Positive automatic thoughts and romantic love

Victoria Schenker

University of North Carolina, Chapel Hill

Spring 2012

A thesis presented to the faculty of The University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the Bachelor of Arts degree with Honors in Psychology

Committee Chair: Barbara Fredrickson, Ph.D.
Committee Member: Sara Algoe, Ph.D.
Committee Member: Elise Rice
Acknowledgments

I would like to thank my advisor, Dr. Barbara Fredrickson, for allowing me to come into her lab this year and for her supervision throughout this project. I am especially thankful to graduate student Elise Rice for her guidance and mentorship during every step of the process and for helping me strengthen my research skills. Finally, thank you to Dr. Sara Algoe for serving on my Honors Committee.
Abstract

Positive automatic thoughts, thoughts that are both positively valenced and unintentional, are a popular concept related to romantic love, but there is virtually no previous empirical research on this topic. Drawing on Fredrickson’s (2013) notion of micro-moments of positivity resonance, in which two people engage with one another in interactions marked by mutual care and concern, I theorize that positive automatic thoughts – especially in the absence of the other - may serve to draw people to their significant others to have more of these micro-moments, and therefore to be happier and healthier. In the present study, I examined the relationship between positive automatic thoughts and romantic love through three online questionnaires. Being in love predicted increased automatic thought frequency. Automatic thought frequency was also associated with greater feelings of interpersonal connectedness and greater relationship satisfaction. Automatic thought frequency predicted explicit wanting to spend time with the partner above and beyond prior explicit wanting and was marginally significant in predicting hours spent with the other above and beyond hours spent with the other reported in the previous questionnaire. These results support some of the predicted connections between automatic thought frequency and romantic love and coincide with the notion that these thoughts may serve as nudges toward micro-moments of positivity resonance.
Positive automatic thoughts and romantic love

Many people can relate to the experience of being newly in love and seemingly unable to stop thinking about the significant other; thoughts about the loved one seem to pop into awareness all the time. Societal notions of love recognize the normality of these cognitions, yet despite their prominence in human experience, very little empirical work has been devoted to understanding how positive automatic thoughts function in romantic relationships. This is unfortunate considering the role these positive automatic thoughts may play in connecting us to others and strengthening the bonds in our relationships. As such, the primary purpose of the present research is to shed light on how these seemingly spontaneous cognitions about relationship partners relate to the processes of falling and staying in love.

Our current psychological understanding of love suggests that it changes one’s mental representations of the other with regard to one’s own self-concept. In two studies, Aron, Paris, and Aron (1995) found that falling in love is associated with greater change and increased diversity of a person’s self-concept domains as well as an increase in self-efficacy and self-esteem. The researchers found these results to be consistent with their self-expansion model of motivation and cognition in close relationships (Aron & Aron, 1986), which suggests that falling in love results in self-expansion. This self-expansion occurs from including other in the self, among other sources. The resulting self-efficacy is due to the person in love recognizing their ability to share the other person’s resources, perspectives, and characteristics. Thus, falling in love is thought to be associated with a change in one’s representation of the other in terms of the other’s resources; this in turn is associated with increases in self-efficacy and self-esteem. Similarly, the Inclusion of Other in Self scale (Aron, Aron, & Smollan, 1992), used to measure the closeness of people in relationships, allows researchers to consider the magnitude to which
people in love may represent the other in relation to themselves. The scale includes pairs of increasingly overlapping circles used to represent the self and other, and can be seen in Appendix 1. Love seems to facilitate the integration of the other into one’s self-concept. Thus, mentally, the lines between self and other overlap more and more as the closeness between the two people increases.

Given that falling in love appears to alter the way we represent the other mentally, it seems plausible that falling in love could also change the thoughts we have about the other. One recent study examined this idea and found that long-term intense love is related to positive thoughts about the partner (O’Leary et al., 2012). The researchers asked married participants to rate how intensely in love they were and found that their responses were positively correlated with “thinking positively about the partner” and “thinking about the partner when apart.” These correlations are suggestive of a connection between positive thoughts about the other and relationship longevity and well-being.

Before further exploring the connections between positive automatic thoughts and properties of romantic relationships, it will be important to be clear about what exactly is meant by the label “positive automatic thought.” There are two principle components to this construct; obviously, the thought must be positively valenced, but it must also be automatic in the sense that it arises without the subjective experience of effort or intention. The phenomenology of these cognitions may entail pleasant thoughts that simply seem to pop into one’s mind. Put simply, the thought involves (1) positivity and (2) automaticity.

