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Unrequited Love Hurts

The Medicalization of Broken Hearts Is Therapy, Not Enhancement

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The following are responses to "The Medicalization of Love" by Brian D. Earp, Anders Sandberg, and Julian Savulescu (*CQ* 24(3))

> Amputees suffer pains, cramps, itches in the leg that is no longer there. That is how she felt without him, feeling his presence where he no longer was.
>
> Gabriel García Márquez, *Love in the Time of Cholera*

In a recent paper in the *Cambridge Quarterly of Healthcare Ethics*, Brian D. Earp, Anders Sandberg, and Julian Savulescu consider various objections to the proposal of using "love drugs" to enhance romantic relationships.[1]

As the authors observe, some of the objections to using drugs for love enhancement are based on the assumption that love is too special an experience to be analyzed, medicalized, and pharmaceuticalized. Earp and colleagues rightly point out that counseling and psychotherapy also attempt to analyze and medicalize romantic love. However, unlike love-enhancing drugs, few people object to using such forms of treatment to improve loving relationships.

They suggest that this opposition to using drugs to "enhance" romantic relationships (that is, to *pharmaceuticalize*)—which could also mean to diminish lust, attraction, or attachment in cases in which such feelings are harmful—is founded on the assumption that love and romance are different from other human experiences (which, conversely, might be enhanced through drugs and not only through psychotherapy). For instance, Evans has suggested that critics of medicalization would argue that we should *not* accept the medicalization of love, because "there are, or should be, experiences that use an older logic, which are under the jurisdiction of another profession or under no jurisdiction at all. *We can all fear the medicalization of love*."[2]

In this article I argue that we should not fear the medicalization of (at least) one particular kind of love: that is, unrequited love. I argue that, because (1) unrequited love can be—and often is—a very painful experience and because (2) people are entitled to avoid pain (if they wish to), medicalization and pharmaceuticalization of broken hearts should be an available option.

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I also argue that it should be considered a form of therapy rather than a form of enhancement.

Unrequited Love Hurts

Falling in love and being in a romantic relationship with someone who loves us back is one of the most exhilarating experiences in life. Most of us know how it feels to be in love and to have that love reciprocated. The world, to put it simply, looks like a friendlier and much nicer place. There are, of course, biological reasons why it is so. Aron and colleagues observed that

> romantic love is also associated, particularly in early stages, with specific physiological, psychological, and behavioral indices that have been described and quantified by psychologists and others. . . . These include emotional responses such as euphoria, intense focused attention on a preferred individual, obsessive thinking about him or her, emotional dependency on and craving for emotional union with this beloved, and increased energy.[3]

Unfortunately, not all romances have a happy ending. Nor do all relationships last until both parties mutually agree they are no longer interested in each other. Very often, at the end of all the happiness, the butterflies in the stomach and rose-colored lenses, there is excruciating pain. Not uncommonly, such pain comes with obsessive thoughts about the now-lost object of that love. Research has shown that obsession is a component of unrequited love as well as of the happier, reciprocated kind. Just as the brain in love releases "good" chemicals that make us feel good, the rejected lover's brain also produces chemicals; except these chemicals make us feel miserable, if not desperate.

In a 2010 study published in the *Journal of Neurophysiology*, Fisher and colleagues used fMRI to examine the cortical systems of 15 people who had recently been abandoned by their partners but who were still intensely in love with them.[4] The participants were alternately shown a picture of their beloved and a picture of some other person familiar to them. These pictures were also interspersed by a task designed to distract the participants' attention. The responses reported by participants while looking at their rejecter included love, despair, good and bad memories, and wondering what had gone wrong.

The study was aimed at testing four predictions:

1) Romantic rejection activates subcortical reward systems that mediate motivation and reward.
2) Romantic rejection activates subcortical and cortical areas associated with drug craving.
3) Romantic rejection engages forebrain areas activated by losses and gains and gain anticipation.
4) Romantic rejection activates brain regions associated with the autonomic nervous system, because the subjects show a range of intense emotions.

All four of these hypotheses were confirmed by the study. The researchers concluded that

> Forebrain activations associated with motivational relevance, gain/loss, cocaine craving, addiction, and emotion regulation suggest that higher-order systems subject to experience and learning also may mediate the rejection reaction. The results show activation of reward systems, previously identified by monetary stimuli, in a natural, endogenous, negative emotion state. Activation of areas

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> involved in cocaine addiction may help explain the obsessive behaviors associated with rejection in love.[5]

Consistent with these results, other studies suggest that romantic love and cocaine addiction share survival system activation in the brain, demonstrating the strength of the obsession.[6,7]

Many people, during some point in their lives, will experience the obsession and the excruciating pain that the subjects of the previously mentioned study experienced when rejected and abandoned.

