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To cite this article: Elisa Aaltola (2021): Egoistic Love of the Nonhuman World? Biology and the Love Paradox, Ethics, Policy & Environment, DOI: [10.1080/21550085.2021.1885245](https://doi.org/10.1080/21550085.2021.1885245)

To link to this article: <https://doi.org/10.1080/21550085.2021.1885245>



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Published online: 17 Feb 2021.



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Egoistic Love of the Nonhuman World? Biology and the Love Paradox

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ABSTRACT

Love of nonhuman animals and nature is often presumed to have positive moral implications: if we love elks or forests, we will also better appreciate their moral value and treat them with more respect and care. This paper investigates perhaps the most common variety of love – here termed ‘the biological definition of love’ – as applied to other animals and nature. Introducing the notion of ‘the love paradox’, it suggests that biological love of other animals and nature can also have deeply negative and anthropocentric moral consequences, due to the self-directedness and biases inherent to it. The need for more other-directed definitions of love is underlined.



KEYWORDS

Love; environmental ethics; animal ethics; moral psychology

Introduction

Love is a difficult emotion to define. Some suggest that it should not be intellectualized too meticulously lest its nuances be lost (Hamilton, 2006) or that it escapes analytic definitions altogether due to its resistance to strict criteria (Ricoeur, 1995), whilst others point out that definitions of love are varied and conflicted (Soble, 1989). Also the relation between love and morality is contested. Some seek to establish moral rules for love, whilst others posit that love cannot be rendered into an object of moral evaluation (Smuts, 2014).

Yet, whether or not we subject love to intentional moral scrutiny, it is a morally laden emotion. In this vein, Stuart Hamilton has argued that differences in definitions of love often stem from differences in our moral outlooks, as our values and conceptions of, say, ‘a good life’ or ‘a good person’, influence our perceptions of love (Hamilton, 2006). It can also be argued in the vein of thinkers such as Iris Murdoch that love acts as a pivotal moral navigator, allowing us to perceive reality in the hues of ‘the good’ – love facilitates moral perception (Murdoch, 2003). In a less Platonic fashion, but following a similar ethos, contemporary moral sentimentalists, including Martha Nussbaum (Nussbaum, 1990) and Jesse Prinz (Prinz, 2006), posit that emotions are a necessary constituent of morality in that they allow us to form notions concerning what is right or wrong, or what ‘a good life’ consists of, and again love surfaces as one morally relevant emotive candidate. Thereby, whether or not love should be the target of moral evaluation, it entwines with

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morality, as it is both influenced by and allows one to identify or construct moral values. Morality may shape our love, and love again shape morality, leaving us in a dizzying but perhaps unavoidable circularity.

This paper focuses on a topic rarely explored in philosophy – love of nonhuman animals and nature. It does so via noting both the difficulties of defining love and the ambiguities between love and morality. Instead of analyzing the canonical definitions of love offered in philosophy – such as those stemming from Plato, Kant, or Kierkegaard – I will focus on a more tangible, interdisciplinary, and contemporarily influential take on love, which I here term ‘the biological definition of love’, and subject it to a philosophical evaluation.¹ The central question will be, how does biology and empirical research advise us to define love in general and love of the nonhuman world in particular, and what are the moral implications and possible problems of this definition. Therefore, in this paper, I will 1) explore the *biological definition of love* and apply it to the nonhuman world, whilst 2) mapping out how it influences our moral understanding of that world.² The notion of ‘the love paradox’ will be introduced, as I will claim that biological love is a necessary but not sufficient approach to love. Often, love of other animals and nature is presumed to be morally constructive, but this paradox manifests that love’s biological variety can, in fact, also be harmful toward the nonhuman domain.

The Biological Definition of Love

In empirical sciences, love is increasingly defined on the basis of its biological, evolutionary roots (e.g., Buss, 2019; Fletcher et al., 2015; Gonzaga & Haselton, 2008; Hurlemann & Scheele, 2016; Zeki, 2007). Social animals require the nurture of their kin, and in order for them to seek and provide that nurture, various neurobiological transmitters rush through their brains creating feelings of attachment and longing. This is the biological explanation for why human infants seek the company of their kin, screaming loudly when longing for the presence of their caretakers, and this also forms one of the reasons why puppies or piglets seek the company of their mothers – conversely, this also explains why both human and nonhuman parents protect and nurture their offspring. This mechanism is not limited to parent-offspring relations, but can be found in a plethora of social bonding, thereby explaining, for instance, why romantic partners and friends stay connected. (Fisher et al., 2005.) Within the biological account, love is defined as the at times intense attachment social animals feel toward their kin. It gains support from a take on love common in psychology, which defines love as a sentiment of profound connection (Hazan & Shaver, 1987; Su, 2015) and accentuates the role of attachment, which it positions as a crucial factor in human relationships, social existence and even our conception of our ‘selves’ (Bowlby, 1982). However, what separates the two is the emphasis that the biological account places on physiological responses.

According to it, love is aided and motivated by the activation of the reward-centers and the ensuing splashes of oxytocin, dopamine, endorphins and other neuro-substances that make us feel warmth, happiness and even euphoria in the company of our loved ones. Crucially, whilst the evolutionary *function* of love is to make us stay connected in order to ensure survival, the evolutionary *method* of achieving this is to spark an affective response in us, constituted by the activation of our reward-centers. The affective content of love is, then, caused by nothing more than the flow of feel-good chemicals that motivate us to

remain close to our kin (Fisher et al., 2005; Hazan & Shaver, 1987). Hence, within the biological definition, the great mystery of love is reduced to biochemical and neural chatter ensuring our survival. This act of reduction finds support from empirical studies, which show that the mere introduction of oxytocin to our bloodstream can make us feel love (as attachment) toward strangers, whilst its removal may push us out of such love (Earp et al., 2015).