**Positivity**

Until recently there has been heavy focus on negative emotions and little on positive emotions, but positive emotions play a crucial role in enhancing the quality of people’s lives, and
they have acquired increasing prominence in the empirical literature. According to Fredrickson’s broaden-and-build theory (1998, 2001), positive emotions momentarily broaden a person’s cognitions, accumulating over time to build physical, psychological, and social resources. Studies support this model on positive emotions, demonstrating how positive emotions broaden a person’s scope of attention, cognition, and action (Fredrickson & Branigan, 2005). Fredrickson (1988, 2001) also theorizes that positive emotions may undo both the aftereffects of negative emotions as well as lingering negative emotions, and also may protect health, fuel psychological resiliency, and trigger upward spirals toward improved emotional well-being. Furthermore, positive emotions may buffer resilient people against depression and fuel thriving after crises (Fredrickson et al., 2003). Finally, in an experiment involving random assignment, and therefore supporting causal claims, Fredrickson and colleagues (2008) found that positive emotions predict increased life satisfaction and reduced depressive symptoms. Thus, the recent indications of the consequences of positive emotions suggest that they are valuable to people’s lives and important to study.

More specifically, love can lead to positive outcomes in an individual’s life. Love experiences are made up of various positive emotions, such as interest, joy, and contentment (Fredrickson, 1998). During loving interactions, the immediate goal is for intrinsic enjoyment. However, over time these interactions help build and strengthen social bonds and attachment and likely become a source of social support. Therefore, loving experiences broaden an individual’s momentary thought-action repertoire and have long-term implications.

Furthermore, connections with another person over the shared positive feeling of love result in micro-moments of positivity resonance, or synchrony between the two, as their gestures, biochemistries, and neural firings mirror one another (Fredrickson, 2013). According to
Fredrickson, people crave these micro-moments, and the more each person has, the happier and healthier each becomes. Thus, given this knowledge, it is reasonable to believe that positive automatic thoughts play a role in generating these micro-moments of positivity resonance.

People crave micro-moments of positivity resonance, and spending more time with another increases a person’s chance for these micro-moments. People’s positive automatic thoughts about their significant others may serve as a way of reminding them and guiding them toward future micro-moments of positivity resonance. As thoughts about the significant other seemingly pop into a person’s head, the person will be thinking of the other and likely wanting to spend time with him or her. In other words, positive automatic thoughts could be the mind’s way of nudging a person back to the other for more positivity resonance. For this reason, I expect to see a relationship between automatic thought frequency and explicit wanting to spend time with the other as well as between automatic thought frequency and hours spent socially with the other.

Extending this principle, due to the benefits of micro-moments of positivity resonance, I expect automatic thought frequency to be associated with increased feelings of interpersonal connectedness and increased relationship satisfaction.

**Automaticity**

Regarding the predicted relationship between automatic thoughts and romantic love, I look to past studies considering the influence that intrusive thoughts have on emotion. One such study focused on suppressed thoughts of a past significant other, or an “old flame” (Wegner & Gold, 1995). The researchers asked participants to think about an old flame; some participants still desired the flame while others did not. The researchers measured the participants’ skin conductance levels and instructed participants to either not think about the old flame or to perform a comparison task. They then instructed participants to think about the old flame again.
Suppression in individuals who no longer desired their old flames resulted in a tendency to dwell on thoughts of the old flame when the expression of the thoughts was invited. In contrast, individuals who still desired a relationship did not have an increased tendency to talk about the person, but had an elevated electrodermal response during the opportunity to talk about their suppressed thoughts, suggesting emotional arousal. Therefore, the researchers found that suppression of thoughts of an old flame may support and increase the psychological presence of the old flame in the person’s mind. Thus, the persistence of intrusive thoughts about an old flame is consistent with the belief that automatic thoughts serve to nudge people back to their loved ones, and in this particular study back to desired past partners, in order to experience more micro-moments of positivity resonance.