During the prescanning interview in the Fisher et al. study, the participants were asked to talk about the person who had rejected them. Their responses included: "I think about him constantly" (all of the subjects reported thinking of the beloved for more than 85 percent of the day) and "I want a letter from him, or a phone call; I want some respect" (all the subjects showed anger as well as the need to understand why the relationship hadn't worked). When attempting to describe their pain, responses from the participants included: "It hurts so much. I crumble. I just start crying" and "I hate what he did to me, but I still love him," as well as "I kept thinking, I love you, I hate you; how could you do this?"

Out of the suffering of being rejected by his beloved Lesbia, the Latin poet Catullus composed the famous verses, "odi et amo, quare id faciam fortasse requiris: nescio, sed fieri sentio, et excrucior" (I hate and I love. You might ask why: I don't know, but that's how I feel and it is an excruciating pain). Unfortunately, very rarely does a breakup produce side effects as beautiful as a song or a poem. More often, unrequited love brings tragic effects. Sometimes people even kill themselves and/or the object of their unrequited love. Even leaving aside such extreme cases, those who are rejected in love frequently experience deep sadness and outright depression.

At the end of the study the authors concluded that "the perspective that rejection in love involves subcortical reward gain/loss systems critical to survival helps to explain why feelings and behaviours related to romantic rejection are difficult to control and lends insight into the high cross-cultural rates of stalking, homicide, suicide, and clinical depression associated with rejection in love."[8]

If unrequited love can have such a negative impact on both the people who have been rejected and—in some extreme cases—the rejecter, then we should ask ourselves whether there are reasons not to intervene pharmaceutically to speed the process of healing and recovering from such pain.

In the next paragraphs I consider some objections to the idea of medicalizing love. I also examine the question of whether pharmaceuticalization of broken hearts is a form of enhancement or a therapeutic option.

Two Arguments against the Medicalization of Unrequited Love

There are two likely objections to the idea that brokenhearted people should be given the option to receive pharmaceutical treatment for their suffering.

The first objection (which I shall call the "peculiarity-of-heartbreak objection") is based on the argument that the anguish we experience from a broken heart is of a special kind. Moreover, the anguish is of a kind that benefits not from quick fixes but, rather, from a long period of endurance, because something important is learnt in the process of recovering.

The second objection (which I shall call the "arts objection") is based on the idea that love, and especially unrequited

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love, motivates people to write poems, books, and songs, and to produce art in general, and that such motivation, as well as its products, has a positive value both for the authors and for those who appreciate the resultant artwork.

The Peculiarity-of-Heartbreak Objection

The suffering caused by social rejection, including unrequited love, has often been construed as a more endurable form of pain—as one that is less deserving of being ameliorated, especially by "medical" means. There seems to be a common assumption that a broken limb hurts significantly more, and in a different way, than a broken heart.

New research gives us reasons to question this assumption. According to research published in *PNAS* by Kross and colleagues in 2011, from a neurobiological point of view, social pain and physical pain are much more similar than we usually assume. The researchers discovered that "experiences of social rejection, when elicited powerfully enough, recruit brain regions involved in both the affective and sensory components of physical pain."[9] The authors noticed that "social rejection and physical pain are similar not only in that they are both distressing, they share a common representation in somatosensory brain systems as well. These findings offer new insight into how rejection experiences may lead to various physical pain disorders (e.g., somato-form disorders; fibromyalgia), highlighting the role that somatosensory processing may play in this process."[10]

Another study by DeWall and colleagues confirmed an overlap between the body's responses to social and physical pain.[11] Moreover, the researchers discovered that daily doses of 2,000 mg of acetaminophen (paracetamol) can reduce psychological pain due to social rejection by also decreasing neural activity in response to social rejection in brain regions that are associated with the experience of both social and physical pain. Researchers therefore concluded that "an over-the-counter painkiller normally used to relieve physical aches and pains can also at least temporarily mitigate social-pain-related distress."[12]

If Both a Broken Heart and a Broken Limb Hurt, What Is Wrong with Using Drugs to Ease the Pain?

The results of the research just presented suggest that people with broken hearts and people experiencing purely physical pain (such as that which results from a broken limb) are not experiencing something significantly different with regard to neural activity. It is noteworthy, for example, that paracetamol can alleviate both kinds of pain. It seems, therefore, that those who oppose the pharmaceuticalization of unrequited love on the basis that it is a sui generis kind of pain are wrong, as, from a neurobiological point of view, the pain is not dissimilar (at least in terms of the neural activity concerned).