The biological definition of love therefore argues love to be an emotion that ensures evolutionary survival by facilitating the sort of pleasant affects that lead to attachment and hence motivate us to maintain social relationships. The three components of what is here termed 'biological love' are: 1) survival, 2) positive affects caused by the activation of reward-centers, and 3) attachment (the first of these forms the ultimate cause and the latter two proximate causes). In short, biological love makes relationships with partners, offspring, friends or other kin feel rewarding and enticing, which keeps our genes going. Such a definition may sound cold: surely love is about more than just the search for survival and pleasant feelings? Yet, the definition is gaining popularity, not only in empirical sciences, but also among ordinary people. Upon a quick online search, I came across a large quantity of accounts of and sayings on how personal happiness/flourishing motivates love, epitomized in this anonymous quote: 'You make me glow, you make me feel good, you make me happy, and that is why I love you'.³

Now, there are a number of serious problems with evolutionary reductions, which all too easily fall foul of the naturalistic fallacy. These reductions ignore important issues such as the question of meaning – even if love serves the above function, the sort of meanings we give to it can far exceed biological explanations. They also may forget about morality and reason, and how the content of our norms and values cannot be directly correlated with 'what is' (a question I will return to later). Further, it has to be underscored that of course, not all that we do is directly dictated by evolutionary functions. Even though also human beings are biological creatures in whom the genetic codes carved by evolution are evident, often the impact of evolution is indirect and finds a multitude of routes and manifestations – the above tendency to create cultural meanings (or indeed moral and intellectual beliefs) and letting them act as motivations for one's choices being one of them. I should also add that evolutionary psychology and other biological reductions should always be approached with healthy skepticism, for some interpret and construct them in accord with given political agendas, which also means that they can be used for morally and politically unjust causes (two examples being sexism and heteronormativity). However, since our roots in biology and evolution cannot be reasonably contested, the task is not to dualistically separate human beings from the rest of nature, but rather to find ways of learning from our biological constitution and pasts without undue ideological baggage.

The object of this paper is to map out what the biological definition of love tells of our love of other animals and nature. The aim is not to defend the definition against more philosophical takes on love, which tend to focus on the prescriptive or intellectual reasons for loving *x* rather than the descriptive, often subconscious motivations of love. Instead, the paper investigates where the definition may lead us in the context of animal and environmental ethics. Since this type of an account on love is biologically well-informed and gaining popularity, it deserves serious exploration. Can the biological definition of love be applied to human–nonhuman relations, and what are the moral implications of doing so?

Biological Love of Other Animals

It should come as no surprise that also nonhuman animals can be objects of biological love. Indeed, E. O. Wilson used the term 'biophilia' to refer to 'the innately emotional affiliation of human beings to other living organisms' (Wilson, 1984; as cited in Bradshaw & Paul, 2010), and there is ample research that points toward its frequency also in the context of animals.

Just as reward-centers activate attachment between humans, the same can apply between humans and companion animals (Nagasawa et al., 2009). Indeed, studies manifest that nonhuman animals can cause human brains to flow with the above neurotransmitters, leading us to feel attachment and pleasant feelings in their company (Logan & Selhub, 2013). For instance, interaction between a human and a companion dog increases the levels of endorphins, oxytocin, prolactin and dopamine in both parties – thus, the reward-centers of both are activated, much like in intra-human moments of affinity (Nagasawa et al., 2015; Odendaal & Meintjes, 2003). Following suit, it has been argued that one can meaningfully apply attachment theory to also nonhuman animals (Siegel, 1990). In support of this claim, a review of empirical studies shows that companion animals are common figures of attachment: they provide comfort, happiness and security, and their loss often triggers grief, all fundamental elements of attachment (Hunt et al., 2008; Zilcha-Mano et al., 2011a). In fact, people may form intense bonds with companion animals that differ only slightly, if at all, from bonds with other human beings (Kurdek, 2008). It is worth highlighting that also the animal counterparts of affection may themselves undergo love – emotional connections run both ways, as for instance, dogs are capable of forming strong attachments to their human companions (Nagasawa et al., 2009). Since biological love is founded on social attachment, it probably exists in all social animals facilitating also their relationships and survival. In line with this, oxytocin, perhaps the most important chemical component of love, has been placed as the fundamental physical facilitator of social bonding in all social animals (Nagasawa et al., 2009).

Crucially from the perspective of this article, such affinities with other animals fulfill the biological definition of love, as both 1) attachment and 2) activation of reward-centers causing positive affects are present. Echoing this, many scholars studying this phenomenon empirically use the concept of 'love' to describe for instance, human-dog relationships. Thus, one research article claims that: 'Several characteristics of human-pet bonds lead people to use pets as a source of *love*, acceptance, and emotional support, which can help to restore emotional equanimity during times of need' (Zilcha-Mano et al., 2011b), whilst another posits that: 'Pet owners tend to feel that their pet *loves* and accepts them unconditionally, and that their relationship with the pet is characterized by stability, consistency, tenderness, warmth, loyalty, authenticity, and lack of judgment or competition' (Zilcha-Mano et al., 2011b) (emphasis added). The severe grief often felt at the loss of a companion animal reveals the intensity of such attachment and affect (Pierce, 2012).

