Are dream emotions fitting?

Melanie Gillespie Rosen & Marina Trakas

Published online: 26 May 2024.

Submit your article to this journal ↗

View related articles ↗

View Crossmark data ↗

Routledge
Taylor & Francis Group

Check for updates

Are dream emotions fitting?

Melanie Gillespie Rosen [ID][a] and Marina Trakas [ID][b]

[a]Philosophy Department, Trent University, Peterborough, Ontario, Canada; [b]Instituto de Investigaciones Filosóficas (IIF/SADAF), Consejo Nacional de Investigaciones Científicas y Técnicas CONICET, Argentina

ABSTRACT

When we dream, we feel emotions in response to objects and events that exist only in the dream. One key question is whether these emotions can be said to be "essentially unfitting", that is, always inappropriate to the evoking scenario. However, how we evaluate dream emotions for fittingness may depend on the model of dreams we adopt: the imagination or the hallucination model. If fittingness requires a match between emotion and evaluative properties of objects or events, it is prima facie plausible that dream emotions could fail to fit under the imagination model because it is unfitting to have an emotion toward an object we do not believe to be real. Under the hallucination model, dream emotions could be unfitting because their objects do not exist but we believe them to be real. More nuance, however, is required. By comparing dream emotions with the emotions we experience while imagining, engaging with fiction, and hallucinating, we conclude that although there are compelling arguments in support of the claim that dream emotions are essentially unfitting, these arguments are not entirely convincing, and it is more plausible that particular dream emotions can be assessed for fittingness under either model of dreaming.

1. Introduction

Emotions are a consistent presence in dream reports, similar in frequency to reports from waking life. These findings have led Nielsen et al. (1991) to claim that emotion is as much a part of dream experiences as it is of waking life experiences. Nevertheless, the exact nature of emotions in dreams remains an open question, one that has yet to receive significant attention in the field of philosophy. Dream emotions, emotions that occur while we sleep in response to experiences we have in sleep, pose many puzzles for philosophers. The events and objects that trigger these emotions are also dreamt and thus, in general, they are non-existent. They are solely generated

by the mind and do not exist as ordinary physical objects that have a spatio-temporal location. If an appropriate emotion is a response to real objects or events, then this is problematic for dream emotions. Further to this, we might observe that, at times, dream emotions can seem very unusual, differing significantly from the emotional responses we would typically experience in our waking life, and this can raise doubts about the coherence of such emotions. The main conundrum for our purposes here, however, is whether dream emotions can *ever* make sense, considering their objects exist only in the dream world.

Answering these questions is no straightforward task, as there is disagreement amongst philosophers regarding both the nature of emotions and the nature of dreams. Further to this, philosophical discourse on the nature of emotions in dreams is lacking, hence the importance of initiating this discussion in the field. While attempting to offer a comprehensive account of the nature of dream emotions might be unrealistic for an initial exploration of the topic, we begin by addressing a specific and more approachable question: Are dream emotions "fitting"? This question will guide our research in this paper, as we attempt to provide an answer.

What does it mean for an emotion to be "fitting"? Here we use fittingness to refer to the general appropriateness of the emotion to the evoking scenario. As Tappolet (2016) explains,

> We are prone to assess our emotions with respect to how they appear to fit evaluative states of affairs. We criticize someone's fear when it bears on something that is not fearsome, such as an innocuous little spider. This practice strongly suggests that we assume that the emotion represents the spider as fearsome. Thus, fear appears to have correctness conditions in much the same way as the visual experience of poppies as blue has correctness conditions. (p. 20)

"Fittingness" is a complex notion that will be discussed in greater detail in section 1. Asking about the fittingness of dream emotions constitutes an excellent starting point for comprehending the nature of dream emotions. Consider waking emotions. Sometimes waking emotions are conceived as unfitting if the beliefs about the object that lead to the emotion are irrational, for example, we believe, for no good reason, that a sturdy bridge is dangerous, so we fear standing on it. At other times, waking emotions are unfitting even when we know that an object is not dangerous at all but still fear it, to give a classic example by Greenspan (1981, p. 162), fearing a lovable old dog that has arthritis and no teeth that we know poses no danger.