However, perhaps one might oppose pharmaceutical treatment of heartbreak because the pain of a love lost differs from physical pain not in a neurological sense but in a *cognitive* sense. In other words, it might be argued that there is some wisdom to gain in the process of recovering from a broken heart. This is one of the points made by Neil McArthur. He argues that there is a difference between physical and emotional pain, because "emotional suffering is arguably integral to the healing process in a way that physical pain is not" and "learning to make the pain go away is precisely what it is to heal." Besides, he adds, "without the

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pain of heartsickness, we would be much less motivated to actually learn and mature. People could find themselves trapped in the same endless, destructive cycles throughout their various relationships."[13]

Sometimes people learn something important when they suffer for love, and sometimes they don't learn anything at all. The existence of a link between suffering and knowledge is still an open empirical issue, not a philosophical certainty. However, even if it were true that people often—or even always—learn something from their heartache, it is not obvious that they should be forced to choose knowledge over relief from pain. Some people might want to live in a pain-free, happy, and less self-conscious way, and the fact that some other individuals don't agree with this approach to life is no reason to prevent them from doing so.

One would also have to assess whether all people experience pain in the same way. As is the case with physical pain, some people have a lower threshold of pain and lower resilience. So it may be that, for them, it is harder to recover from a breakup or they experience a higher level of suffering. All these questions are open to empirical investigation, but the similarity between physical and psychological pain caused by social rejection ought to be taken into account.

A brief example will help to make my point clearer: suppose that John is in pain because the person he loves has left him, and suppose that Colin is in pain because, during his karate training, a friend punched him in the nose. Suppose that both John and Colin go to their general practitioner (GP) to ask for pain relief treatment. Would it be morally justifiable for the GP to refuse to recommend to John a daily dose of 2,000 mg of paracetamol but to recommend to Colin the same dose of the same medication to relieve the pain from his swollen nose? Most people would, of course, consider it unacceptable for the GP to advise Colin—whose nose has been punched—to reflect on the appropriateness of engaging in karate training, or to try to derive some kind of life lesson from the experience, rather than simply helping him relieve the pain. However, those who object to the medicalization of love would consider the same type of behavior appropriate in the case of John, whose heart has been broken.

This double standard in the treatment of pain is not obviously defensible. Besides, given that there is no relevant difference (in terms of neurological effects on the individual and in terms of suggested treatment) in the cases of a broken heart and a swollen nose, medicalization of a broken heart should not be considered a form of enhancement (rather, it should be considered a form of therapy) as long as giving paracetamol to Colin cannot be considered a form of enhancement either.

Social rejection and physical pain activate the same areas in the brain, and the pain caused by social rejection and pain caused by physical trauma can both be relieved through painkillers. Given that considerations about the potential benefits that may result from heartbreak (e.g., pieces of art or lessons about life) are not relevant when making medical decisions, it follows that there are sound reasons to allow the use of drugs to treat social rejection pain, just as we do in the case of physical trauma.

The Arts Objection

Neil McArthur, responding to a paper by Earp, Wudarczyk, Sandberg, and Savulescu in 2013,[14] argues that the medicalization of unrequited love would

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have a devastating effect on our society's artistic life. As he writes,

> The pain of heartache has given us some of our greatest masterworks, in a variety of fields. It would be impossible to present a complete list, but notable examples include the many great poems W. B. Yeats wrote for Maud Gonne (as well as some to her daughter), Goethe's novel The Sorrows of Young Werther, and Eric Clapton's anguished rock classic "Layla."[15]

I agree with McArthur that brokenhearted artists have produced some great pieces of art. And, perhaps, had Catullus been happy, he would never have written those beautiful poems alluded to earlier. But such hypotheses do not take us anywhere: Perhaps Catullus would have written different, happier poems, or perhaps he would have simply enjoyed his romance with Lesbia and not written anything. Perhaps he would have found other sources of unhappiness and dissatisfaction to translate into pieces of art. It is impossible to know how many poems, songs, and novels we would lose if the anguish caused by rejection could be fixed quickly with a drug. On the other hand, it is also impossible to know how many happy poems we are currently missing out on because of the pain caused by (untreated) heartbreak.