But what of the third criteria of the biological definition of love, i.e. evolutionary function? How does love of other species facilitate human survival? The perhaps surprising answer is that it does this via a multitude of ways. Besides material benefits, which for instance, love of dogs has offered in the form of ensuring canine protection and assistance for humans, love of animals comes with psychological and physiological benefits that enhance survival. Attachment to companion animals (rather than mere ownership of

them) is linked to better mental health (Garrity et al., 1989), as it for instance, aids in the regulation of emotions (Mikulincer & Shaver, 2012; Siegel, 1990). It has also been positively correlated with physical health, as it for instance, lowers blood pressure and heart rate, and helps one to endure stress better (intriguingly, spouses can have the opposite effect) (Allen et al., 2002). Further, having companion animals teaches human beings how to nurture others (Kurdek, 2008), which again strengthens also human kinship and survival. Therefore, also the ultimate function of biological love – survival – is served by love of other animals. (One can hypothesize, to what extent broadening this type of love to creatures such as cows or pigs could enhance survival also indirectly in the future, by reducing the consumption of animal products, which again would help in tackling a severe threat to our species, i.e. climate change.⁴)

But why would biological love jump over the species barrier? Attachment to other animals has been explained via reference to parental responses. According to a common argument, human individuals tend to feel love particularly toward child-like animals (Bradshaw & Paul, 2010). Already Konrad Lorenz claimed that humans have a tendency to favor those animals, who to some extent resemble human infants (Glocker et al., 2009) and one can speak of a human preference for neoteny (retaining of infant-like traits) in other animals (Estren, 2012). This preference for childlike, cute animals comes with heightened positive affects, as our reward-centers become activated in their presence, which again intensifies the feel of love – in fact, the activation can become something of an addiction, whereby individuals want and need to feel the rushes of being in the company of or witnessing cute animals (Bradshaw & Paul, 2010, 110).

One argument is that particularly companion animals fit the model of the parent-child – bond, and thereby elicit biological love. Scholars studying such attachment have concluded that it is ‘interspecific parental behaviour’, whereby ‘behaviours evolved to provide care and comfort to human infants have been co-opted for interacting with other social partners’ (Prato-Previde et al., 2006). Particularly dogs may have even evolved to fit an infant-like role: they display attachment behaviors similar to human infants, in that they get stressed in the absence of their human companions and express blissful joy at the moment of reunion (Prato-Previde et al., 2003). How we talk of and to companion animals lends support for this parental explanation and the appeal of neotantony. Some call their companion animals ‘babies’ or ‘children’, and position themselves as the animals’ ‘mom’ or ‘dad’ – tellingly, also a scholar writing on attachment toward companion animals refers to herself as ‘a pet parent’ (Sable, 2013). This coincides with the tendency to speak what is called ‘motherese’ to dogs, i.e. use similar soft tones one applies when addressing a young child (Mitchell, 2001; Prato-Previde et al., 2006). Tactile expressions of affection toward companion animals, such as instigating play and providing care, are common across genders and appears to be a universal tendency (Prato-Previde et al., 2006), although of course culture bears great influence on which animals such regard is given to.

Therefore, following the biological definition of love, love of animals is at least partly founded on one’s parental inclinations, which an infant-like animal arouses, and which explains preference for neotantony and at least some aspects of our (hopefully) nurturing relationship with companion animals. Importantly, it appears that neotantony does not need to refer to resemblance to *human* infants, but rather the baby-like features of also other species may suffice, which would explain our keenness for dogs that have the appearance of wolf puppies. Following the logic of biological love, as social animals, we

are simply wired to feel affection for those creatures (human or nonhuman), who have given traits, and perhaps youthful helplessness is one of these.

Yet, there are reasons to question how comprehensive this preference for neoteny is as an explanation of love of animals. First, there is a risk of placing overt emphasis on the child-like role of the animal, thereby offering a one-sided depiction of attachment and adding to the infantilisation of nonhuman creatures. It is paramount to remember that the roles may be reversed, as also human individuals can adopt the position of the 'infant', whom animals 'parent' by offering care and nurture. In fact, as pointed out earlier in this paper, akin to a parent, companion animals provide proximity, a safe haven and security for many humans, and (just like an infant) we can yearn for the nurture of our nonhuman company. Particularly dogs are often perceived as providers of proximity and care, whereby we enjoy their company and find it comforting (Kurdek, 2008). Therefore, it would be misleading to reduce only nonhuman animals into the role of 'infants', as attachment can include both infant- and parent-like behaviors for both humans and other animals. This, again, implies that not all of our affection and love toward other animals stems from their neoteny. Quite the contrary, also their ability to offer adult-like protection, company and support can be an integral part of our love toward them (e.g., Knight & Edwards, 2008), which explains why love can flow easy also toward those animals, who are not the least bit 'cute'.

Second, when it comes to biological love of animals, parent-child dynamics are only one potential factor among many. Also interspecific resemblance plays a role, as studies suggest that biological and behavioral similarities (factors such as size, appearance, cognition and social organization) make humans more prone to like given animals (Batt, 2009; Plous, 1993). Thus, for instance, invertebrates tend to be met with dislike, fear, anxiety and aversion, whilst mammals invite more positive sentiments (Kellert, 1993). Intriguingly, this is evident even in conservation science, where large mammals (similar to humans in many respects) gain much more attention than for instance, amphibians (Trimble & Van Aarde, 2010), thereby biasing conservation work (A. Knight, 2008). Hence, humans may love their dogs, not because of neoteny, but simply because they have much in common with them, which makes it easier, for instance, to communicate and interact with, and feel empathy toward them (on such possible biases of empathy, see Aaltola, 2018). Further, it appears evident that also familiarity and proximity direct our affections, as we (quite evidently) become attached easiest toward those animals, whom we know or who live in our homes. This, again, may direct human love toward companion animals, whilst for instance, farmed or wild animals are left beyond its scope.

