

Is Love Really Blind? – The relationship between  
feelings of romantic love, attribution and the  
neurological implications

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Patterns of Action Dissertation

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## ***Love is Blind***

*Love to faults is always blind,  
Always is to joy inclin'd,  
Lawless, wing'd, and unconfin'd,  
And breaks all chains from every mind.*  
—William Blake, *Poems (1791 -1792) from Blake's Notebook*

According to the semantic marker hypothesis, we make emotional relations to the physiological changes that we experience, as a result of the various events that take place in our lives (Damasio, 1994). Emotion plays a large part in our day to day lives, and often times it can have a large effect on the way we think and in the decisions we make. Taking a step back and looking in from the outside, emotions interact with the cognitive system in a feed-forward loop system, in that emotions influence cognition and cognition influences emotion. In order for us as humans to function holistically, both must interact (Izard et. al., 1984). Cognitions contribute to the generation of emotions, and these emotions then form cognitions. In particular, the latter will be focused on looking at the emotion of love. Love is rather abstract and so the 'feelings' of love will be looked at, and how the feelings of love can influence and affect cognition.

Through decades the idiom 'Love is Blind' has been used to give explanation to the inability for one who is in love, to 'see' the problems and/or shortcomings of the individual that they are in love with. Due to being in love, the person has become 'blind' to seeing what others may see, and as a result, can be placed in the predicament where remaining in the relationship is to their detriment. Those that are in love can sometimes behave in ways that they normally would not, and can produce behaviour that is irrational and without much thought. This dissertation will look at the 'love is blind' phenomenon in more depth, looking specifically at the neurological effects that feelings of (romantic) love produce, and how these effects have an impact on cognition and critical thought.

According to Swami and Furnham (2008), the love-is-blind bias is defined as the 'tendency to perceive one's romantic partner as more attractive than oneself'. In their study of the relationship variables that contribute towards the love-is-blind bias, a sample of men and women had completed various tests that included different measures (i.e. demographic, individual differences, and relationship-related). The results obtained were in support of the love-is-blind bias, where both men and women rated their romantic partners as significantly more attractive than themselves. Although this result was in support of this love-is-blind bias, surely the love is blind phenomenon is reflective of much more than just perceiving your partner to be more attractive than yourself. The results could be explained by one's own self-esteem, rather than them being 'blinded' by love. What about when it comes to failing to see the problems and shortcomings of the significant other?

Taking a similar element from the studies by Swami, it has been found that satisfaction within any relationship 'is associated with idealistic, rather than realistic perceptions of an individual's partner' (Murray et. al., 1996). This means that for a relationship to be satisfying, there is an element of creating a positive illusion of what one 'wants' to see, rather than a simple appreciation (or tolerating) of what is already there. Couples who were dating and married were asked to rate themselves as well as their partners on a number of interpersonal attributes. They were also asked to rate on the same attributes, the typical and ideal partner. Results showed that how an individual viewed their partner was more along the lines of their own ideals and self-images rather than their partners' reported attributes of themselves. This suggests that reality is 'put to the side' rather, and the ideal is used as a basis by which to base the relationship. This therefore yields more satisfying relationships overall.

Often times during disagreements within a relationship, a more positive reasoning may be chosen over the harsh reality of the situation in order to reduce the mental conflict caused by what is expected and what is presented. It had been gathered that, a partner would find it necessary to create a story that would frame their partner's qualities and take focus away from their faults (Murray & Holmes, 1993, 1994). Within Murray et. al. (1996)'s paper, they go on to elaborate on the projection of one's self-image and qualities onto their partner. Also, as each individual would have an image of how their ideal partner would be, they would see their partner through this 'looking glass', as a more 'direct path to wish

fulfilment', assuming that their partners are just like them, if not better (Berscheid & Walster, 1978, Murstein, 1967, 1971).

So research has confirmed the tendency for individuals to turn a 'blind eye' to another's faults and imperfections in order to create a positive illusion of the significant other.

However, is this a voluntary process or is it something that happens internally? Do people physically make the conscious thought to ignore the faults as research suggests, or do the feelings of love induce a change in the brain that facilitates this positive illusion?

