) = 10.90, p < .005$. This effect was not significant for impressions of the partner, but again was significant for obsessive preoccupation ($M = 2.73$ vs. 2.35), $F(1, 22) = 6.45, p < .02$. Being on a team whose opponents openly communicated with their feet may have increased subjects' sense of identification with their own team, perhaps, or it may have increased their tendency to view the situation as a potentially romantic one.

Performance. Whether teams won or lost the card game was analyzed to determine whether performance differed among conditions. There were marginally significant effects for performance, including a tendency for subjects in the contact conditions to win more often ($M = 0.64$) than those in the noncontact conditions ($M = 0.36$), $F(1, 22) = 4.10, p < .10$, and a tendency toward an interaction of secrecy and contact, $F(1, 22) = 4.10, p < .10$. The secret contact teams tended to win more often ($M = 0.89$) than the secret noncontact teams ($M = 0.11$), whereas the nonsecret teams won equally ($M = 0.50$ in each case).

We were concerned that this trend might be responsible for the observed attraction effects, and so we conducted several analyses to check this. Correlational analyses indicated, first, that the relationship across subjects between performance and the key attraction variables was nil. Performance was not significantly correlated with attraction, $r(96) = .11$, with impression, $r(96) = .12$, or with obsessive preoccupation, $r(96) = .11$. Thus, when performance was entered as a covariate in the ANOVAs on these attraction variables, the significant effects reported earlier remained reliable at about the same levels. The evidence suggests, then, that the observed performance variations were not crucial for the production of the predicted attraction effects.

Obsessive preoccupation analysis. We were concerned that the measure of obsessive preoccupation in this experiment was far less reliable than similar measures in our surveys, and we undertook a correlational analysis to examine this. Specifically, we calculated the correlations among the components of the obsessive preoccupation measure in the various conditions of the design. This revealed that the correlation between ratings of thought suppression ("I tried not to think about my partner during the game") and the sum of ratings reflecting thought ("I thought about my partner a lot during the game" and "Even now, thoughts of my partner keep popping into my mind") varied by condition. Whereas thought suppression was positively related to thought in the secret contact condition, $r(24) = .45$, it was negatively correlated with thought in the other conditions, mean $r(24) = -.21$.

In our prior surveys, thought suppression was grouped by factor-analytic procedures along with measures of thought into an overall obsessive preoccupation index. It may be, however, that the synthesis of an obsessive state of mind—in which suppression is associated with the return of the unwanted thought—is dependent on the processes that unfold as a relationship occurs. Under the conditions of the relatively uninvolved connections made between subjects in this study, there may have been little reason for the "reverberation" between thought and suppression to develop. Only subjects who were in the highly charged situation of secret contact showed an inclination toward the unfolding of obsessive preoccupation as we observed it in the surveys of natural relationships.

In view of these findings, it is difficult to evaluate the role of obsessive preoccupation in the production of attraction. Obsessive preoccupation was correlated with attraction across individual subjects, $r(96) = .63, p < .01$, and it was marginally correlated with positive impressions as well, $r(96) = .20, p < .10$. This makes it plausible that obsessive preoccupation might have played some role in the production of attraction and positive impressions. One test of this hypothesis is to examine the attraction and impression results in ANCOVAs, removing the influence of obsessive preoccupation. And indeed, in such analyses the key interaction of secret, contact, and target was not significant. For the attraction analysis, the effect was nonsignificant, $F(1, 21) = 2.25, p > .14$; for the impression analysis, the effect was marginally significant, $F(1, 21) = 3.56, p > .07$.

Normally, these results might be interpreted to indicate that obsessive preoccupation mediates the attraction and impres-

sion findings. However, because of the differences in correlations of the components of obsessive preoccupation we found among cells, the reliability of the obsessive preoccupation index begins to be acceptable only in the secret contact condition (Cronbach's $\alpha = .51$) and is negative in the other conditions. This means that any examination of the mediating role of obsessive preoccupation in the attraction and impression results must be interpreted very cautiously. In view of this ambiguity, we also used the individual scale items comprising the obsessive preoccupation index as covariates in ANCOVAs with attraction and impression as the criterion variables. These analyses suggested that the item specifically tapping intrusive thinking ("Even now, thoughts of ___ keep popping into my mind") was particularly critical for the observed effects. When this item served as the covariate, the interaction of secret, contact, and target was not significant for attraction, $F(1, 21) = 1.22, p > .20$, or for impression, $F(1, 21) = 1.00, p > .25$. Covariance of the other obsessive preoccupation items (tapping thought during the game and suppression during the game) did not undermine the attraction or impression effects to this degree.