It should be added that also cultural factors can have a significant impact on biological love, a poignant example of which is that in some cultures dogs – despite their similarity and cuteness – are treated with moral and emotional disdain (Bradshaw & Paul, 2010). Moreover, I would like to add that many Westerners tend to feel great affection for species such as whales, regardless of their obvious lack of similarity with humans, let alone baby-like characteristics. Hence, cultural beliefs can outweigh biologically hardwired preferences and thereby influence our affections toward nonhuman beings (and human animals). Their impact is most evident in how use-based taxonomies, which group animals into different ontological and moral categories ('farmed animals', 'prey', 'vermin', 'pets', and so forth) on the basis of their instrumental value for humans, can guide one's affections, inviting us to love 'pets' and withhold love from, say, farmed animals

(Aaltola, 2012). Here, culture does not wholly override biology, but rather as its emergent property accentuates given tendencies whilst sidelining others, thereby creating conflicts among different evolutive traits. (Of course, also intellectual beliefs and moral considerations based on them can and often should supersede biologically constructed preferences – a topic I will return to later.)

Biological Love of Nonhuman Nature

But what of forests, mountains and rivers – can one feel biological love toward them? Again, Wilson's 'biophilia' presumes so and indeed, the first criterion of biological love – attachment – is met. Also here, the analogy of infant-parent – bonding is relevant. We are the product of nature, as in a very broad sense it is the 'parent' who gave birth to us. Perhaps this metaphor of parental nature plays in our minds, since some undergo oceanic feelings of unity and deep belonging when venturing into places of 'wilderness', akin the psychological sense of oneness that infants feel with their caretakers (Logan & Selhub, 2013). Conversely, we may also reciprocally adopt the role of the metaphoric parent, whereby we wish to nurture nonhuman nature in all of its fragility and vulnerability. Whichever the role, experiences of transcending 'the self' and gaining a sense of unity with the nonhuman realms are common (Hinds, 2011; Keltner & Haidt, 2003; McDonald et al., 2009), which is fertile ground for affection. As seen earlier, comfort, security and longing are all pivotal aspects of attachment, and arguably they are common also in relation to nature. The presence of nature gives comfort to many and we may even long for it, missing for instance, the forests of our childhood when living in urban areas in adulthood, or simply yearning to be near trees or oceans. Attachment to nonhuman nature may even be vital for human development and both mental and physical flourishing. One intriguing argument is that poor mental health often correlates with loss of contact with nature. People in developed countries are spending less time in nature, which has been argued to diminish the wellbeing of both human beings and the environment. When disconnected from our natural surroundings, many begin to suffer both mentally and physically (Nisbet et al., 2011; see also Stigsdotter et al., 2010), which attests to the depth and significance of our relationship with and attachment to the nonhuman world.⁵

Also the second criterion – positive affect and activation of reward centers – can be ticked. Venturing into green spaces can activate reward centers and cause surges of feel-good chemicals; even just viewing images of nature increases the production of many love-related neurotransmitters, including serotonin, oxytocin and dopamine (Logan & Selhub, 2013). Indeed, numerous studies manifest what most of us already know: being in contact with green spaces feels good, as it proliferates positive affects (Barton & Pretty, 2010; Berman et al., 2008). Following suit, a meta-analysis reveals that contact with nonhuman nature leads to an increase in positive and a decrease in negative affects (Mcmahan & Estes, 2015). Importantly, next to straightforwardly pleasurable sensations, such positive affects can include a sense of profound meaning, as one may undergo existential realizations when venturing into nature. Thus, another meta-review shows that contact with nature increases both hedonic (enjoyment) and eudaimonic (meaning) wellbeing (Capaldi et al., 2015).

But what of the third criterion, i.e. the evolutionary function of love of nature – does it serve our survival? Again, the answer is affirmative. One way to illuminate this stems from the past of our species. ‘The biophilia hypothesis’ posits that since the wellbeing of early humans was dependent on their ability to engage and connect with the nonhuman world, also modern humans yearn for nature and feel affiliated with it – indeed, humans tend to favor given types of green spaces, probably due to them having been advantageous to our ancestors (Kellert & Wilson, 1995). One could add to this that also in the present day, positive contact with the nonhuman world facilitates the survival of our species simply, because we need that world in a very fundamental sense. In short, biological love of nature is in our genes: it serves our survival to both have positive affects in nature, and to nurture the natural environments that sustain us, and hence it makes evolutionary sense to feel attachment and love toward them (Pretty, 2004).

Now, it should be noted that the biophilia hypothesis has also been criticized. For instance, Yannick Joye and Andreas De Block have argued that it remains vague in content, whilst the empirical evidence in favor of its links to mental wellbeing stands inconclusive. Also, ignoring the role played by intra-human social interaction in our early evolution has been deemed to be a problem; perhaps we have an evolutive tendency to favor connections with each other over those with the rest of nature? Moreover, the hypothesis faces the issue of ‘pan-naturalism’, as if humans loved all of nature equally, whereas in fact evolution probably guided different populations to feel differing levels of affiliation with specific types of nonhuman beings and entities. This, again, would mean that not all of nonhuman nature is equal in our moral psychology. Furthermore, next to biophilia, we can speak of ‘biophobia’, as many hold the sort of negative psychological attitudes toward nonhuman nature that may also have served an evolutive function (such as fear of snakes). It also obvious that *Homo sapiens* has a tendency to exploit rather than just feel affiliation with the rest of nature (although this is culture-specific⁶). Indeed, one potent criticism of biophilia is the latter’s often gaping absence from decision-making, particularly in industrial countries: if we are prone to love nonhuman nature, why is there a sixth mass extinction and climate change going on?⁷ Hence, it is not clear, whether biophilia and its beneficial psychological or moral consequences are universally felt or applied. (Joye & De Block, 2011; see also e.g., Levy, 2003.)