Though the research of Wegner and Gold focused on intrusive thoughts in the negative context of ended relationships, it is important to consider positive emotions as they are very significant to a person’s quality of life. Therefore, in the present study I seek to further previous research on automatic thoughts and romantic love by examining positive automatic thoughts in this context. I hypothesize that falling in love increases the frequency of automatic thoughts about the other person. A recent study found a positive correlation between the personal significance of a given topic and the frequency of positive automatic thoughts a person has about that topic (Rice & Fredrickson, unpublished data). If we extend this principle to love, one explanation for this is the increased salience of the significant other. The significance of the partner may lead to chronically heightened activation of its mental representation, so it is easier at any given moment for it to rise above the threshold of conscious awareness. In other words, the salience of the significant other may render the mental representation of the other in a state of chronic automaticity (Bargh, 1992, 1994). Another consideration is that falling in love increases
the amount of indirect associations related to the other person, resulting in more cues tied to the representation of the other, and therefore more thoughts about the other. As the relationship develops and partners share experiences and make memories with one another, they may inadvertently create more and more associations with each other, so that encountering any number of relevant cues may bring thoughts of the other into awareness. Thus, once again, experiences of love are rewarding and, in the absence of the other, positive automatic thoughts serve to draw individuals back to their partners.

However, multiple studies have considered the endurance of love in long-term relationships with mixed results. Some theorists believe that romantic love fades in marriage along with attraction and sexual desire (Sternberg, 1986), and most importantly for our study, that older couples in happy marriages no longer experience intrusive thoughts about their partners (Tennov, 1979). Therefore, it is likely that positive automatic thoughts decrease as time spent in a relationship with the partner increases.

The current study seeks to explore these and other aspects of positive automatic thoughts in the context of love. No previous research has examined the relationship between positive automatic thoughts and romantic love, making the current study not only one of the first on positive automatic thoughts, but also the first to apply these common experiences to the significant context of falling in love.

**Hypotheses and Overview of Empirical Strategy**

In the present study I seek to investigate the relationship between positive automatic thoughts and romantic love by using self-reported repeated measures of thought, emotion, and relationship variables. Specifically, I consider the interplay of love status, which refers to whether or not the participant is in love, and if so, whether they recently fell in love; automatic
thought factors, including measures of frequency and valence; relationship measures of interpersonal connectedness and relationship satisfaction, which are measured by the Inclusion of Other in Self Scale (Aron et al., 1992) and A Generic Measure of Relationship Satisfaction (Hendrick, 1988), respectively; and general relationship variables, such as the duration of the relationship.

Several hypotheses follow from the integration of past literature on automaticity and positive emotions discussed above. Considering automatic thought frequency, I believe:

- Participants who are in love will have more frequent automatic thoughts about their significant others than participants who are not in love.
- Participants will have less frequent automatic thoughts about their significant others as the relationship progresses (i.e., participants who are newly in love will have more frequent automatic thoughts about the significant other than those who have been in love longer).
- More frequent automatic thoughts will be associated with greater feelings of interpersonal connectedness, as measured by the Inclusion of Other in Self scale (Aron et al., 1992).
- More frequent automatic thoughts will be associated with greater relationship satisfaction, as measured by A Generic Measure of Relationship Satisfaction (Hendrick, 1988).
- Automatic thought frequency will predict subsequent explicit wanting to be with the other above and beyond prior explicit wanting.
- Automatic thought frequency will predict subsequent hours spent socially with the other above and beyond previous hours spent with the other.
Methods

Participants

All participants were students in an Introduction to Psychology course who participated to earn course credit. The study began with 88 participants, and 15 participants stopped participating by the end of the study. Additionally, three participants joined during Time 2, resulting in 91 total participants.

Of the 88 participants at the beginning of our study, 29 were male and 59 were female. Eleven participants identified themselves as African American, 10 as Asian, 61 as Caucasian, two as Hispanic, and four as Other. The mean age of the participants was 18.52 years, with a standard deviation of 1.06. The mean relationship length was 18.68 months ($SD = 36.96$).

The participants who did not complete the study did not differ from those who did in age, sex, or race. The attrition rate could be in part due to participants no longer needing course credits and possibly due to a malfunction in our survey program (i.e., Qualtrics) during Time 3, during which it may not have recorded some of the data.

Measures

Love items.

The Love Items assessed whether or not the participant was in love. Participants answered the following yes or no questions: Are you currently in love? If so, have you fallen in love in the last four weeks? Next, the participants entered the first name of the person with whom they were in love. If they were not currently in love, participants were asked to enter the first name of a person with whom they would like to be in love. If neither applied to the participants, they were asked to leave the space blank.
Automatic thought items.

