CHAPTER 1

Love as Expansion of the Self

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What Is Love? And How Can the Self-expansion Model Help Us Understand It?

The self-expansion model of love was developed in the 1980s (Aron & Aron, 1986; for a recent review, see Aron, Lewandowski, Mashek, & Aron, 2013). It emerged from an integration of two diverse worlds of knowledge. The first world of knowledge was relevant social-psychological theories of basic human motivation, and the little research that existed at the time on attraction and relationships. The second world of knowledge was from classical concepts of love. From Western philosophy, for example, Plato's *Symposium* on love emphasizes the ultimate goal of growth from loving a specific person to universality. From Eastern philosophy, for example, the Upanishad discusses how close relationships lead to this kind of universality: "the love of the husband is not for the sake of the husband, but he is loved for the sake of the self which, in its true nature, is one with the Supreme Self" (and then continues the same for love of the wife, of children, and even of wealth).

Our focus then was mainly on romantic love, although since then the model has been applied much more widely, both to diverse types of love, and beyond love to fields such as intergroup relations and individual motivation. In this chapter, our focus is on romantic love, both intense passionate love and close relationships more generally.

We first describe key principles of the model, and then turn in more detail to its implications, focusing on initial attraction, the neural basis of being intensely in love, and the trajectories of romantic relationships over the lifespan. We then turn to implications for maintaining and enhancing relationships; then to understanding diverse problems that arise in relationships; and finally, briefly to other kinds of love. We conclude with examples of how the self-expansion model relates to some other major theories and discussion of future directions. We consider our model not

as a competitor to other approaches, but rather as a partner, with the self-expansion model in some cases helping to deepen (or even "expand") other models, and in other cases, with other models helping to deepen and expand our model (and, of course, in some cases both).

The Self-expansion Model

What is the self-expansion model? The model has two key principles:

1. *Motivational principle:* People seek to expand their potential efficacy, to increase their ability to accomplish goals. That is, a fundamental human motive is what other scholars have described as exploration, effectance, self-improvement, curiosity, competence, or a broadening of one's perspective. (And experiencing rapid self-expansion should be particularly rewarding.) The motivational principle was influenced by White's (1959) work, arguing that the drive for efficacy or competence is similar to drives for basic needs such as hunger and thirst. Deci and Ryan's (1987) theory of intrinsic motivation, Bowlby's (1969) theory of secure base support for exploration, and Fredrickson's (2001) broaden-and-build model all touch on related motivational principles. See Aron, Aron, and Norman (2004) for a more detailed discussion.
2. *Inclusion-of-other-in-the-self principle:* One way people seek to expand the self is through close relationships, because in a close relationship the other's resources, perspectives, and identities are experienced, to some extent, as one's own.

And what does all of this mean for love? Based on this model, we define love as "the constellation of behaviors, cognitions, and emotions associated with a desire to enter or maintain a close relationship with a specific other person" (Aron & Aron, 1991, p. 26). That is, love is the desire to expand the self by including a desirable other in the self.

Example Research Support for the Motivational Principle

Aron, Paris, and Aron (1995) conducted a study with undergraduates in two large classes, in which every two weeks over a ten-week quarter, students completed standard self-concept measures along with a measure of whether they had fallen in love in the last two weeks. Those who fell in love in the previous two weeks showed significantly greater self-esteem, self-efficacy, and more traits listed in response to "Who are you today?" (a kind of literal self-expansion). And perhaps the most direct example for making

clear what self-expansion motivation has to say about relationships is the consistent findings of greater relationship quality for those with higher scores on the widely used measure of relationship self-expansion, the Self-Expansion Questionnaire (SEQ; Lewandowski & Aron, 2002). Example items include "How much does your partner help to expand your sense of the kind of person you are?" "How much does your partner increase your ability to accomplish new things?" and "How much do you see your partner as a way to expand your own capabilities?"

Example Research Support for Inclusion-of-Other-in-the-Self

The inclusion principle has actually received the most scientific attention. The basic idea is that in a close relationship your mental construction of yourself (the way you spontaneously think of yourself) overlaps with your mental image of your close other. This has been shown in a particularly direct way by the "me-not-me response-time procedure": You rate yourself and a close other on various traits, and then later in another context, you are shown each trait on a computer screen and asked to press a "yes" or a "no" button for whether the trait is or is not true of yourself. The greater closeness between you and your close other, the slower you are in pressing the button for traits on which you and your close other differ. Other studies have shown, for example, that closeness predicts difficulty in distinguishing memories relevant to the self and the other, greater spontaneous sharing of resources with the others, and more overlapping neural areas when hearing the names of the self and the other. Indeed, a pictorial self-report measure of perceived overlap of the self and the other, the inclusion of the other in the Self Scale (Aron, Aron, & Smollan, 1992) has been used successfully in literally hundreds of studies to date (see Figure 1.1).