In these cases, waking emotions can be considered *unfitting* because they do not appear to align with the subject's beliefs or the evaluative properties of their objects. In contrast, waking emotions can be appropriate or fitting when, for example, we are afraid of a dog that shows signs of aggressiveness, or a rational belief about something dangerous, like a deadly snake, leads to

fear. Waking emotions can thus at times be fitting and at others unfitting. It is not evident, however, that dream emotions present this same feature. Given that dream objects and events are not real and further, some theories of dreams imply that we do not even believe that dreamed objects exist (Ichikawa, 2016), it seems natural to suspect that dream emotions as a kind are unfitting. We think a good analogy can be made with emotions toward fiction, which have been considered to be essentially *irrational, incoherent and inconsistent*, as we acknowledge the nonexistence of fictional objects yet still experience emotions toward them. Dream emotions, like emotions toward fiction, could also be "*essentially unfitting*" for similar reasons.

The discussion regarding the possible irrationality and inconsistency of emotions directed toward fictional entities as a kind was first initiated by Radford and Weston (1975) and Walton (1978). This not only opened up the debate about the nature of emotional reactions to fiction and their relation to emotions toward non-fictional objects but also prompted a reevaluation of the ontological assumptions and commitments inherent in different theories of emotions and fiction (Konrad et al., 2018; Stecker, 2011; Tullmann & Buckwalter, 2014). Moreover, it broadened our sensitivity to the diverse ways in which emotional responses can manifest and the varied functional roles that they can present in our affective life (Stecker, 2011). Just as the debate on fictional emotions has been an important step in our understanding of emotions and fiction, equal consideration should be given to the exploration of emotions within dreams to further enhance our understanding of both emotions and dreams.

Setting our sights on dream emotions, after expanding on the concept of "fittingness" and providing reasons for favoring this term over the notion of "rationality", we argue that the fittingness of dream emotions may depend on what kind of mental state dreams are. While there is much debate on the nature of dreaming, this disagreement can be divided into two main models: the hallucination model, according to which dreams are a form of hallucination that may involve realistic world simulation, and the imagination model, according to which dreaming is akin to closing one's eyes and imagining, except that this occurs while we are asleep. Because each model proposes dreaming to be a different kind of mental state, dream emotions under each model of dreaming bring up different questions regarding their fittingness. However, under each model, the issue of essential unfittingness arises, but for different reasons. After a careful examination of the potential reasons to consider dream emotions as essentially unfitting under the two frameworks, we conclude that we should not attribute "essential unfittingness" to dream emotions in either of the two models of dreams. Despite prima facie essential unfittingness, dream emotions, similarly to waking emotions, can at times be fitting and at other times be unfitting.

2. Emotions: Rationality, appropriateness, and fittingness

Dream emotions have been associated with bizarreness and irrationality because they often appear to be incoherent and inconsistent responses to dream events (Hobson, 2004; Kubota et al., 2011; Merritt et al., 1994; Scarone et al., 2007). For example, "[In the dream] I was walking on the sidewalk next to a school yard near my house. On the other side of the fence (inside the school yard) I saw a cute small dog. This terrified me (which is odd because I'm not afraid of dogs, in fact this dog looked similar to my dog, who I love and do not fear at all)."[1] The dreaming mind is also said to be deficient in rational capacity (Hobson et al., 2000; Metzinger, 2013). The alterations to activation in the dorsolateral prefrontal cortex (DLPFC) during dreams may be related to our inability to repress emotions and assess beliefs (D'Agostino et al., 2013; Hobson & Kahn, 2007), making their cognitive profile akin to delusions (Coltheart, 2005; Rosen, 2022). This would be a tidy explanation of the weirdness of dream emotions: we are irrational when we dream, and so are our emotional responses. Alterations to cognitive mechanisms are certainly important for our understanding of mental states in dreams, however, whether the notion of rationality is at all applicable to emotions is debatable.