Automatic thought items assessed the frequency and valence of the participants’ automatic thoughts. The item assessing frequency asked participants: How often do thoughts about the person you love or care about pop into your head? with five response options ranging from “Never” to “All the time.” The valence item asked participants: When thoughts about this person seem to pop into your head, which of the following best describes what they tend to be like? with categorical answer options of “Mostly or entirely negative,” “Mostly or entirely positive,” “A fairly equal mix of positive or negative,” and “Neither positive nor negative.”

Relationship measures.

Inclusion of Other in Self scale.

The Inclusion of Other in Self scale is a pictorial measure intended to examine people’s sense of interpersonal connectedness (Aron, et al., 1992). Participants choose one of seven pictorial options of two circles varying in different degrees of overlap that best described their relationship. The Inclusion of Other in Self and the rest of the measures included in the repeated questionnaire can be seen in Appendix I.

A Generic Measure of Relationship Satisfaction.

I used the seven items from A Generic Measure of Relationship Satisfaction (Hendrick, 1988) to measure relationship satisfaction. The scale has been found to correlate significantly with measures of love, sexual attitudes, self-disclosure, commitment, and investment in relationship. A sample question from this scale is “How well does this person meet your needs?” with five response options ranging from “Not at all” to “Entirely.”
**Relationship variables.**

I measured five properties of the participants’ target relationships: how much time, in hours, they had spent socially with the other person in the past week; how long, in months, they had been in a relationship; how long, in months, they had known each other; how much they liked the other person, with five answer choices ranging from “Not at all” to “Extremely”; and a similar measure pertaining to explicit wanting, asking how much effort they would exert in the moment to spend an hour with the person with five answer choices ranging from “None” to “An extreme amount.”

**Procedures**

Participants received online questionnaires at Time 1, Time 2, and Time 3, which were four weeks apart. They had one week to complete the questionnaire using their own computers, and it was recommended that they do this somewhere private. Each questionnaire contained identical love items, automatic thought items, and relationship measures, and the first questionnaire also asked the participant’s age, sex, and race.

**Results**

In order to test the hypothesis that participants who are in love have more automatic thoughts about their partners than participants who are not in love, a multilevel model was created with observations nested within participants. Being in love was associated with more frequent automatic thoughts as compared to not being in love, $\beta = -1.20$, $p < .0001$. Love status was dummy-coded such that being in love is the reference group, resulting in a negative slope. In testing whether having fallen in love recently predicts increased automatic thought frequency, a subset of the data set was selected, so that only observations in which the participant indicated being in love were analyzed. A multilevel model with observations nested within participants
was created, and it was found that having fallen in love recently did not significantly predict increased automatic thought frequency, $\beta = -0.39$, $p = 0.0982$. However, there were only 23 instances in which a participant had fallen in love recently, as defined by having fallen in love in the previous four weeks, compared to 206 instances in which the participant had not fallen in love recently.

To test whether automatic thought frequency was associated with greater scores on the Inclusion of Other in Self scale, multilevel models were created with observations nested within participants. Results showed that automatic thought frequency was associated with greater scores on the Inclusion of Other in Self Scale, $\beta = 0.09$, $p < 0.0001$. Similarly, to test whether automatic thought frequency was associated with greater scores on A Generic Measure of Relationship Satisfaction, multilevel models were created and showed that automatic thought frequency predicted scores of relationship satisfaction, $\beta = 0.47$, $p < 0.0001$.

I hypothesized that automatic thought frequency would predict subsequent explicit wanting to be with the other above and beyond prior explicit wanting. A multilevel model was created with observations nested within participants and previous explicit wanting predicting subsequent explicit wanting. Explicit wanting to spend time with the other previously was a significant predictor of explicit wanting subsequently, $\beta = 0.54$, $p < 0.0001$. Once automatic thought frequency was entered as an additional predictor, automatic thought frequency was a significant predictor of subsequent explicit wanting above and beyond prior explicit wanting, $\beta = 0.63$, $p < 0.0001$. The reverse did not hold; previous explicit wanting did not predict subsequent automatic thought frequency above and beyond previous automatic thought frequency, $\beta = 0.09$, $p = 0.2638$. 