Implications for Different Types/Stages of Romantic Love

Attraction and Falling in Love

With whom are you likely to fall in love? Many studies on the predictors of initial interpersonal attraction have documented the importance of reciprocal liking (the other person liking you), desirable characteristics, and seeing the other as similar (see Zhou, Chelberg, & Aron, 2016, for a review). It feels good to be liked by others and it is also rewarding to be around others who validate our worldviews (Byrne, 1971). The findings on reciprocal liking and similarity taken together suggest that perceptions of

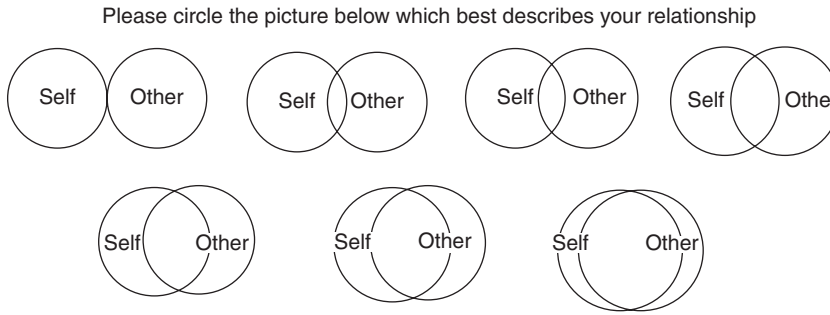

Figure 1.1 The inclusion of the other in the Self Scale.
(Originally printed in Aron et al., 1992.)

how others feel about the self are crucial in deciding with whom to engage in a relationship. The self-expansion model also sheds light on the processes of interpersonal attraction, suggesting that the standard situation works in part because reciprocal liking and similarity suggest a relationship (and thus expansion) is likely; and desirable characteristics are desirable at least in part because they are qualities that would expand the self if you had a relationship with this person. (Indeed, research going beyond attraction, examining people's experiences of falling in love, found that the most common situation was one in which a desirable other did something that indicated they liked the self; e.g. Riela, Rodriguez, Aron, Xu, & Acevedo, 2010.)

In addition, the model has pointed out some situations where, after reciprocal liking is established (and a relationship seems likely), opposites might attract. In one experiment, participants were given a measure of interests and a week later were shown the interest results of a supposed other person whom they were either told they were likely to get along with or about whom they were given no information. The first condition created an expectation for relationship certainty, establishing the idea that reciprocal liking was likely to occur. As predicted, based on the notion that different interests, if a relationship is possible, offer greater expansion of the self, participants in the relationship certainty condition reported liking dissimilar others more than similar others (Aron, Steele, Kashdan, & Perez, 2006).

Being Intensely in Love

So, you have now fallen in love. What does it mean to be passionately in love? One way researchers have explored this question is with brain imaging. We

consider self-expansion (and especially the perceived opportunity for rapid expansion) through a relationship to be a powerful motivation. Passionate love specifically represents the intense desire for self-expansion through a relationship with the beloved (and thus, including him or her in oneself). Brain imaging can provide a clear picture of the degree of intense motivation experienced when one is in love.

Over the last dozen years, several functional magnetic resonance imaging (fMRI) studies have consistently demonstrated greater activation in the brain's key reward system when in-love individuals viewed a facial photo (or even when they were subconsciously presented with the name) of their romantic partner versus a facial photo of a familiar acquaintance. These findings have been replicated cross-culturally and across sexual orientation (for a review, see Acevedo, 2015). The key areas found again and again represent what is known as the dopamine reward system, the same brain areas that respond to cocaine. (Although the notion that romantic love is fundamentally a reward-based process is consistent in a general way with many models of love, it specifically supports the self-expansion model notion that passionate love should be considered more from a motivational than an emotional perspective, that it is associated more with expansion than survival, and that it is not primarily a more-specific brain system.)