### ***Neurological Implications that Love is Blind***

It has been found that when one is in love, whilst one area of the brain is activated, another area, which happens to be the area responsible for critical thought, is suppressed. This area that is suppressed is responsible for 'the critical assessment of other people and the making of negative judgements'. This finding explains the inability to make rational and correct decisions when in love, as there is 'blindness' to the individual's faults (Bartels & Zeki, 2004).

The brains of 20 young mothers were scanned whilst they viewed pictures of their own children, other children, their best friend and of acquainted adults. Looking at the results from this study and previous findings on romantic love, it was found that the activation and deactivation points in the brain for maternal and romantic love were very similar. Each of these types of love activated their specific regions of the brain, as well as 'overlapping regions within the brain's reward system', overlapping regions consisted of 'regions in the striatum, (putamen, globus pallidus, caudate nucleus), the middle insula and the dorsal part of the anterior cingulate cortex', mostly responsible for cognition. There was also a deactivation of the common regions of the brain that were associated with negative judgement and critical social assessment. Regions included, "middle prefrontal, inferior parietal and middle temporal cortices mainly in the right hemisphere, as well as the posterior cingulate cortex, as well as the amygdala, temporal poles, parieto-temporal junction and mesial prefrontal cortex", these areas being related to negative emotions (Bartels & Zeki, 2004).

This study as they suggest explains the 'love is blind' phenomenon as it shows that when one becomes closer to another individual, there is less need to critically appraise that individual, and so there is a deactivation of the areas of the brain that are responsible for carrying out critical assessment. Hence, the inability to not take note of the individual's shortcomings and faults, which would perhaps be more evident when coming across less familiar people (Bartels & Zeki, 2004). These findings explain that the love is blind phenomenon is not just a decision that individuals make towards the ones that they love, but due to the love that is felt, areas of the brain that would normally allow the individual to 'see' what perhaps they should see, are suppressed.

From this research one could then accept the statement that love indeed is blind, and that this 'blindness' is for the benefit and growth of the relationship. It has also been gathered that love being blind, also comes irrational behaviour. However, it has been argued that love can be rational and help an individual to look at things more clearly.

### ***Love is...Rational?***

The common idea separates emotion and rationality, with either being at opposite ends of the spectrum. In any instance where emotion has been used in the executing of a judgement or decision, there is reason to believe that the judgement or decision has not been made from an objective point of view, and so may not be relied upon. Ortiz-Millan (2007) looks at emotion being a facilitator of rational thinking rather than an inhibitor. Ortiz-Millan explains the philosophy of romantic love, and how it is explained as something that causes you to lose control of yourself, and lead you to a place where there is a lack of foresight, understanding and good sense. According to 'the cognitive fallacy' by David Clarke, 'only rational things can be studied rationally', and so therefore emotion or in this instance, love, cannot be studied rationally. Contrarily, love is in fact rational and follows particular 'rules'. The emotion of love often comes with belief systems, values and judgements about the object of our love. Rules of reciprocity also come into play, with behaviour being shaped in a way to gain or maintain the love of the other individual. This means that not only does the individual have to be mindful in how they behave towards the individual, but they must also be mindful of how they conduct themselves. Therefore there is not only an effect on how they relate to the object of their love, but self-awareness also

comes into play. Also, in light of prospect theory, the behaviour economic theory where behaviour is shaped around the outcome utility of gains and losses, (Khaneman & Tversky, 1979), being in love would allow one to see the challenges that may present themselves as a reason to work out how to achieve the greatest gain. Rationality suggests choosing the option or the outcome that would maximise the expected utility. In love, this is often the case. An individual may continue on in a relationship that has many losses, only because the gains outweigh the losses, therefore providing a higher outcome/higher expected utility. Ortiz-Millan therefore makes the conclusion that love enables us to follow certain practical requirements, and to follow these practical requirements we must behave rationally. In light of the term 'love is blind', perhaps this blindness is a rational blindness which is characteristic of the demands of love? Another practical requirement of love is cooperation and the need to be there for the other, do whatever can or needs to be done for the sake of the other individual. It may be that in circumstances where a blind eye may need to be taken to another's faults for the sake of the relationship, then this will be done. However, although this may be the case, lovers continue to have a realistic view of one another despite this 'blindness' (Heimer & Stinchcombe, 1980). Love can prevent one from seeing the negative aspects of the one that they love, which can often be a risk to the individual in love in that they fail to see warning posts or signs of unreciprocated affection. On the other hand, being in love can allow the individual who is in love to see things even more clearly and in depth. Anything that is in close relation to the object of your love will be studied more closely, with more attention being paid to it, just as the object of your love would be (Ortiz-Millan, 2007).