While the notion that certain emotions lack coherence and rationality has circulated in philosophical discussions concerning emotions toward fiction (Radford, 1990; Radford & Weston, 1975), the attribution of (ir)rationality to emotional experiences can be considered as a product of the over-intellectualization of emotions, that is, of the tendency to conceive of them as evaluative judgments and beliefs (Goldie, 2000). If emotions are evaluative judgments and beliefs, feeling fear despite believing or judging that the situation is not dangerous seems irrational. Nonetheless, the notion of (ir)rationality may not be adequate to explain and evaluate emotions. Recalcitrant emotions, emotions that conflict with a judgment or belief (Brady, 2009) as in the previous example of fearing a lovable old dog, could in fact be explained without appealing to conflicting and contradictory judgments or beliefs. They may instead be due to the cognitive impenetrability or informational encapsulation of some emotions – we cannot simply update them based on new information the way we update beliefs (Griffiths, 1997; Goldie, 2000; Tappolet, 2016).[2] Further, particularities of the biography and situation of the individual, such as past trauma or phobias, could also account for recalcitrant emotions (Calhoun, 1989; Goldie, 2000). Another reason for skepticism about the relevance of rationality to emotion is that if one attempted to manage their beliefs the way we reasonably attempt to manage our emotions, such attempts themselves would be irrational (Gubka, 2022). It makes sense to try to manage fear of a harmless spider in front of me through repression, relaxation or taking medication, but it would be irrational to use these methods to try to stop believing that the spider is there.

In this sense, we follow Goldie (2000) and Gubka (2022) and allow that "the notion of rationality can do little to explain expression of emotion" (Goldie, 2000, p. 7). It is more plausible that "emotions are ineligible for rationality" (Gubka, 2022, p. 293). Emotions, like perceptual experiences, should not be assessed as rational or irrational the way beliefs and judgments are (see also Döring, 2014). Seeing an illusion or hallucination is not irrational. Assessing that one is seeing an illusion does not banish the illusion: one still sees the lines of the Müller-Lyer illusion as being of different lengths, even after realizing they are the same length (Goldie, 2000; Tappolet, 2000). Only the belief or judgments related to the perception might be judged for rationality: for example, it may be irrational to refuse to acknowledge that what one is seeing is an illusion despite having good evidence for this being the case. Similarly, in our view, it is the belief related to emotions, not emotions themselves, that are rational or irrational. Being terrified of a non-threatening, cute animal is neither rational nor irrational, whereas believing that it is dangerous without good reason can be irrational. Only beliefs or judgments about the object of an emotion can be assessed for rationality, not emotions themselves.[3] However, as we will see, our assessment of the rationality of beliefs will be relevant to our assessment of emotions.

While we generally assess perceptions in terms of accuracy, a vast array of notions have been recently used in the philosophical literature to assess emotions, such as appropriateness, reasonableness, aptness and fittingness. This suggests that there are different criteria for evaluating an emotion. The more basic sense in which an emotion can be assessed is in an epistemic sense, that is, in relation to their objects and to the beliefs we form about them. The correctness conditions – the conditions by which we assess the emotion as being appropriate to the object – include that the emotion correctly represents or matches the evaluative properties of the object: fear is fitting if its object is in fact fearsome (D'Arms & Jacobson, 2000; Tappolet, 2016). The notions of "fittingness" and "appropriateness" have been generally used to denote this initial epistemic assessment criterion (Naar, 2021).