Self-ratings of nervousness, discomfort, and fun. Subjects' self-ratings of affect were obtained to examine how these variables might have been influenced by the experimental conditions. Nervousness and discomfort are of interest, for example, because they tap how experienced arousal might be involved in the production of the observed attraction effects. It might be argued, for instance, that secret contact provides some special impetus toward self-perceived autonomic arousal and that attraction effects might result from this. Alternatively, it is possible to suspect that positive affect plays an important mediating role here. For this reason, it is instructive to examine subjects' ratings of how much fun they had in the session. Means for these variables are shown in Table 6. Separate ANOVAs conducted for these revealed no significant effects. Thus, it appears unlikely that the attraction findings were mediated by these variables—at least as they were measured here.

General Discussion

The results of three kinds of investigations—a survey comparing relationships within subjects, a survey examining individual variation, and a laboratory experiment—suggest a role for secrecy in certain aspects of attraction to relationships. The first survey showed that the former loves that people ruminate about past their bloom are reported in retrospect to have been more likely to be secret. Crushes from the past that are still the focus of rumination also tended to have been secret from others. These findings imply that secrecy in relationships, whether real relationships or only desired ones, may have long-term consequences for the person's inclination to remain obsessively preoccupied with the relationship.

The second survey echoed these findings by showing that individuals who reported that a past relationship was secret also reported that the relationship continues as the target of their obsessive preoccupation. The secrecy of past relationships was not significantly predicted by demographics such as subject sex, relationship length, or relationship recency, nor was it significantly predicted by estimates of past love or by reports of the desire to undo the loss. Even after all these factors were entered

as predictors, however, obsessive preoccupation was found to account for significant variance in the reported secrecy of the past relationship.

The results of the third study are yet more pointed in their implications for the role of secrecy in attraction. This laboratory experiment thrust pairs of strangers into a situation contrived to make them share a secret relationship: They were asked to communicate nonverbally by touching feet secretly beneath the table during a card game with another couple. As compared with couples who were asked to touch in the same way, but without the secrecy, and as compared with couples who did not touch or know about a secret, these secret contact couples reported greater attraction to each other after the game. Measures of obsessive preoccupation with the partner and personality impressions of the partner showed a similar although less robust pattern.

Secrecy, Obsessive Preoccupation, and Attraction

How does secrecy create attraction? The results of these studies offer several clues, but they are not conclusive. The most direct implication of the research is that secrecy is involved in the development of a pattern of thinking about a relationship that we have called *obsessive preoccupation*. This pattern arose in both of our surveys as a concomitant of secrecy. The pattern is distinct from a desire to return to the relationship, and it also is different from judgments of past love or continuing admiration for the partner. Obsessive preoccupation is also unique in that it is not marked by a simple concentration or focus on the partner, but by a combination of intrusive thoughts of the partner and efforts not to think about the partner. A fruitless urge not to think about the partner appears to be the legacy of secret love.

The findings regarding obsessive preoccupation must be regarded as only preliminary—yet potentially very interesting. In our laboratory experiment, we found that attraction ensued from secret contact even though our measure of obsessive preoccupation was only marginally influenced under the same conditions. As it happened, however, the experiment may also have uncovered some observations about how obsessive preoccupation gets its start. We found that the specific combination of thought suppression and thought recurrence was not clearly evident in the experiment for people who had not experienced the secret contact. Among these individuals, reports of the tendency to suppress thoughts were negatively correlated with reports of the thoughts themselves—suggesting that here, reporting that one had suppressed the thought was merely another way of saying that the thought was not present. For individuals in the secret contact condition, however, suppression and thinking were positively associated—suggesting the wellsprings of the pattern of obsessive preoccupation we found linked to secrecy in the survey data. Although these findings were unanticipated and must be viewed with circumspection, they do signal what may be a useful path for investigation of the state of mind that secrets induce.