This neural pattern has even been found in a study of long-term married individuals reporting high levels of passionate love (Acevedo, Aron, Fisher, & Brown, 2011). This study also explicitly measured key self-expansion model variables, and found that (a) activation of the dopamine system was correlated with greater inclusion of the other in the self (as measured by the IOS Scale) and that (b) participants also showed stronger dopamine system activation in association with greater relationship self-expansion (measured by the SEQ). Other fMRI studies provide further support for the centrality of this motivational system in passionate love. For example, when individuals experiencing intense romantic love are shown images of their partner (versus neutral acquaintances), it reduces brain responses to physical pain (Younger et al., 2010). And in a study of habitual smokers who are in love, viewing images of the beloved significantly reduced the brain's response to images of cigarettes (versus of pencils) (Xu, Wang, et al., 2012).

Ongoing Love and Relationship Closeness

Love as including each other in each other's self. In a love relationship, the identities of two partners become intricately intertwined. For

example, partners know what the other is thinking, can finish each other's sentences, and have difficulty remembering what belongs to whom. As we noted earlier, describing the "me-not-me" procedure, this can happen so much so that reaction-time studies have shown that it takes longer to decide whether a trait belongs to yourself if it doesn't also belong to your partner; mental representations of the self include elements of close others. There are many studies showing this self-other overlap in a variety of ways. For example, Aron, Aron, Tudor, and Nelson (1991) asked participants to rate the extent to which they and a non-close other possessed pairs of traits (e.g. "carefree-serious"). Participants were given the option to report that only one trait, both traits, or neither trait applied to themselves and a non-close other. People reported both traits applied more when rating the self compared to a non-close other, because people are less likely to make dispositional attributions (seeing a person as all one-way) about the self compared to others (Sande, Goethals, & Radloff, 1988). Aron et al. (1991) showed that individuals also chose more "both apply" options when rating close others (similar to when rating the self). These results suggest that people treat close others in the same way that they treat themselves, spontaneously showing to some extent the same self–other dispositional bias for a close other as for the self. When in a close relationship, people demonstrate cognitive interdependence as well, which means they are more likely to use pronouns such as 'we' and 'us' compared to 'me' and 'my' (Agnew, Van Lange, Rusbult, & Langston, 1998). In addition, people are better at inferring intentions of close others compared to non-close others, owing to the activation of brain areas related to familiarity (Cacioppo, Juan, & Monteleone, 2017).

In such deeply interdependent relationships, perceived partner responsiveness, or the sense that the partner understands, validates (gets you), and cares for you, is central (Reis, Clark, & Holmes, 2004). One study suggests that perceptions of how much your partner includes you in their self are important in determining the extent to which you are willing to also include your partner in your own self (Tomlinson & Aron, 2013).

Love over time. Love and general relationship satisfaction consistently show typical declines over time (e.g. Karney & Bradbury, 1997; O'Leary, Acevedo, Aron, Huddy, & Mashek, 2012; Tucker & Aron, 1993). The self-expansion model argues that passion arises from the intensity of the rapid self-expansion that occurs in the formation of a relationship as one comes to include the other in the self; but once the other is largely included, the rate of expansion inevitably slows down. Indeed, in a large representative

sample, how much passionate love one feels was associated with self-expansion in relationships over time (Sheets, 2014). The benefits of self-expansion are likely owing to increases in positive affect (Graham & Harf, 2015; Strong & Aron, 2006) and decreases in boredom (Tsapelas, Aron, & Orbuch, 2009). (As an aside, in a sense, passionate love is selfish in that it is focused on my feelings of self-expansion, but it is also unselfish in that because I include the other in the self, his or her self-expansion is also experienced as my own. So, we should be motivated to want the other to expand, and both partners should experience rapid self-expansion, but this has not been directly tested.)

Nevertheless, although passionate love (and satisfaction and love of all kinds) generally declines over time, the view that passionate love *inevitably* declines has not been demonstrated. It is clear that many long-term couples experience high levels of satisfaction. Indeed, in a four-year longitudinal study of newlyweds, Karney and Bradbury (1997) found that about 10% maintained or increased their level of satisfaction. Perhaps more surprising, in a representative US survey, 40% of individuals married for ten years or longer reported being "very intensely in love" with their partner (O'Leary et al., 2012). Further, interview data (Acevedo & Aron, 2005) suggests that at least some reports may correspond to how the relationship is actually being experienced and are not due merely to wanting to make a good impression or self-deception. These results were supported by fMRI data in partners reporting intense passionate love and married an average of 21.4 years, showing that brain activation is similar to that found in early stage passionate love (Acevedo et al., 2011). Further, brain activation in areas associated with passionate love and reward were positively correlated with satisfaction in long-term couples (Acevedo et al., 2011). There is also evidence that brain activation early on in a relationship predicts relationship stability and quality up to forty months later (Xu, Brown, et al., 2012).