These criticisms are warranted, and biophilia deserves both more philosophical focus and empirical exploration. However, the biological definition of love, also in the environmental context, differs from biophilia, although the latter can support the former. Therefore, whether we accept the biophilia hypothesis or not, biological love of nature may still find justification. Further, since my aim is not to defend the biological definition of love as such, but rather to explore its foundations and implications in the context of nonhuman ethics, I hope to escape the above criticism (and many others, which can be directed more specifically at the biological definition). What suffices for my purposes is that, regardless of whether love of nature is universal or whether it always supports our wellbeing, there are solid and growing grounds to argue that it exists at least in some significant degree and often is beneficial to human flourishing, which again fulfills the affective and evolutive criteria of the biological definition of love. I agree that it is often absent from our dealings with the rest of nature – however, this issue can be approached as a motivation to cultivate our love rather than as a reason to forsake love’s relevance. Yet, as will be seen, I do not think that ‘biological love’ alone suffices as an emotive foundation for sound animal and environmental ethics.

Love of nature facilitates survival in many tangible ways. Besides the obvious immediate benefits of loving nature (such as utilizing its resources in a prudent and gentle manner, thus ensuring that such resources also exist in the future), like affection for animals, also affection for or contact with nature can come with obvious psychological benefits (Ewert et al., 2011; Pretty, 2004). Conversely, lack of such affective contact can have severely adverse consequences for the human psyche (Gullone, 2000). The cause for nature's beneficial influence is simple and follows the biophilia hypothesis: we evolved within nonhuman nature, and thereby also our mental needs and capacities thrive best amidst it (Ewert et al., 2011). More specifically, research indicates that contact with nature increases vitality (Capaldi et al., 2014; Ryan et al., 2010; Williams & Harvey, 2001), creativity (Ferraro, 2015), life-satisfaction (Capaldi et al., 2014), cognitive functioning (Berman et al., 2008), emotional wellbeing (Pasanen et al., 2014), optimism (Dietrich et al., 2015), happiness (Van Herzele & de Vries, 2012), working memory (Berman et al., 2012), autonomy, personal growth, and satisfaction with one's life (Nisbet et al., 2011). The psychological benefits can entwine with physiological ones, as contact with nature lessens anger, anxiety, fatigue and stress, and thereby reduces blood pressure (Berto, 2005; Ewert et al., 2011; Hartig et al., 2003). Indeed, living in the vicinity of green spaces increases positive self-reports on also physical wellbeing (De Vries et al., 2003). Summarizing this, a meta-analysis reveals that connection with natural environments enhances both mental and physical health (Nisbet et al., 2011). Therefore, biological love does extend to nonhuman nature: we can feel attachment to nature and undergo positive affect in its company, all of which serves an evolutionary benefit.

Moral Implications: Self-directedness and Biases

From the moral point of view, it may seem that love of other animals and nature is always constructive. Surely it makes one perceive value in the nonhuman realms, and to treat them with more care and respect?

There is some support for this presumption. First, biological love of animals can come with moral benefits, as studies show that it can correlate with improved human ability to recognize animal mindedness and agency (Martens et al., 2016), and as it can also foster positive attitudes toward animals, which motivate one to offer care for them (Hawkins & Williams, 2017). In sum, biological love of nonhuman animals can facilitate recognition of their minds and agency, invite positive attitudes toward them, and cultivate concern for their wellbeing – all key constituents of sound animal ethics. Therefore, if we wish to put animal ethics into practice and promote a society that acknowledges animal subjectivity and supports the wellbeing of nonhuman creatures, cultivation of biological love appears as a productive emotive method.

Like love of other animals, also love of nature can have positive moral consequences. The term 'nature-relatedness' has been used to explain and measure such love, and is defined as 'one's appreciation for and understanding of our interconnectedness with all other living things on the earth' (Nisbet et al., 2008, 2). It appears to alter significantly between individuals and thus, a 'nature-relatedness scale' has been constructed. Importantly from the perspective of morality, those higher on the scale spend more time in nature, have positive attitudes toward it, report pro-environmental behavior and hold strong views on the importance of protecting nature. Consequently, scholars have

argued that nature-related individuals are more likely 'to endorse vegetarianism, humanitarianism, love of animals, environmental activism, [and] environmental concern' (Nisbet et al., 2008). It has also been shown that individuals, who have spent time in 'the wilderness', often adopt stronger environmental values and change their lifestyles to suit them (Hinds, 2011; McDonald et al., 2009). Therefore, biological love of nature can motivate one to both value and actively protect the environment, which points toward its moral constructiveness.

Yet, further philosophical reflection is in order, for biological love has also morally troubling consequences. The most severe of these is that it depicts love as a self-directed emotion. This is evident on two levels. On *the affective level*, we want to undergo pleasant feelings and thereby seek the company of those, who make our reward-centers activate – we search for love, because it is experientially gratifying. On *the functional level*, love supports our own survival and the survival of our genes. Hence, both the proximate (positive affect and attachment) and ultimate (survival) causes of love are self-directed. As Alan Soble has pointed out, the risk with such self-directed love is that our loved-ones become instrumental, as the primary aim of our love is personal happiness and survival, and as the inherent value of others remains secondary (Soble, 1989). The objects of our love are there to make us feel secure, comfortable and cheerful – they are instruments of personal satisfaction. Although this may sound unnecessarily cynical or gloomy, just a slight scratch on the surface of everyday depictions of love quickly reveals that many explicitly search for their own happiness through love and prioritize this search over the wellbeing of the objects of their affections. In fact, this appears to be the most realistic depiction of everyday love: on the most rudimentary level, we love others, because attachment and factors such as proximity, nurture and acceptance make us (more or less) happy, and offer security for our futures. There are good grounds for suggesting that prescriptively, love should follow a different formula; however, descriptively we are social animals, whose love is often founded on our affective and practical need of each other. (On the role of the latter factors, see DeWall & Bushman, 2011.)