The diversity of the patterns of relationship among secrecy, obsessive preoccupation, and attraction in these studies suggests that our initial conception of their causal connections is oversimplified. That is, although we began with the broad hypothe-

sis that secrecy causes obsessive preoccupation, which in turn causes attraction, the evidence at hand suggests that this basic sequence is inadequate to capture the operating relationships among these variables. In Study 1, for example, we found that retrospective reports of secrecy were not associated with retrospective reports of love, current desire to undo the loss, or continued admiration. However, past secrecy was related to current obsessive preoccupation. Study 2 revealed a similar temporal pattern in that retrospective reports of secrecy were related to current obsessive preoccupation but not to current desire to undo the loss or to retrospective reports of love. Thus, although past secrecy of a relationship was clearly associated with current obsessive preoccupation in these studies, current obsessive preoccupation was not highly related to other measures of attraction, past or present. Estimates of past love are likely to have fewer objective referents than estimates of secrecy and for this reason might well be faulty. But because even concurrent attraction measures other than obsessive preoccupation were unrelated to secrecy, it is important to note that secrecy's influence in these studies was specific to obsessive preoccupation and not mediated through obsessive preoccupation to all indicators of attraction.

In the laboratory experiment, in turn, strangers who were prompted to perform a secret action together became more attracted to one another. Obsessive preoccupation was only marginally influenced by this manipulation, and although it may have some mediating role, this is not clear. We are left, then, to consider the possibility that obsessive preoccupation has different modes of association with attraction in relationships that are past versus those that are ongoing or that are only beginning. Although obsessive preoccupation is somehow "in the action" between secrecy and attraction, the present studies have merely demonstrated this and have not solved the more complicated problem of how this form of thinking enters the person's cognitive involvement with a relationship as it begins, continues, ends, and then recedes in memory. Our conclusion at this point is merely that thought is involved in the path from secrecy to attraction, as people think more frequently and in a more troubled way about their secret partners than they do about other partners.

In view of these ambiguities, it might be profitable for future inquiry to focus on the temporal sequence of thought and attraction variables in the course of secret relationships. Studies focusing on ongoing secret relationships seem to be natural paradigms for examining these questions, but it is precisely such relationships that are likely to remain hidden from scientific investigation.

Other Mediators

The present studies offer some information on the usefulness of other plausible mediators of the secrecy-attraction relationship. The idea that secrecy might express its effects through the mechanisms of psychological reactance, for example, was not substantiated by the survey data. Questions tapping respondents' perceptions of social constraints on their past relationships in Study 1 did not discriminate significantly between those relationships that were still the target of rumination and those that were not. Reported secrecy did allow this discrimi-

nation, and removing the effects of constraint from this secrecy effect by ANCOVA did not diminish its influence. Because the survey also revealed that secrecy tended to have the expected effect in the case of past crushes—relationships that never were and so were maximally constrained—it is difficult to hold that reactance is a necessary part of secrecy's influence.

Attempts were also made in the laboratory to measure possible mediators such as negative affect (in the form of self-rated discomfort), arousal (in the form of nervousness), and positive affect (in the form of fun). Certainly, single-item assessments can be criticized as potentially unreliable indicators of the constructs they are meant to represent. Still, for what they do gauge, the measures showed no pattern that would indicate a clear mediating role, as none of them showed significant elevation or reduction in the secret contact condition as compared with the other conditions. Thus, it is difficult to assert a mood or self-perceived arousal analysis of secrecy and obsession on the strength of our findings.

The card game performance of couples surfaced unexpectedly as a potential mediating influence in the experiment, as pairs in the secret contact condition were somewhat more successful than other pairs at the card game. Secret contact couples were not significantly more successful, however, and when such performance effects were eliminated from the attraction effects by means of ANCOVA, the attraction effects remained. Although it is possible to suggest that unmeasured psychological effects of success as a couple might have surfaced that could account for our findings, it is difficult to envision any measure of these that would be more direct than success itself.