Fittingness overall may require more than simply fit to the features of the object or evoking situation, also referred to as *aptness* by Jones (2004). Reasons and beliefs also play an important role in the assessment of emotions. Emotions present not only correctness conditions but also justification conditions: to be justified or *reasonable*, emotions need to be sufficiently grounded in the subject's beliefs and in the evidence available to them (Deonna & Teroni, 2022; Jones, 2004). Emotions based on irrational beliefs and not supported by evidence could be considered inappropriate or unfitting in this second epistemic sense of the term. The same applies to recalcitrant emotions, such as feeling afraid of a dog I believe to be safe. Even if this emotion fits the object in the first epistemic sense by getting it coincidentally right and correctly representing or matching the evaluative properties of the

object, the emotion may still not be entirely fitting given that it does not fit the subject's beliefs and available evidence. It is not fitting to fear an old lovable dog that happens to become unexpectedly vicious due to rabies when the reason to fear it, such as being attacked once by a different dog, has nothing to do with what makes this one dangerous (see also Deonna & Teroni, 2022). This second epistemic sense of fittingness highlights another aspect of emotional fittingness: not only must emotions align with the experiencer's representation of the object, but relevant beliefs about the object must also be rational and correctly reflect the evaluative properties of the object for the emotion to be fitting. In sum, although these two epistemic senses of fittingness are separable and can diverge in certain cases, we consider that both of them are relevant to a broad and comprehensive understanding of the concept of fittingness. One might consider that the object, the emotion, and the beliefs need to align for an emotion to be fitting.

Making sense of emotions requires still more than establishing whether the emotion fits one's beliefs and the objects of beliefs. The *proportionateness* (Goldie, 2000; Jones, 2004) of our emotional response – whether it is experienced at a reasonable intensity – may also be a criterion to assess the appropriateness or fittingness of emotions. *Biographical meaningfulness* (Calhoun, 1989) considers individual variations of background, character and situation and can render the emotions of a particular person *intelligible*. Intensely felt emotions can be normal for one individual but not for another in the same circumstances. Furthermore, *normative, prudential* and *cultural* criteria may also determine when an emotion is the "right" way to feel. Amusement at a sexist joke may be morally wrong, envy and resentment toward a newly tenured colleague may be prudentially bad for the untenured junior faculty (D'Arms & Jacobson, 2000), and pride in one's ancestors can be more appropriate in some cultures than others (Goldie, 2000).

Despite all the different senses in which emotions can be assessed, we focus on the epistemic criteria of this evaluation, that is, on the understanding of fittingness – the term preferred here, which assesses emotions in relation to their objects and the beliefs that ground them. Because our discussion here is about the possibility that no emotions experienced during dreams fit their objects or the subject's beliefs, the issue of intensity, as well as personal, moral and cultural fit, belongs to a different debate, so we leave them aside. In the following, we outline two influential models of dreaming before explaining why dream emotions might be "essentially" unfitting in an epistemic sense.

3. Two Theories of Dreaming

It is currently accepted that dreams are experiences that occur during sleep (Rosen & Sutton, 2013), although beyond this there is much disagreement. Dreams have been described as hallucinogenic delirium (Hobson, 2004),

virtual reality involving illusions (Windt, 2010, 2017), imagination (Ichikawa, 2008, 2016; Sosa, 2005), a state that shifts between imagination, hallucination and illusion (Rosen, 2018, 2021a, 2024), or a sui generis state unlike the aforementioned (Thompson, 2016; Windt, 2015, 2021). Most theorists would agree that not all experiences that occur during sleep can be classed as dreaming, for example, propositional thoughts that occur without some sort of sensory representation should be omitted. If some kind of representation of objects is required, "white dreams", the experience of being aware of time passing during sleep without any experience of objects or events (Fazekas et al., 2019), should be omitted despite the name. We find these omissions to be plausible. While there are many disagreements about how to characterize dreams, how they are generated and what, if any, evolutionary purpose they have (Rosen, 2024; Scarpelli et al., 2022; Windt, 2015), one key debate regarding the nature of dreaming is between imagination theorists and hallucination theorists. This debate primarily concerns the phenomenology of dreaming: whether the experience of dreaming is like imagining or hallucinating. Each model has different implications for our discussion about dream emotions. While we cannot clearly define dreaming without begging the question since the nature of dreaming is what is at issue here, we take dreaming, whether imagination, hallucination, or otherwise, to be a type of experience that occurs during sleep that represents objects or events. The dreamer often represents themselves as being within the dream, being embodied and interacting with dream objects. Importantly, dreamers sometimes experience emotions in response to their dreamed events and objects.