At any rate, let us assume for the sake of argument that medicalization of unrequited love would have a negative effect on our society's artistic life, and that people who enjoy the artistic byproducts of suffering would be somehow worse off by the development of a quick fix for broken hearts. It is a reasonable contention that people who enjoy these byproducts of suffering derive their enjoyment from the way the suffering being portrayed resonates with their own sadness. The brokenhearted may feel that the poems or songs were written by someone who was experiencing the same pain they are experiencing, and that the poet or singer can express perfectly how brokenhearted people are feeling. In being able to relate to the artist through his or her music or verse, brokenhearted people may in some cases feel better about themselves. Of course, appreciation for the artistic byproducts of unrequited love is not limited to the brokenhearted, and the satisfaction such works generate in us doesn't lie exclusively in our ability to relate to the emotions expressed in the novel or song or poem.

However, it seems quite cruel to prevent people from pharmaceutically recovering from their bad breakup because we want them to write songs and poems, especially if one considers (1) that there are already many great artworks for us to enjoy; (2) that it is unlikely that all great artists would use such drugs, or perhaps they would only turn to drug therapy after their suffering ceased to be a source of inspiration; and, finally, (3) that not everyone is an artist. Although there are some people in the world who are as good as Shakespeare, Catullus, Goethe, and García Márquez, the majority of people are not artists, or not good ones, and their heartbreak just makes them suffer without leading them to produce (beautiful) works. In such cases, giving them the possibility to reduce their suffering or to not suffer at all should be an acceptable option.

It might be argued that very talented artists at least have a prima facie moral obligation to refrain from drug therapy in order to produce art that would bring pleasure to others. But this doesn't imply that artists should be denied the option of pharmaceutical treatment if they wish it; it only implies that talented artists have a stronger moral reason than bad artists or nonartists to refuse such treatments.

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Conclusions

Earp, Sandberg, and Savulescu discuss the medicalization (and pharmaceuticalization) of love and respond to some common objections to the proposal of using love-enhancing drugs. In this article I have shown that unrequited love is a form of love that deserves special consideration in the debate over love-enhancing drugs. I consider the medicalization and pharmaceuticalization of unrequited love to be a form of therapy rather than a form of enhancement because it aims at alleviating pain. Furthermore, the suffering caused by heartbreak is neurologically similar to purely physical pain. If alleviating pain that is caused by physical injuries is not commonly considered a form of enhancement, then pain alleviation for suffering caused by social rejection (such as unrequited love) should not be considered a form of enhancement either.

Notes

1. Earp BD, Sandberg A, Savulescu J. The medicalization of love. *Cambridge Quarterly of Healthcare Ethics* 2015;24:323–36.
2. Quoted in Parens E. On good and bad forms of medicalization. *Bioethics* 2013;27(1):28–35, at 33.
3. Aron A, Fisher H, Mashek DG, Strong G, Haifang L, Brown LL. Reward, motivation, and emotion systems associated with early-stage intense romantic love. *Journal of Neurophysiology* 2005;94(1):327–3, at 327.
4. Fisher HE, Brown LL, Aron A, Strong G, Mashek DG. Reward, addiction, and emotion regulation systems associated with rejection in love. *Journal of Neurophysiology* 2010;104: 51–6, at 51.
5. See note 4, Fisher et al. 2010, at 75.
6. Fisher HE. Lust, attraction, and attachment in mammalian reproduction. *Human Nature* 1998;9:23–52.
7. Frascella J, Potenza MN, Brown LL, Childress AR. Shared brain vulnerabilities open the way for non-substance addictions: Craving addiction at a new joint? *Annals of the National Academy of Science* 2010;1187:294–315.
8. See note 4, Fisher et al. 2010, at 58.
9. Kross E, Berman MG, Mischel W, Smith EE, Wager TD. Social rejection shares somatosensory representations with physical pain. *Proceedings of the National Academy of Sciences USA* 2011;108:6270–5, at 6270.
10. See note 9, Kross et al. 2011, at 6273.
11. DeWall CN, MacDonald G, Webster GD, Masten CL, Baumeister RF, Powell C, et al. Acetaminophen reduces social pain: Behavioral and neural evidence. *Psychological Science* 2010;21(7):931–7, at 935. doi:10.1177/0956797610374741.
12. See note 11, DeWall et al. 2010, at 935.
13. McArthur N. The heart outright: A comment on "If I Could Just Stop Loving You." *The American Journal of Bioethics* 2013;13:11, 24–25, at 25. doi:10.1080/15265161.2013.839773.
14. Earp BD, Wudarczyk OA, Sandberg A, Savulescu J. If I could just stop loving you: Anti-love biotechnology and the ethics of a chemical breakup. *The American Journal of Bioethics* 2013;13(11):3–17.
15. See note 13, McArthur 2013, at 25.

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