Ways to Maintain/Enhance Love

How Can We Keep the Passion Alive?

Shared self-expansion activities. Once relationship partners can no longer gain substantial expansion from the initial development of the relationship, they can renew that sense to some extent by engaging in expanding activities together and thus associate the relationship and partner with the expansion from that shared expanding activity. Participation in shared self-expanding activities positively influences romantic relationship satisfaction

(Aron, Norman, Aron, McKenna, & Heyman, 2000). Reissman, Aron, and Bergen (1993) randomly assigned married couples to participate together each week in either an exciting or a pleasant but not exciting activity for ten weeks. The activities most often listed as exciting included things like attending musical concerts, plays, lectures, skiing, hiking, and dancing. Couples who participated in exciting activities had significantly greater increases in satisfaction after the ten weeks compared to those who participated in pleasant activities. Five other studies further established the impact of exciting activities above and beyond the effect of mundane activities on relationship satisfaction (Aron et al., 2000). For example, in three experiments, couples in the exciting condition participated in an obstacle course task together that included elements of novelty, challenge, and arousal. Further, a randomized clinical trial experiment asked couples to complete exciting activities for ninety minutes per week for four weeks (Coulter & Malouff, 2013). As in Reissman et al. (1993), couples chose the activities themselves after giving suggestions that were adventurous, passionate, sexual, exciting, interesting, playful, romantic, and spontaneous. Results showed that couples in the exciting group (compared to a waitlist control) had increased relationship excitement, positive affect, and satisfaction when tested four months later.

The self-expansion model suggests that exciting activities should be beneficial over more mundane or pleasant activities, but exactly what the exciting activities should look like has not been spelled out. The majority of the exciting activities that have been considered across studies contain elements of novelty, challenge, interest, and arousal (not necessarily sexual, but just general physical arousal). These initial studies did not identify which elements of excitement are most essential and if they vary by stage and type of relationship. Tomlinson, Hughes, Lewandowski, Aron, and Geyer (in press) sought to clarify this issue by comparing the effects of arousal and expansion in ongoing friendships and marriages. Across four studies, in both friend and married pairs, expansion was central to both individual and relationship outcomes, whereas arousal was not. These are only initial findings, but if future work continues to find this pattern, this suggests that elements of expansion, such as interest and fun, should be prioritized over physical arousal when selecting shared activities within ongoing relationships. That is, doing things together that are interesting and fun has more effect on love than just exercising together!

In addition to identifying the benefits of shared participation in exciting activities, research in this area also suggests that the mechanisms behind

the benefits of exciting activities are owing to increases in positive affect (Coulter & Malouff, 2013; Graham & Harf, 2015; Strong & Aron, 2006) and decreases in boredom (Aron et al., 2000; Tsapelas et al., 2009). Daily diary research suggests that the increases in positive affect and decreases in boredom while participating in exciting activities may occur because of a sense of flow or optimal engagement in the activity (Graham, 2008). For optimal engagement to occur, it is important that the couple's skill levels are matched with the challenge level of the task. If a task is too challenging (in such a way that exceeds skill), couples did not experience benefits (Graham & Harf, 2015).

One type of shared activity many couples choose to seek out is a double date with another couple. Recent research experimentally tested the effects of engaging in a shared self-expansion task with another couple (Slatcher, 2010; Welker et al., 2014). In these studies, reciprocal and escalating levels of self-disclosure across couples provide the vehicle for self-expansion. Couples engaged in a forty-five-minute closeness building task. (This procedure, developed by Aron, Mellinat, Aron, and Vallone (1997) and usually done with pairs of strangers, is widely used in research and is known as "Fast Friends." It has become popular in the broader culture as "The 36 Questions for Closeness." There are a series of questions that are increasingly self-disclosing; each of the four answers each question, before proceeding to the next; and this continues for about forty-five minutes.) Those who did the closeness task, compared to pairs of couples who did a similarly long small talk task, felt closer to the couple that they got to know through the task, and more importantly, felt closer to one another (Slatcher, 2010). In addition, couples who engaged in the closeness task (compared to couples who made small talk) with another couple experienced increases in positive affect (Slatcher, 2010) and passionate love (Welker et al., 2014). These results suggest that simply sharing deep conversation with another couple might provide a way of enhancing and maintaining relationships over time.