According to the imagination model (Ichikawa, 2008, 2016; Sosa, 2005), dreaming is a type of imaginative activity. Dreaming is akin to closing one's eyes and sensorially imagining being in and interacting with a world, the main difference being that dreams occur while we are asleep. Here we use imagining to refer to mental imagery as opposed to "imagining that", or propositionally imagining. When you imagine an apple, you bring up an image of an apple, but the phenomenal nature of this apple is different from perception (Nanay, 2016). It is not experienced as present – solid and accessible for interaction or navigation (Matthen, 2005; Noë, 2012; Oblak et al., 2022; Rosen & Barkasi, 2021). Imagination is not necessarily visual, however. We can also imagine tasting, hearing, smelling, touching, or any type of sensation. What specific kind of imaginative activity is involved in dreams requires further clarification. Imagination can refer to a broad range of phenomena and it resists a simple taxonomy and definition (Liao & Gendler, 2019; Nanay, 2016), so we will focus on the subtypes of imagination that are most relevant to dreaming.

For Ichikawa and Sosa (2009), dreaming is like imagining in several important ways. Dreaming develops alongside the ability to spatially

imagine, both have no causal efficacy, are not subject to moral assessment, and what occurs is under, respectively, an "in the imagination" or "in the dream" operator. That which occurs under either such operator does not in fact occur.[4] Although we report carrying out actions in a dream world, these "actions" are just like imagining one's body interacting with an imagined world. In our view, the best description of dreaming under the imagination model is what we refer to as *imaginative mindwandering* with closed eyes. Although mindwandering, like imagination, is difficult to define as there are a broad variety of mental states that could be categorized as mindwandering (Seli et al., 2018; Zedelius & Schooler, 2018), it can be broadly described as a type of unguided mental activity in which one's mind "meanders from topic to topic" (Irving & Glasser, 2020, p. 4). We consider imaginative mindwandering to be a subtype of the broad range of mindwandering phenomena that differs from, for example, propositional mindwandering, when one's thoughts wander.[5] This means that dreaming, under the imagination model, is like the experience of unguided mental *imagery*: it can involve visual, auditory and other sensory imagery such as touch and smell, and it is unguided because one does not usually intentionally bring up dream imagery. The main difference between dreaming and imaginative mindwandering is that dreaming occurs while asleep and imaginative mindwandering occurs while one is awake but relaxed or distracted from a task. As with imagination, we do not believe that dreams are real. Imagination model theorists tend to appeal to the fact that many of the features of dreaming, such as the fact that we are unsurprised by bizarre events (Hobson & Friston, 2012) and the rapid shifts between places and times (States, 2000), echo what occurs when we imagine (Ichikawa, 2009).

Dreaming about walking down the street and seeing a scary monster, in this model, is akin to relaxing, shutting one's eyes, letting one's mind wander, and picturing walking down the street and seeing a scary monster while awake.[6] If dreams are imagination,[7] this should reflect whether emotions felt toward imagination are ever fitting. The main area of contention will be whether it can be fitting to feel emotion about an item that one knows does not exist.

The hallucination model of dreaming is the common or received view that has gained the most support in the literature (Rosen, 2024; Windt, 2015). According to this model, dreaming is a form of hallucination. We take hallucination to be a kind of experience that is phenomenally similar to or indistinguishable from perception but is generated by the mind in the absence of the material, physical object that is hallucinated (Nanay, 2016). A hallucinated apple looks like an apple but there is no apple present causing the experience. Dreaming, in the hallucination model, is the experience of being in a world that is generated by the mind which could be seen as similar to a virtual reality (Hobson et al., 2000; Windt, 2010) but we believe it to be real.