Therefore, biological love comes with an evident problem. Since it grounds love on the activation of reward-centers and survival, it risks being fundamentally egoistic. Applied to the present context, we love nonhuman nature and animals, because doing so makes us feel the rushes of positive affect and serves our own survival – the value of the nonhuman world remains instrumental. Indeed, also love of nonhuman nature and animals is often explicitly self-directed, as many openly seek the company of those animals, forests and mountains, which spur pleasant feelings. The consequences can be morally disturbing, as other animals and nature may be directly harmed in the pursuit of love. To name two examples, given dog breeds, such as the Cavalier King Charles Spaniel or the French Bulldog, are bred to look ever cuter and infant-like to a point where these dogs suffer from brain damage and breathing problems, whilst wilderness mountains are cleared in order to build ski resorts for people, who want to spend time in nature. In both cases, the human search for affection and positive affect, in the form of biological love, damages the nonhuman world.

Due to this risk of harmful self-directedness, the ability of biological love to serve as an emotive moral compass is a matter that requires further critical focus. This is particularly evident in the context of loving the nonhuman world, for it is already often approached

via an instrumentalising outlook that prioritizes human interests. Indeed, the danger is that biological love of nonhuman animals and nature strengthens the already dominant ethos of anthropocentrism, which posits that human interests by necessity triumph over those of other species, whilst the latter only hold instrumental value.

Of course, one may argue that life is fundamentally egoistic, and that human beings are intrinsically biased, which makes also morality an egoistic and partial affair. We are no Harean archangels, and must thereby accept that in both love and morality, self-interest and biases have their place. Yet, a false dichotomy between pure altruism and pure egoism should be avoided, and a scale between the two opposite ends recognized. Even if self-interest governs much of our internal landscapes, there is space also for more other-directed motivations, and when it comes to love, their role is particularly imperative. Similarly, a false dichotomy between strong objectivism and strong partiality serves little benefit, for in everyday existence, we move on a scale between obviously subjective prejudices and more neutral considerations. Following Murdoch's suggestion, again it is particularly love, which ought to take distance from subjective biases and instead strive toward the sort of 'realism' that lends more objectivity to our perception (Murdoch, 2003). These observations apply also to love's counterpart – morality. In order to avoid reducing morality into sociological or biological description and in order to thereby hold on to its normative, prescriptive dimension, it is vital to keep egoism and biases in at least a relative check.

Self-directedness is not the only worry, for biological love also comes with biases that limit its moral potential. Since it is enhanced by factors such as neoteny, similarity, and familiarity, biological love can produce and sustain various biases. If we accept that love is an emotion that can, *de facto*, deeply influence morality, then such biases can distort also the sort of moral vision Murdoch spoke of, making us notice value only in those nonhuman creatures and things that are, for instance, sufficiently infant-like or similar to human beings. Indeed, one example of the morally troubling consequences of biases is the manner in which those animals, who are not infant-like or otherwise appealing, and who are not considered companion animals eligible to become 'furry kids', are often left outside the scope of (biological) love. As argued by Mark Estren, the ensuing risk is that everyday animal ethics becomes guided by anthropomorphism (Estren, 2012), whereby we love and value most those animals who are most alike us.

The treatment of farmed animals serves as one potent example. Studies show that many struggle with what is called 'the meat paradox', whereby they both express love of and concern for other animals, and yet take part in practices that cause animals obvious harm (Loughnan et al., 2014). Thus, many self-proclaimed animal lovers eat meat, eggs and dairy that comes from intensive animal agriculture, notorious for causing suffering. The meat paradox offers a potent example of how love of animals can entwine with causing severe harm to them. I suggest that biological love, prone to partiality, may partly explain the meat paradox: love toward animals in the group x is used to justify the lack of love and moral concern toward the group y. Hence, the modern animal lover may proclaim that only companion animals are lovable, whilst farmed animals are left outside of affection and (by practical implication) moral consideration. In fact, it is likely that the exclusion of farmed animals is partly founded on biases such as preference for neoteny, similarity or familiarity: for instance, adult cows fail to be sufficiently infant-like, similar to humans, or familiar to us to spark biological love. To make matters worse, self-

directedness and biases can interlock, whereby biases serve one's self-interest. This is particularly evident in the context of the meat paradox, where biases that exclude farmed animals also facilitate the self-interested desire to consume animal products.

Also biological love of nonhuman nature can come with biases, which complicate its relation to morality. One of these is the risk of favoring the sorts of environments, which are most affectively pleasing, whilst overlooking nature, which is more affectively challenging. Many love national parks with their attractive paths and picturesque viewing spots, whilst fewer declare love of dense brushwoods and thickets that are arduous to walk in, filled with unpleasant insects, and provide no scenic landscapes. Love flows easily toward beautiful mountains and pristine forests, and is less obviously present in relation to swamps or arid lands void of esthetically appealing vegetation. 'The idyllic view of nature' offers an excessively harmonious take on nonhuman existence, void of e.g., suffering (Horta, 2010), and may strengthen biases toward the tranquil instances of nature. As pointed out above, even conservation work often highlights attractive species, whilst hordes of less attractive species all too easily gain less focus. Again, biases for given types of nature may curtail love's moral potential, and often these biases intertwine with the self-directed search for pleasure.

Now, it is quite understandable that biological love is facilitated by factors that support affection and interaction, whether these arise from, say, similarity or familiarity. From the perspective of *de facto* love as attachment, biases may be inevitable. However, from the perspective of morality, they are problematic and question whether biological love should guide our moral values and norms. Descriptively biases may be unavoidable and even intrinsic to biological love, but whether they should govern our prescriptive values and norms, is an altogether different matter.

The Love Paradox

In sum, the moral flip sides of biological love are its self-directedness and biases. If we use biological love as a compass for moral matters, it can render also our animal and environmental ethics egoistic and partial. This, again, leads to potential harm toward the nonhuman world, as it will be instrumentalised for human purposes, whilst those creatures and things that fail to fit self-directed and biased aims will be excluded from moral concern. Love can, therefore, cause harm. I call this 'the love paradox': the biological definition of love may guide one to harm others via 1) instrumentalising them, and 2) excluding legitimate moral patients outside of moral concern.