Individual self-expansion activities. Although there is a clear benefit to engaging in shared activities with a partner, couples also spend a substantial portion of their time apart and engaging in hobbies, work, friendships, and other activities. There is a growing body of research that suggests that individual activities can provide an excellent vehicle for individual self-expansion (e.g. Mattingly & Lewandowski, 2013). Across a variety of experiments, individuals who engaged in novel, exciting, and interesting

activities (compared to controls) experienced increased self-expansion and exerted greater effort (Mattingly & Lewandowski, 2013). Individual self-expansion activities lead to benefits because they increase the self-concept size and promote approach motivation (Mattingly & Lewandowski, 2014; Mattingly, McIntyre, & Lewandowski, 2012); a result that applies even in the work place (McIntyre, Mattingly, Lewandowski, & Simpson, 2014). By participating in individual self-expansion activities, whether they be leisure activities or a satisfying job, people can increase their own self-concepts and bring novel identities, perspectives, and resources back to the relationship and their partner.

Support for partner's self-expansion. Because participation in individual self-expansion activities has the potential to lead to relationship benefits, it would be advantageous for partners to encourage one another to seek out activities that might lead to expansion. Indeed, within long-term relationships, individuals whose partners actively encouraged them to seek out an opportunity for self-expansion (in comparison to those partners who only provided a passive acknowledgment) experienced increased relationship satisfaction (Fivecoat, Tomlinson, Aron, & Caprariello, 2015). In addition, people who perceive their partners to support their goal strivings experience increased feelings of capability of accomplishing the goal, which leads to self-growth, goal accomplishment, and self-esteem over time (Tomlinson, Feeney, & Van Vleet, 2016).

Self-expansion in retirement. Much of the research on self-expansion has been done with college students or relatively young married couples. However, there is evidence that older adults self-expand in a variety of life domains (Harris, Kemmelmeier, & Weiss, 2009). Retirement could be viewed as an opportunity to seek out activities that could lead to growth, which couples did not have time for while focusing on career goals. In a recent longitudinal study, we asked retirees to respond to the same question "Who are you today?" that we asked college students to answer in the Aron et al. (1995) study on falling in love. Interestingly, we found that during the transition to retirement, in general, people's self-concept size and diversity decreased, but partner support for self-expansion predicted an increase in self-concept size over a six-month period (Tomlinson, Yosaitis, Challener, Brown, & Feeney, 2015). In addition, partner support for self-expansion predicted relationship satisfaction, satisfaction with retirement, self-efficacy, goal accomplishment, and health over time (Tomlinson & Feeney, 2016).

Problems

Though there are many benefits and joys, especially to love relationships that are self-expanding rather than self-adulterating (Mattingly, Lewandowski, & McIntyre, 2014), there are also risks that are inherent to opening yourself up to closeness.

Over-idealization

When in love, partners tend to view one another with rose-colored lenses. Idealization is generally a good thing within relationships (Murray et al., 2011) and might even lead to self-expansion through which a partner helps you to reach your ideal self (Rusbult, Finkel, & Kumashiro, 2009). However, recent research suggests that perceived idealization has a kind of "U"-shaped relationship with satisfaction, such that too little or too much is detrimental (Tomlinson, Aron, Carmichael, Reis, & Holmes, 2014). Feeling over-idealized can be problematic because it sets up expectations that may be unwanted or unachievable, leading to a fear of discovery. In addition, the object of over-idealization may be less motivated to engage in pro-relationship behaviors, such as accommodation, if they feel that their partner thinks they walk on water. Over-idealization seems to be mainly an issue for more visible abilities within dating couples, but it is problematic for both traits and abilities for married couples.

Infidelity

Infidelity (or "cheating") is a major issue in romantic relationships (for a review, see Tsapelas, Fisher, & Aron, 2011). As we have seen, self-expansion has important implications for relationship quality; and dissatisfaction may cause people to seek extra-dyadic partners to fulfill these self-expansion needs. Indeed, several studies of dating college students (mostly in several-month-long exclusive relationships) have found that self-expansion in the current relationship predicts less interest in potential alternative partners. Lewandowski and Ackerman (2006) found that both inclusion of the other in the self and, especially, how much one sees their relationship as providing or potentially providing self-expansion, strongly predicted how much people reported the likelihood that they would engage in various infidelity behaviors. Similar results, using other methods were found in two studies conducted by VanderDrift, Lewandowski and Agnew (2011). In study 1, participants interacted by computer with what they were led to

believe was an available attractive potential partner who provided standard answers that indicated high potential levels of self-expansion in a relationship with that person. Participants who had earlier reported low levels of self-expansion in their current relationship indicated that they liked the simulated partner and the overall interaction considerably more. In study 2, participants were told they could choose to be in a follow-up study involving a "get to know you" activity with a currently single opposite-sex student. They were then given a list of twelve very attractive potential interaction partners and asked to pick as many or few as they would like. Those with lower current-relationship self-expansion selected a greater number of the potential interaction partners. The two-dimensional model of relationship self-change finds that people who are in self-adulterating or self-contracting relationships (which add negative self-content or take away positive self-content) were more likely to demonstrate emotional and sexual infidelity (Mattingly et al., 2014).