Considering the hypothesis that automatic thought frequency would predict hours spent socially with the other above and beyond previous hours spent with the other, a multilevel model was created with observations nested within participants and time together previously predicting time together subsequently. Automatic thought frequency previously only marginally predicted hours spent socially with the other subsequently above and beyond hours spent with the other previously, $\beta = 2.39, p = .0597$. The mean hours spent socially together was 10.91 ($SD = 17.77$).

**Discussion**

The common notion of constantly thinking about a romantic partner is something many can relate to, and yet there is a lack of empirical research on this topic. In this experiment I hoped to shed some light on how these positive automatic thoughts relate to romantic love. This is an especially prevalent topic when applied to loving experiences, because positive automatic thoughts may serve to nudge people back toward their romantic partners in order to have more micro-moments of positivity resonance, and thus become happier and healthier.

As predicted, being in love was associated with increased automatic thought frequency as compared to not being in love. This is consistent with Bargh’s (1992, 1994) principles of chronic automaticity, in which salient items are better able to come into conscious awareness, and my extension of these principles; a significant other is likely to be salient to a person, and thus should be better able to come into conscious awareness. It also corresponds with the idea that the amount of indirect associations related to the significant other results in more cues tied to the representation of the other, and therefore more thoughts about the other.

Also consistent with my hypotheses, automatic thought frequency was associated with feelings of interpersonal connectedness. The Inclusion of Other is Self Scale uses overlapping circles to represent the closeness of two people, and love seems to facilitate the integration of the
other into one’s self-concept. Participants who reported frequent automatic thoughts also had these feelings of interpersonal connectedness. This could reasonably connect to micro-moments of positivity resonance, because they are thought to promote happiness and health (Fredrickson, 2013). While I cannot make causal claims from my data, it is possible that positive thoughts serve to draw people to their significant others to have micro-moments of positivity resonance, and therefore feel more connected. Similarly, automatic thought frequency was also associated with relationship satisfaction. I expected that there would be a relationship between the two based on the same logic; micro-moments of positivity resonance are thought to be connected with happiness, so it is reasonable that this may be extended to relationship satisfaction. However, one aspect of these findings to consider is that my sample represented only one half of the valence continuum of automatic thoughts. It is possible for people to have negative automatic thoughts about significant others, which might then lead to less feelings of interpersonal connectedness and low relationship satisfaction. In this study, participants experienced positive automatic thoughts about their significant others, allowing me to consider those positive automatic thoughts in association with increased feelings of interpersonal connectedness and increased relationship satisfaction.

An unexpected finding occurred in relation to relationship longevity and automatic thought frequency. Based on past theories and findings that romantic love fades with time (Sternberg, 1986), and more specifically that many happily married couples do not have intrusive thoughts about one another (Tennov, 1979), I hypothesized that having fallen in love recently would predict increased thought frequency about the other. However, this was not the case. The low number of observations in which participants had recently fallen in love may be partly responsible for this contradiction. Furthermore, it may be that my sample was too different from
the samples used in the past; while many of the participants in past studies were married for at least ten years, my sample was made up of undergraduates who are less likely to be in such a committed relationship, especially for that amount of time. Thus, because I did not compare participants in a new relationship with people in long-term relationships or marriages, perhaps any difference between the two was lost. It is possible that the fading of automatic thoughts in romantic love occurs further down the line in relationships than most of our participants were experiencing. While we cannot tell from my data what the true cause of the lack of significant results was, future studies could help distinguish between the different interpretations. Future research could better explore when in a relationship automatic thoughts about the other decrease or cease by using a longitudinal study.

Considering that automatic thoughts may serve to guide people to see their significant others in order to obtain more micro-moments of positivity resonance, I hypothesized that automatic thought frequency would be related to explicit wanting to spend time with the other as well as hours spent socially with the other. I found that automatic thought frequency was a predictor of subsequent explicit wanting above and beyond prior explicit wanting. Interestingly, the reverse was not true; previous explicit wanting did not predict subsequent automatic thought frequency above and beyond the previous explicit wanting. This is an interesting finding. According to Fredrickson (2013), features of love are both the cause and consequence of loving connections. For example, health, bonds, personality traits, and resilience all increase the frequency and intensity of micro-moments of positivity resonance during which one experiences love. In turn, love builds the resources and the resources boost one’s experiences of love. While I believed that automatic thoughts could contribute to these resources as well, such that
automatic thoughts would encourage micro-moments of positivity resonance and, in turn, these micro-moments would encourage more automatic thoughts, this was not the case.