The love paradox, specific to the biological definition, appears to explain the contradictions that color attitudes toward animals. Why one loves dogs whilst eating pigs is a common question, which the love paradox offers one answer for: dogs are loved due to the biases of love, and pigs are excluded for the same reason. As suggested above, the love paradox offers an explanation also for why dogs, whom many profess to love, are routinely harmed by practices such as breeding: such harming is motivated by the self-directed elements of love. The love paradox is evidently at play also in relation to the rest of nonhuman nature. The danger is that love of appealing nature causes moral sidelining of the less alluring entities and places of nature. Further, it may spur one to reduce nature into an instrument of personal wellbeing, whereby the value of nonhuman nature is found, for instance, from its therapeutic or hedonistic uses. Strikingly, love may also lead

to the destruction of the very nature one professes to love, as humans flocking to national parks or sitting in whale-watching boats may be inadvertently causing both direct and indirect harm to nature. Moreover, in their effort to render nature more pleasing, some may radically reshape it into the desires form, thereby destroying 'wilderness'.

If we accept the thesis presented in the introduction, according to which love is a powerful moral emotion capable of influencing our values and norms, the implications of the love paradox are worrisome. The more biological love is celebrated, the more instrumentalising our attitudes toward other animals and nature may become, and the more extensively those falling outside love's scope may be ignored. Hence, there is a need to reconfigure what the sort of 'love' that is morally constructive consists of. Here, it is worthwhile to go back to Hamilton's earlier claim, according to which the concept of 'the good life' may influence our understanding of love. Indeed, I suggest that the love paradox points toward the need to rethink and develop our notion of 'the good life' and, conjointly, our take on 'love'.

Often, depictions of the good life are limited to human individuals and societies, and are thereby deeply anthropocentric: it is as if 'the good life' comprised of only intra-human affairs and concerned only human beings. Hence, there is a need to radically redefine 'the good life' in a manner that notes the bonds to and with other animals and nature, and recognizes also 'the good life' of nonhuman beings and even things. In the era of animal industries, species extinction and global warming, such redefinition is far overdue, for it appears evident that particularly the residents of developed countries have been misled by poorly formulated ideas concerning 'the good life', consisting precisely of self-directed, short-term pleasures and excessive, morally excluding instrumentalisation of the surrounding reality. Indeed, the flourishing of life on this planet appears to depend on our ability to step away from the constant prioritization of both self-interest and the instrumentalising outlook that are antagonistic toward inter-species connections and nonhuman value and perspectives. Therefore, a concept of 'the good life' that acknowledges human connections to the nonhuman world and approaches the latter also outside of purely self-directed and biased motives is needed, and holds promise of nourishing a more inclusive and less biased understanding of 'love'.

Yet, amidst the circularity between morality and love, in order to achieve such a concept, we may also need to rethink the content and scope of love. That is, our take on love arguably influences our take on the good life, for it teaches us what sort of relations with others, and what kind of beings, are of value. Together with the above, this means that any alteration of either requires that we pay attention to both, which brings us back to the importance of also reconsidering what it means to love foxes, bees, pikes, forests or oceans. In fact, the prevalence of self-directed, instrumentalising attitudes in the contemporary cultures may be partly founded on biological love. If love does impact the type of values we construct and follow, and if biological love is inherent to (most of) us, the rather unavoidable consequence is that, following its lead, we may begin to prioritize immediate affective rewards, instrumentalize others in their search, and favor given beings and things on the basis of various biases. Therefore, biological love may play a part in teaching us to constantly seek positive rewards and to evaluate the surrounding world on the grounds of how well it secures them, which again leads to a very narrow and anthropocentric perception of the good life.

Now, this is not to say that nothing morally beneficial can come from biological love. On the contrary, affection toward one's kin and the positive affects that motivate it have served an enormously important role in shaping not only human beings but also their morality. We need affectively rewarding motivation and without biological love, there would be no 'Homo sapiens' as we know it, and in our place would probably stand emotionally disconnected creatures with little moral concern for their fellows. Biological love can form emotive bonds that potently awaken us to the value of nurture and it stands at the root of also nonhuman social existence. My argument, therefore, is not that one ought to eradicate biological love. Rather, I suggest that it *alone* does not suffice, and that unaccompanied by constructive takes on 'the good life' and other varieties of love (together with other moral emotions and rational reflection), it may lead us and our morality astray. Biological love is one emotive kernel of morality, but on its own it is just that – a pit that can reduce also our morality into something far too enclosed. In more standardly philosophical terms, I suggest that it is a necessary but not sufficient emotive compass for morality (this is not to say that other factors, such as reason and empathy, are not also necessary).

Therefore, although many celebrate love of animals and nature as emotions with only positive moral implications, the love paradox sheds light on their moral dangers. In order to address these dangers, we need to reconfigure both our notion of 'the good life' and 'love', with an eye on the inevitable circularity between the two. From the perspective of this paper, particularly reconfigurations of 'love' arise as interesting. What sort of alternative takes on love avoid the love paradox and could strengthen *de facto* animal and environmental ethics?