Using a somewhat different focus, Tsapelas (2012) led participants to feel they did or did not have sufficient self-expansion in their lives. Participants were then shown pictures of several attractive others, each paired with self-expanding traits that their current partner either did or did not possess. After doing another task, participants who had been led to believe they had high self-expansion needs showed better memory for the alternatives that had self-expanding traits their partner did not have. Finally, in an fMRI study by Tsapelas and colleagues (in prep), participants showed less neural activity associated with perceiving attractive faces after viewing a video of their partner describing a self-expanding experience done together, versus after viewing a video of their partner describing a neutral activity done together (or even compared to a video of their partner describing an experience of showing their love for each other).

In sum, across multiple methods and studies, having self-expansion in a relationship (or even in one's life) seems to substantially help reduce the interest in cheating.

Unrequited Love

So, some problems with love involve feeling over-idealized or your partner being interested in someone else. But what if the person you love never loved you to begin with? Unrequited love is extremely common. In a large sample of college students, Baumeister and Wotman (1991) found that 93% reported having had at least one powerful or moderate experience of unrequited love in the last five years. Our own research with college

students (described below) found it in 82%. Hatfield, Schmitz, Cornelius, and Rapson (1988) found it common even among children.

Unrequited love can be a major source of depression and even suicide. Yet, at the same time, even unrequited love can be desired by some. To quote the great poet Tennyson, "better to have loved and lost than never to have loved at all." So, what is going on? The study of unrequited love raises special motivational issues, as the usual sources of expansion from an actual relationship are lacking. Given the self-expansion model, desirability would probably be the major motivation for unrequited love, in the sense that if a relationship with this person is seen as being extremely self-expanding, then you might be attracted, even if the probability is low. (It is similar to betting on the lottery – small odds, but big potential winnings.) Probability may play the greater role in a second situation when you mistakenly felt a relationship was likely, developed an attraction, and later discovered the error. But in the context of unrequited love, the self-expansion model also suggests a third factor, which is a desire to be in love, in order to have the expansion associated with enacting the culturally scripted role of lover, to experience the close association of expansion with being in love that is culturally ingrained – but *not* necessarily really wanting an actual relationship. To examine this three-factor motivational approach, Aron, Aron, and Allen (1998) tested this in 733 undergraduates who had experienced unrequited love. Consistent with predictions, each of the three motivational factors significantly and independently predicted intensity. The strongest effect for most was for desirability, but probability and desire to be in love had the strongest effects for substantial numbers of individuals. (We will briefly discuss the individual differences that seem to determine this in a later section.)

Rejection

And what if you were already in a relationship, and then rejected? Fisher, Brown, Aron, Strong, and Mashek (2010) used the standard procedure from fMRI studies of individuals who were newly in love, but this time for a sample of participants who had been recently rejected but still were intensely in love with their partner. In interviews, these participants were quite upset, angry, depressed, and more (indeed, several participants when in the scanner looking at pictures of their partner were sobbing). The brain scans showed all of this – when looking at their rejecter (vs. neutral other) they showed activation in regions associated with anxiety, pain, and attempts at controlling anger; yet, they still showed the powerful activation

in the dopamine reward areas found generally in studies of love. They were clearly upset, but also clearly still intensely seeking to be united with the partner – or as one way to understand this, the self-expansion opportunity was just too strong to let go. (The good news is that the longer it had been since the rejection, the less intense the findings. So, it seems time does typically help heal this wound.)

Breakup

The end of a self-expanding relationship, whether you were rejected, rejected the other, or something else happened, is challenging in many ways. Because the self grows through including the partner in the self, following a breakup, self-contraction can occur (Lewandowski, Aron, Bassis, & Kunak, 2006). The loss of a self-expanding relationship is especially detrimental to the self-concept post-dissolution. If you're feeling down after a breakup, one way to make yourself feel better could be to write about your feelings. Research shows that it is particularly helpful to write about the positive sides to a breakup, such as newfound time to hang out with friends or pursue a hobby (Lewandowski, 2009). However, if the relationship was low in self-expansion to begin with, results with undergraduate dating students suggest that people actually grow following a breakup due to rediscovery of the self, less loss due to the breakup, and increased positive emotions (Lewandowski & Bizzoco, 2007).