Finally, thought frequency was only a marginally significant predictor of subsequent social time spent with the other above and beyond prior social time spent with the other, suggesting that there may be a trend. It is possible that this marginal significance is a result of our sample. Our participants were all undergraduates in college, and largely college freshmen, which may be a busy and overwhelming time for many, and thus may leave less time to spend with a significant other despite wanting to spend time with that person. Therefore, it is possible that the marginally significant results suggest that this hypothesis was in the right direction but hindered by my particular sample. Future research using a sample in different circumstances may help clarify these results. There is a connection between automatic thought frequency and the desire to spend time with the other, while the relationship between automatic thought frequency and actually spending time together may require more research to fully explore. Overall, the data provide some support for the notion of automatic thoughts serving as guides toward micro-moments of positivity resonance.

The present study has strengths in that it is among the first to consider positive automatic thoughts, especially in the context of love. On the other hand, it has limitations as well, most of which are due to the nature of online questionnaires. While convenient for this type of study, there are certainly uncontrollable variables involved, such as how participants choose to complete the questionnaires, including whether they completed the questionnaire in a setting that could lead to social desirability effects (i.e. their partners were nearby). However, I did my best to control for these limitations by instructing the participants to complete the questionnaires in private.
Furthermore, the data collected could not lead to any causal explanations, and for that reason it is possible that some of the variables are related in different directions than predicted. Participants who reported being in love might have then answered automatic thought items in a manner they thought corresponded to that feeling (i.e. people in love should think positively and frequently about their partners, and since I am in love, I must think that way). Future research could help control for this by framing the questions differently. If, for example, a question explained that all relationships have good and bad aspects, then participants may answer more truthfully. Alternatively, people may interpret their automatic thoughts and determine that because they have these thoughts, they must be in love. Again, future research could help clarify this point by allowing for more causal linkages.

Overall, my findings demonstrate that there is a connection between automatic thoughts and romantic love in at least some areas. I explored the relationship between automatic thoughts and the way one represents the other with regard to oneself through measures of interpersonal connectedness and relationship satisfaction. I also considered ways in which automatic thoughts may serve as a way to bring partners together by reminding and encouraging them to seek out micro-moments of positivity resonance with one another. While the present study cannot report any causal linkages, my findings suggest that this is a fruitful area for further investigation. Aside from the aforementioned improvements based on methods and sample, there are other new directions that future research could explore. One prominent feature of Fredrickson’s (2013) micro-moments of positivity resonance, for example, is the ways in which two or more people engage with one another by mirroring each other’s gestures, biochemistry, and warmth; in other words, both parties are responsible for producing love, not just one. Thus, research considering both partners’ automatic thoughts, feelings of connectedness, relationship satisfaction, and
explicit wanting to spend time with one another could offer a more complete view of my arguments. However, my research has strengths in that it suggests we are on the right path toward finding more exact or causal linkages between positive automatic thoughts and romantic love.

The feeling of always having your significant other in your mind is something we hear about often; many of us can even relate to it, either from a past love or a current one. It is something commonly discussed, but rarely examined in the context of the role these thoughts might play in romantic love. The results of the present study suggest that there may be more to these automatic thoughts than was previously thought. Perhaps these automatic thoughts actually serve as a method of bringing us to our significant others, which in turn could lead to a variety of positive results, including greater feelings of interpersonal connectedness and greater relationship satisfaction, as well as the positive outcomes of micro-moments of positivity resonance (Fredrickson, 2013) of greater happiness and health.
References


Appendix 1. *Questionnaire Content.*

Please answer the following questions about yourself as openly and honestly as you can.

Are you currently in love?

Yes          No

If so, have you fallen in love in the past 4 weeks?

Yes          No

Please enter the first name of the person with whom you are in love. If you are not currently in love with someone, enter the name of a person with whom you would like to be in love. If neither of these applies to you, please leave the space blank.