Biological love is just one definition among many, and whilst it may accentuate the love paradox, other definitions hold promise of offering an antidote to the latter. Philosophical theories of love, ranging from Plato to Immanuel Kant and Kierkegaard, and from Simone Weil to Murdoch and Nussbaum, are a treasure-hold for the sort of takes on love that aim toward its more other-directed and objective potentials. Following suit, I suggest that the biological definition of love ought to be complemented also in everyday lived realities with more philosophically orientated definitions. There is a difference between recognizing the organic roots of emotions and reducing those emotions to nothing but biology, and this difference is particularly poignant in the realm of emotions that strongly influence morality, which is not about retracing our steps to the evolutionary past but walking toward our ideals in the future. Even if biological love often guides the lived realities of love, there is much to be gained from the following question: How should we redefine and redirect love in a manner that sparks serious heed to the flourishing and value of not only ourselves but also others? What type of reasons can love be founded on, which of these are philosophically relevant, and which reasons should love follow? The task, then, is to search for definitions that allow us to be other-directed also in the context of other animals and nature – regardless of their adorability, esthetic appeal or proximity to human lives. It has been suggested that we need to ameliorate our concepts and language in order to advance our morality in a changing world (Haslanger, 2020). Arguably, the same applies to love – perhaps answering the calls of the nonhuman world in crisis requires that we not only apply our strongest definitions of love more extensively, but also modify them, and even invent new vocabularies of love.

Mapping out further options and investigating how different philosophical definitions of love apply to one's relation to other species, is a matter of urgency, as the nonhuman world is currently bursting with anthropogenic problems. These problems also render the limits of biological love evermore evident, as they require us to love beings and things that fail to pull us into the tunnels of blissful affect and instead cause surges of less appealing feelings. Climate change, species extinction and the catastrophically poor treatment of farmed animals are all affectively challenging phenomena – instead of activating reward-centers, they invite anxiety, worry, sorrow, and melancholy. To an ever-increasing extent, thinking of other species and nature sparks negative, not positive affects. Therefore, perhaps more than ever, we need definitions of love that allow us to direct love also toward the affectively difficult parts of existence and transcend short-term self-gain.

One way to approach the issue of loving amidst challenges is found from a distinction between romantic and moral love drawn by Kierkegaard. Kierkegaard argued that romantic love is grounded on personal preferences and self-directedness, as it makes us want and yearn satisfaction for ourselves. Moral love, on the other hand, is based on an altruistic desire to exist for the other person without seeking anything for oneself, and is guided by moral duties toward her (Kierkegaard, 2009, 65). Now, this distinction is more nuanced than Kierkegaard acknowledges, as moral love need not be categorically altruistic, and romantic love can contain altruistic elements. However, where Kierkegaard succeeds is in pointing toward an essential difference between self-directed and partial love, founded on personal desires and gratification, and moral love, guided primarily by moral considerations. Love of nonhuman animals and nature would do well to fall in the latter category, but this is not the only thing to be learned from Kierkegaard. Significantly, he asserts that the test of moral love is, whether it can tolerate difficulties – can we love others, even when doing so is demanding and deeply unpleasant, and requires sacrifices? When investigating how different philosophical definitions of love may help us to make sense of and guide love toward the nonhuman world, this test needs to be kept in mind. Can we love nonhuman creatures and things even at times when they offer only few positive experiences and instead remind us of widespread suffering and looming catastrophes? What varieties of love help us to love nonhuman animals and nature inclusively in the era of animal industries, species extinction and climate change?

Conclusion

Many of us tend to think that love of nonhuman animals and the environment is morally applaudable – the more we love, it is presumed, the better we will treat the object of our love. This paper has investigated what perhaps the most prominent approach to love – here called 'the biological definition of love' – means in the context of animal and environmental ethics. I have argued that it can with ease be applied to also love of nonhuman animals and nature, stereotypic examples being the cherishing of one's companion dog or cat, and feeling good for doing so, or enjoying the esthetic wonders of national parks. Such attachments with their floods of feel-good neurotransmitters can serve an immensely valuable role in making us attend to and nurture vulnerable animals and nature, and in enticing us to bond with the nonhuman realms. Love can feel delicious and still remain morally constructive.

However, when it comes to morality, this variety of love also has its downfalls, such as self-directedness and biases. These downfalls, again, can lead to what is in this paper called ‘the love paradox’, in the grips of which we instrumentalize our loved ones, harm their wellbeing, and exclude legitimate moral patients from moral consideration. As a result, farmed animals, distant and strange species, and uncomfortable places or entities of nature are all too easily left outside of *de facto* moral attention – at times simply because they fail to activate our reward-centers. Thereby, accentuating only biological attachments at the cost of other varieties of love is morally risky, and may divert us from radically bettering our relationship with the nonhuman world. Affectively rewarding love has its place, but it needs to be complemented by more other-directed and less partial forms of love. Indeed, during this era of anthropogenic nonhuman crises, more focus on what morally inclusive love of other animals and nature may mean, is desperately needed.

The purpose here has been to manifest that love is not always morally constructive and may indeed have morally unsound consequences. It is beyond the limits of this paper to further examine alternative depictions of love of nonhuman animals and nature (I have carried out such examinations elsewhere). What suffices here is to note that biological love is the necessary beginning, but the insufficient endpoint, of redefining what love of the nonhuman world comprises of – particularly at a time, when we need love’s moral guidance perhaps more than ever.

Notes

1. I explore different philosophical definitions of love in the context of animal and environmental ethics in (Aaltola, 2019a; Aaltola, 2019b).
2. Terms such as ‘nature’ and ‘wilderness’ are notoriously problematic. Here, the term ‘non-human nature’ is used and its meaning stands as obvious; the term also recognizes that humans are part of nature. (Woods, 2017)
3. <https://images.app.goo.gl/mpDtUQmF1F7AdjV29>.
4. An interesting possibility is that the pressures of the past have led to a type of love that may indirectly help us fight also wholly novel pressures of the current era and future.
5. Of course, spending time in nature can also have a negative impact on that nature (Aaltola, 2015).
6. See The Guardian 12/10/2020 ‘This is my message to the western world – your civilisation is killing life on Earth’, <https://www.theguardian.com/commentisfree/2020/oct/12/western-worldyour-civilization-killing-life-on-earth-indigenous-amazon-planet?>
7. I was kindly reminded of this by the other reviewer.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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