Beyond Romantic Love

Love is not just romantic love (although that is the main focus of this chapter). In this section, we briefly consider how the self-expansion model can help us understand the many kinds of love. What we love, whether a romantic partner or anyone or anything else, involves at least in part including or seeking to include these others in the self. Not surprisingly, parents include their children in the self and children include their parents (and the extent to which they do so predicts the quality of their relationship; e.g. Birditt, Fingerman, Lefkowitz, & Dush, 2008).

Furthermore, studies show that people even include nature in the self (e.g. Schultz, 2001). And beyond that, studies show that some people who include all people in the self have a general caring for all human beings (Leary, Tipsord, & Tate, 2008). And even further, being religious is associated with including God in the self (e.g. Hodges, Sharp, Gibson, & Tipsord, 2013). At the same time, the self-expansion model has been

applied to love of products and brands (e.g. Riemann & Aron, 2009), with research showing that including a brand in the self predicts brand love, brand loyalty, and so forth.

Research in all of these areas has only begun recently, but has considerable promise. However, there are two areas that have received particular attention, namely compassionate love of other groups (especially involving undermining prejudice toward minorities) and love of friends.

Compassionate Love for Members of Other Groups

Compassionate love is love that "centers on the good of the other" (Underwood, 2009, p. 3). That is, it is about caring for and feeling concern and wanting to help the other when in need. And it follows from the self-expansion model, that if you are close to someone, and thus to some extent include this person in yourself, you will want the best for him or her, just as you would for yourself. Indeed, there is research showing that we spontaneously share resources more equally with those we include in the self (Aron et al., 1991, study 1). However, as spelled out in more detail in Brody, Wright, Aron, & McLaughlin-Volpe (2008), most of the application of self-expansion directly relevant to compassionate love has focused on processes that involve including groups in the self. It is well documented that you include your own groups (your college, your ethnicity, your gender, and so forth). But the situation in which this becomes especially interesting, in terms of compassionate love, is when you include an "out-group" in the self, especially a group that is discriminated against.

One major way in which this can happen is through having a friend in an out-group. Suppose you are a European American and you have a good friend, Jose, who is Mexican American. According to the self-expansion model, as your close friend, Jose is to some extent part of yourself. Thus, if someone insults Mexican Americans in general (or even disparages some individual Mexican American) you are likely to feel insulted. A meta-analysis of 135 studies testing this basic idea that a close friendship makes feelings toward out-groups more positive, has found strong evidence for this effect (Davies et al., 2011). What is especially interesting here from the point of view of compassionate love is that the effect is not just reducing prejudice or negative feelings, but actually increasing positive feelings, such as care, respect, and even admiration of the other group. And this effect is found not just in surveys, but in strong, random-assignment experiments. For example. various researchers have done experiments where participants

are randomly assigned to get close (using the Fast Friends, or "36 questions" procedure) to a member of their own group or a member of another group and then are tested, for example, with hormonal response to expecting to meet a person from the out-group (Page-Gould, Mendoza-Denton, Alegre, & Siy, 2010). The findings are clear that getting close to a member of the other group substantially increases the effects on your feelings for the other group. Another example is a study that conducted a version of this experiment with the majority of an entering freshman class at a fairly racially diverse US university. During an early semester class session, freshmen were randomly paired to do Fast Friends together. The findings were clear – those that had been paired with a member of a different ethnic group showed much more positive feelings toward that other ethnic group than did those paired with a member of their own group (Davies, Aron, Wright, & McLaughlin-Volpe, 2007).

Finally, an especially interesting extension of the basic friendship effect based on the self-expansion model is called "extended contact." Just knowing about someone in your own group who has a friend in an out-group also causes more positive feelings toward the out-group! That is, suppose you are a Christian and you can see, sitting at the cafeteria table every day, that Mary (who you know is also a Christian because you see her at church) always sits with and clearly has a deep friendship with Fatima (who wears a headscarf and is known to be a Muslim). The findings from scores of studies (Zhou, Page-Gould, Aron, Moyer, & Hewstone, 2018) suggest that you will feel more positively about Muslims in general, and that one significant mechanism is via an indirect inclusion of other in the self (I include the in-group in the self and if I am aware of in-group members who include an out-group member in the self, it leads me to include that out-group).