[Text box]

This next set of questions relates to automatic thoughts about the person you named on the previous page. Automatic thoughts may seem to pop into your head or just come to you. Other times, you may just find yourself thinking about something without remembering how, when, or why you started thinking about it. The defining feature of automatic thoughts is that you don’t specifically try to have them the way you deliberately try to have other thoughts. Please answer the following questions with respect to the automatic thoughts you tend to experience as openly and honestly as you can.

How often do thoughts about the person you love or care about seem to pop into your head?

Never        Rarely        Sometimes        Often        All the Time

When thoughts about this person seem to pop into you head, which of the following best describes what they tend to be like?

*(Participants select one)*

- Mostly or entirely negative thoughts
- Mostly or entirely positive thoughts
- Thoughts that are a fairly equal mix of positive or negative
- Neutral thoughts that are neither positive nor negative
Indicate the extent to which each of the following describes how the thoughts that pop into your head about the other person make you feel.

__ Angry, irritated, or annoyed

Not at all  A little  Moderately  A lot  Extremely

__ Sad, downhearted, or unhappy

Not at all  A little  Moderately  A lot  Extremely

__ Scared, fearful, or afraid

Not at all  A little  Moderately  A lot  Extremely

__ Disgust, distaste, or revulsion

Not at all  A little  Moderately  A lot  Extremely

__ Contemptuous, scornful, or disdainful

Not at all  A little  Moderately  A lot  Extremely

__ Embarrassed, self-conscious, or blushing

Not at all  A little  Moderately  A lot  Extremely

__ Repentant, guilty, or blame-worthy

Not at all  A little  Moderately  A lot  Extremely

__ Ashamed, humiliated, or disgraced

Not at all  A little  Moderately  A lot  Extremely

__ Grateful, appreciative, or thankful

Not at all  A little  Moderately  A lot  Extremely
__ Interested, alert, or curious
Not at all  A little  Moderately  A lot  Extremely

__ Love, closeness, or trust
Not at all  A little  Moderately  A lot  Extremely

__ Amused, fun-loving, or silly
Not at all  A little  Moderately  A lot  Extremely

__ Glad, happy, or joyful
Not at all  A little  Moderately  A lot  Extremely

__ Hopeful, optimistic, or encouraged
Not at all  A little  Moderately  A lot  Extremely

__ Sexual, desiring, or flirtatious
Not at all  A little  Moderately  A lot  Extremely

__ Proud, confident, or self-assured
Not at all  A little  Moderately  A lot  Extremely

__ Content, serene, or peaceful
Not at all  A little  Moderately  A lot  Extremely

__ Awe, wonder, or amazement
Not at all  A little  Moderately  A lot  Extremely
__ Sympathy, concern, or compassion
Not at all    A little    Moderately    A lot    Extremely

__ Surprised, amazed, or astonished
Not at all    A little    Moderately    A lot    Extremely

Now please answer the following questions about your relationship with the other person as openly and honestly as you can.

Please select the picture below that best describes your relationship.

Please answer the following about your relationship with the person you named earlier in the experiment.

__ How well does your partner meet your needs?
Not at all    A little    Moderately    A lot    Extremely

__ In general, how satisfied are you with your relationship?
Not at all    A little    Moderately    A lot    Extremely

__ How good is your relationship compared to most?
Not as good    About as good    A little better    Much better    Far better

__ How often do you wish you hadn’t gotten into this relationship?
Never    Rarely    Sometimes    Often    All the Time
__ To what extent has your relationship met your original expectations?
Not at all   A little   Moderately   A lot   Extremely

__ How much do you love your partner?
Not at all   A little   Moderately   A lot   Extremely

__ How many problems are there in your relationship?
None   A few   A moderate amount   A lot   An extreme amount

In any average week, how many hours do you spend socially with the other person (that is, outside of class, extracurricular activities, etc.)?

[Text box]

How long (in months) have you been in a relationship with the other person? (Leave blank if not currently in a relationship.)

[Text box]

How long (in months) have you known the other person?

[Text box]

How much do you like the other person?

Not at all   A little   Moderately   A lot   Extremely

How much effort would you exert right now to spend an hour with this person?

None   A little bit   A moderate amount   A lot   An extreme amount

Please indicate the extent to which you agree with the following statements.

______________________________________________________

The first questionnaire also contained the following items.

Please answer the following questions about yourself.

What is your gender?

Male       Female
What is your age?

[Text box]

What is your ethnicity?

African American  Asian  Caucasian  Hispanic  Other