Love is rational because it follows practical guidelines. In following these practical guidelines; judgements, values and belief systems continue to be created, which then gages the emotion that is felt. This challenges the 'love is blind' phenomenon by giving explanation to why it may be blind, whilst also showing the other side of the coin, the rationality of love. The neurological aspect of love being blind has been looked at, is there neurological evidence to suggest that love facilitates rational thinking? If research has found that feelings of love suppress areas of the brain that control critical thought, then surely there is similar research to reflect the opposite?

### ***Neurological implications of Rational Love***

Romantic love is universal, and a developed form of the 'attraction system' used by mammals and birds 'to express mate preferences and make mate choices' (Fisher et. al., 2005). Romantic love was investigated, looking at the neural mechanism for mate choice using fMRI. Fisher et. al., (2005) wanted to investigate the hypotheses proposed about romantic love; that it involves subcortical dopaminergic pathways that were associated with reward, and that it would follow the same neural circuits similar to that of goal-directed behaviours, suggesting that romantic love is not just an emotion, but a goal-directed state.

Participants, both men and women, were recruited and were interviewed in order to grasp their feelings of romantic love, in terms of duration and intensity. A self-report questionnaire was conducted, as well as viewing photographs of their beloved, neutral acquaintance and carrying out distracter countback tasks in the midst of viewing the photographs.

The ventral tegmental area (VTA) is an area of the brain that is central to the brain's 'reward system', being associated with pleasure and general arousal. Several regions including this area were activated in response to the participants' beloved. Activations were also found in the caudate nucleus, which receives projections from the VTA, and is a key player in reward detection, the representation of goals and expectation. These results support the hypotheses that were generated by Fisher et. al. (2005) that romantic love will be found to cause activation along the dopaminergic pathways, and found to be a goal-directed behaviour.

How do these results reflect that love is rational? The findings show that romantic love is not just a specific emotion, but that it is 'a neural system associated with motivation to acquire a reward' (Aron and Aron, 1991). This means that this neural system is wired to assist with decisions that we as humans make regarding courtship and mate selection. Mate selection is a rational process as much is taken into account in terms of what that mate should be able to provide; stability, reproductive ability, etc. Romantic love is that mechanism that allows us to make these rational decisions, through the activation of the neural systems within the brain associated with reward, goal-orientation, expectation and pleasure.

## ***Love and Attribution***

Much has been studied looking at the dynamics within the relationship of the two people who are in love; however there is much that can be accounted for by others who observe the relationship from a distance. According to Actor-Observer asymmetry (also known as actor-observer bias), proposed by Jones & Nisbett (1972), explained the disparity between how people explain their own behaviour when they are the 'actor', and the way in which others (observers) explain the actor's behaviour, from the outside looking in. The explanation was that those that are actors usually explain their behaviour to be as a result of situational factors, whereas observers attribute the actor's behaviour to dispositional factors. Essentially, the bottom line is that attributions differ depending on whether someone is the actor or the observer of a particular situation.

In relation to love being blind, an individual (the actor), who is in love with someone may very well explain their behaviour as a result of situational factors. Upon their explanation for disregarding their beloved's faults, they may explain "The situation's a lot more complicated than you think", or "If you were in my situation you'd understand". Also, those on the outside looking in, often cannot comprehend the decisions the actor may make during their relationship, and will often make dispositional judgements reflective of such statements, "'X' is only with 'Y' because she/he's needy" or, "'X' never takes the time to get to know people she/he always rushes into things". According to the observer, the idiom 'love is blind' would most likely to be used to explain an ignorance that prevents people from seeing what others can. However the actor is less likely to agree with the observer's assertions, often claiming that the observer doesn't understand because they are not the one's involved. This actor-observer asymmetry often reflects that one, either the actor or the observer is making a wrong judgement, because two opposite judgements cannot both be correct at the same time. It has been explained that this bias happens less with close friends and family members due to the extra information that is known about the individual being observed. With strangers and acquaintances one is less able to make an accurate judgement about the actor's behaviour and so often resorts to accounting their behaviour to personality and general character. However, when there is a closer relationship between the individuals, the observer can better account for the situational factors that have an effect on the actor's behaviour within their relationship.