Friendship Love

As expected, friendships (whether with someone of another group or of your own group) that are high in self-expansion are higher in satisfaction (Lewandowski and colleagues, unpublished data). Indeed, according to this study, people who are high in approach motivation seek out friendships that would expand the self. It can be intimidating to approach someone who is very different from us, but the opportunities for self-expansion are even greater when we get to know people who come from different backgrounds or groups. As discussed in the "Attraction and Falling in Love" section, Aron et al. (2006) found that if participants were

told that they were likely to get along with another student, they were more interested in someone with dissimilar interests. These results have implications for forming friendships across difference and suggest that manipulating relationship certainty may help people to seek out a relationship that has the most opportunity for expansion. Indeed, intergroup friendships, in addition to what we have seen in terms of their potential for creating more positive intergroup attitudes (Davies et al., 2011), have important implications for individual self-expansion.

Relation to Other Approaches to Understanding Love

How does the self-expansion model relate to other approaches (such as the many covered in this book)? In this section, we give an example of this symbiotic relationship with each of a few of the many other important approaches.

Interdependence theory is one of the pioneering and ongoing most influential theories. A central, well-documented principle (Le & Agnew, 2003) is that commitment to a romantic relationship is largely predicted by a combination of high satisfaction, low quality of alternatives, and high investment in the relationship. The self-expansion model provides some clear predictors of part of what leads to each: more satisfaction (feeling self-expansion from the relationship); less interest in alternatives (the more self-expansion in the relationship the less appealing are alternatives, particularly those that do not offer any different expansion opportunities), and greater investment (inclusion of the other in the self would be lost without the relationship).

Attachment theory (Chapter 13, this volume), which is also enormously influential, includes a relationship-relevant individual difference, "attachment style." Largely owing to our early relationships with our parents, some of us are "secure" (and thus comfortable in close relationships); some avoidant (do not expect good outcomes from a close relationship); and some "anxious-ambivalent" (really want one, but do not expect the other will like us). As one example of the relation of attachment theory to our model, this classification helps explain the individual differences in the main motivations for unrequited love (as discussed earlier). Specifically, secures were most likely to have gotten into this situation by being misled into thinking the probability of a relationship was high, avoidants by desiring the experience of being in love (without having an actual relationship), and anxious ambivalents by desirability of the other (Aron et al., 1998).

Communal/exchange theory (Chapter 5, this volume) is a highly valuable model that suggests that in close relationships you do not keep score of who gets what and focus on just caring for each other's needs as they arise. We suggest that one source of communal caring is including each other in the self (e.g. Medvene, Teal, & Slavich, 2000).

Evolutionary theories (Chapters 3 and 10, this volume), as in all areas of human functioning, provide a very basic core understanding of why we do what we do. Romantic love clearly plays such an important role in shaping how we produce and raise offspring, and thus survive as a species! The main link with the self-expansion model is that we argue a key basic human motive beyond just survival, is expansion (often called exploration in the evolutionary literature), and that this motivation has been adapted to help create and maintain pair-bonds that will last at least through the raising of our large-brained babies.

Love as a story (e.g. Sternberg, Hojjat, & Barnes, 2001) suggests that there is a culturally validated script for falling in love (see Lamy, 2016). We suggest that these stories operate so strongly because they make explicit just how love can be a source of self-expansion.

The triangular theory of love (Sternberg, 1986) identifies three key aspects of love (also supported by Aron & Westbay, 1996). The self-expansion model suggests that each of these distinct qualities arises from the motivation to experience rapid expansion. Expansion occurs via including the other in the self (passion), ongoing expansion through shared experiences and deep inclusion of the other (intimacy), and the fear of losing self-expansion and IOS as described above regarding interdependence theory (commitment).

Conclusion

In this chapter, we have described the self-expansion model and how it describes and explains the nature of love. As you have seen, there is considerable research support for the basic principles as they apply to romantic love, from attraction to break up, and even beyond to other kinds of love**.** Love is so very important in the lives of almost all of us, which is why we have made understanding it the center of our research and thinking. As we have described in this chapter, the self-expansion model has proven very valuable in helping us understand love. But what has been done is only the beginning. More work is needed in all the different areas we have described, and many areas that have only minimally been studied that hold great promise for deepening and expanding what we know in

important, useful ways. These include the following: the role of social class and culture in shaping our experiences of love; the way in which we move from attraction and falling in love to being in a relationship; how love operates in families; and how specific types of love operate in crucial contexts, such as compassionate love in long-term relationships and, not forgetting how it starts, passionate love in children. (Did you not fall in love with someone when you were a child? What was that about?)

What we can feel confident about at this point is that our understanding of love and relationships can be deepened by taking into account the basic motivation to expand the self, and that one way do so in a close relationship is by including the other in the self.

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