The results also tend to rule out a simple application of a social categorization model to the influence of secrecy on attraction. In the laboratory experiment, after all, nonsecret contact probably created as clear a social category in the usual sense as did secret contact, but it did not have the same attraction effect. Indeed, the nonsecret categorization was known by more people and thus might be considered to have more legitimacy and authenticity than the secret contact. The extent of perceived categorization was not measured, though, so this conclusion cannot be drawn with certainty. It would be useful to know just how strong the "we" feeling may have grown between secret relationship partners in the present investigations. Perhaps secret relations engender a stronger cognitive categorization of social groupings than nonsecret ones, yielding in turn the observed attraction effects.

One other potential mediator is suggested by a misattribution analysis of our findings. In the case of the experiment, for example, it could be argued that contact creates some degree of sympathetic arousal and that without the imposition of secrecy this arousal is perceived by subjects as due to the contact. With secrecy, however, subjects may be more hesitant to label their arousal in this way and instead attribute it to attraction to the partner. This kind of analysis hinges, of course, on the supposition that secrecy has some influence on the extent to which individuals are open to thinking about and labeling their arousal states and so resembles in some ways the idea that secrecy yields obsessive preoccupation. Given that neither the labeling nor the level of arousal was measured here, however, it is difficult to assess whether this account offers a reasonable alternative. In

addition, the survey studies offer little substantiation for this approach, as the application of a misattribution analysis to past relationships would require an implausibly long-term carryover of arousal and emotion.

The Bonds of Secrecy

If it is true that secrecy often creates attraction to relationships, implications can be imagined for relationship formation, relationship maintenance, and relationship dissolution. In the formation of a relationship, for instance, the effect of secrecy might be useful as the basis for a strategy. A person who wished to develop a relationship with another might seek out ways to involve the other in secret interactions, somehow making the case that relatives, friends, or ex-lovers should not know. This strategy could be useful in prompting an initial intrigue with the relationship that might not otherwise occur.

The maintenance of ongoing relationships might also be spurred by the strategic application of secrecy. Relationships that are long lived, after all, are commonly drained of many of their potentially secret features. One knows one's partner all too well, and everyone from the kids to the relatives in Sheboygan is deeply familiar with most every facet of the relationship. The bonds created by secrecy could be used in this instance if new secrets were created by the couple. Admittedly, the kinds of intrigues that are shared by partners engaged in a covert affair might be difficult to simulate in this instance. But a few secret activities, from weekends away from the kids to clandestine noontime trysts, might introduce a new dimension of excitement and awareness to the relationship. It could even be the case that some of the more kinky undercover activities that are attributed to otherwise humdrum middle-class, middle-aged couples are sought out in the hopes that renewed attraction to the relationship will result.

Secrecy must also be counted as a culprit in the downfall of relationships. When a secret infidelity interrupts an ongoing relationship, it may well be that the secret affair is given an extra boost—not because it is inherently better in any sense—but simply because it is secret. The partner who becomes involved on the side spends more time thinking about the secret relationship than about the nonsecret one, and thus becomes progressively more attracted to the secret love. Eventually, the secret relationship may take over and become the person's new primary relationship. But then, any new secrets will be inclined to follow precisely the same pattern. The allure of secret relationships could, in this way, contribute to the development of relationship turnover and the consequently high rate of divorce.

Secrecy appears to form a social bond of considerable strength, one that may be the basis for an individual's attraction to and preoccupation with a partner. It may even be that prolonged secrecy in the face of prying or otherwise difficult audiences could yield agitated mental states bordering on obsession. These states may not always result in healthy or even pleasant relationships. Couples could surround abusive or violent relations with secrecy, and pairs engaged in socially undesirable behaviors from drug abuse to incest could choose to hide their interactions as well (cf. Silver, Boon, & Stones, 1983). The partners in such cases might achieve an unusually intense level of psychological connectedness that would not resemble anyone's

definition of a loving or successful relationship. The openness and public commitment that are often ideals in close relationships may be replaced, through secrecy, with a haunting and disquieting closeness.

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