Perhaps then the phrase 'love is blind' has been created by those who were incorrect in their judgements towards someone else's relationship? It was stated earlier that it is sometimes a rational and calculated decision to put the faults of those we love to one side, as we recognise that accepting, being tolerable and understanding of someone's faults is a practical requirement of love. Are there any neurological implications in attribution?

### ***Attribution and Neurological Implications***

According to Heider (1958), people often make dispositional judgements when assessing others' behaviour because we seek for consistency in others' behaviour. The three criteria used to judge whether someone's behaviour is due to situational or dispositional factors, is by looking at the consistency, distinctiveness, and the consensus of the behaviour on a low-high scale. Behaviour that is high in consistency, low in distinctiveness, and low in consensus reflects that the behaviour can be attributed to the person's unique self and personality, whereas opposite scores on those criteria show that the behaviour is dependent on external/environmental factors. Previous research looking at the attributions made of other people and its effects on the brain have found activation of the superior temporal cortex (Lieberman et. al., 2002), as well as medial pre-frontal cortex (Mitchell et. al., 2002, 2004). Using Kelley (1972)'s Covariation model of attribution as a basis, Harris et. al., (2005) looked at the effects of attribution on the brain using 12 undergraduate university students. Participants saw 12 sentences which were varied in category, and were asked to respond to an attribution question about each sentence. Before responding to the question, participants received further information on consensus, distinctiveness and consistency.

Results that were obtained were in support of Kelly (1972)'s model, 'with more dispositional attributions being made to the person when ratings for consensus were low, low for distinctiveness and high for consistency. In terms of the neuro-imaging data, 'person attribution evoked activity in the superior temporal sulcus', as found in previous literature, with there also being activation of the medial pre-frontal cortex 'under conditions where there was focus on social cognition'. Overall, it was concluded that 'unique dispositional attributions have a special status in neural activation patterns' (Harris et. al., 2005).

Making dispositional attributions activates particular areas of the brain that are associated with general social cognition; this means that there perhaps is a higher proclivity to make attributions to the person rather than to external factors. Within this study, sentences about fictional individuals were used, so it is now known from this research whether the same results would've been obtained for individuals the participants were acquainted with and/or close to. The lack in ecological validity prevents there from being a clear conclusion as to whether being an 'observer' often produces wrong assumption due to the lack of taking in external context.

### ***So...is Love Really Blind?***

This phrase is a phrase that can be debated for decades. The neurological evidence for those in romantic love suggests that love indeed is blind, as it prevents you from critically assessing. If you are unable to critically assess, then surely you will be oblivious to what needs to be assessed, as according to your own knowledge it would not be present. On the other hand, there is the claim for rational love which explains that yes love may be blind but it is a beneficial 'blindness' that is for the overall utility of the relationship. Putting aside faults that have been recognised in the significant other isn't necessarily a disregarding of the faults, but merely not focusing on the faults alone. Love requires many practical requirements, tolerance being one of them. The neurological evidence, reflecting love as an 'attraction system', with a wired neural system associated with motivation and reward, which is geared towards mate selection, shows that love has much biological foundation in the rational process of mate selection. What is seen as rational on the inside is much more neurological than we think.

In terms of attribution, the idea is that what we see is not necessarily what others see, or rather, what we *don't* see is often what others see. However, sometimes what others see from the outside looking in can in fact be an incorrect judgement as a result of not knowing enough about the actor involved. As passers-by we can often assume that the individual in love does not know much, but we fail to realise that most of the time they have more knowledge and context to work with, and so know more than we think. Love is blind in that it can make you do 'crazy' things, act in strange ways and think in ways you would not

normally think, but perhaps this 'blindness' is all a part of that biological plan for love being able to continue and flourish, so that the human race can continue!

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