We feel embedded and embodied in the dream (Rosen, 2021b), and objects within have a sense of presence – they appear solid and accessible for inter-action or navigation (Matthen, 2005; Noë, 2012; Oblak et al., 2022; Rosen & Barkasi, 2021). The AIM (activation, input gating, modulation) model (Hobson, 1992, 2013) is an example of a hallucination model of dreaming. Input gaiting (I) occurs during dreams, meaning that we are shut off from stimulus from the external environment while the brain undergoes intense activation (A) that produces hallucinations in a state in which there is a difference in neuromodulation (M) compared to waking. The consequence is that the brain generates a hallucinatory world or virtual reality which we mistake for the real world (Revonsuo, 1995; Windt, 2010; Windt & Metzinger, 2007). However, the altered neuromodulation means that the content of dreams can be bizarre and we lack certain cognitive capacities such as metacognition and rationality, so we do not notice the bizarreness or realize we are dreaming (Rosen, 2018). Our emotions in this state can be heightened (Fukuda, 2005; Schredl, 2018) or inappropriate for a particular dreamed event (Merritt et al., 1994), such as intense fear of something that is not scary. It is important to note that appealing to brain activation is not a plausible way of determining whether dreaming is imagination or hallucination since, although progress is being made, we have not discovered neural correlates of each state to allow us to distinguish them (Dijkstra & Fleming, 2023; Klein, 2010). In general, hallucination model theorists appeal to the first-person testimony of dreamers to support their model. People tend to report having realistic, although often bizarre experiences that they thought were real at the time (Domhoff, 2007). Our discussion about the essential unfittingness of dream emotions in this model, thus, will be based on the inexistence of dreamed objects and the irrationality of our beliefs about their existence.

There are alternatives to the imagination and hallucination models of dreams, such as the embodied simulation approach of Domhoff[8] (Domhoff, 2017, 2022), the pluralistic model, according to which dreams shift between imagination and hallucination and contain elements of both (Rosen, 2018, 2021a, 2024),[9] and the sui generis view, according to which dreams are not described as imaginative or hallucinatory but are a distinct type of mental state (Thompson, 2016; Windt, 2015, 2021). Here we focus on the imagination and the hallucination models, as they are the two influential models of dreams in philosophy that distinctly oppose each other and present clear and different implications for the conceptualization of dream emotions and emotional fit.[10]

Why might dream emotions be "essentially" unfitting in an epistemic sense? What we call *essential* unfittingness,[11] that is, unfittingness of a whole class of emotions, might occur then under two conditions in the case of dreams: first, when the subject's beliefs do not align with their emotion and second, when the beliefs that ground the emotion are irrational or false. The first kind of essential unfittingness could be attributed to dream emotions if

the imagination model of dreaming is correct. According to this model, we do not believe that dream objects and dream events are real, so there would be no object to which the dreamer could attribute evaluative properties. Nonetheless, we still appear to feel emotions while we dream.[12] We evaluate this view in section 3. The second kind of essential unfittingness, that emotions are unfitting if our beliefs are irrational or false, could be attributed to dream emotions if dreams are akin to hallucinations. In this model, we wrongly believe that dream content is real – that there are real objects with real evaluative properties.

In the following section, we assess whether emotions in dreams can be said to be fitting at all, or, rather, if they are *essentially* unfitting under the imagination model. We follow with a discussion of essential unfittingness under the hallucination model in section 4.

4. Essential Unfittingness of Emotions under the Imagination Model of Dreaming

Under the imagination model of dreaming, we would, prima facie, expect dream emotions to show significant overlap with emotions that we have while we imagine. Further, our assessment of the fittingness of emotions while we dream should also mirror our assessment of the fittingness of emotions while we imagine. According to this model, we do not believe that what we experience in a dream is true (Ichikawa, 2009), yet people report experiencing intense emotions toward dream content (Hobson et al., 2000; Sikka et al., 2018; Zadra et al., 2006). It seems that such emotions are unfitting. However, we also can experience emotions toward what we imagine while we are awake. What should be made of these cases? Are emotions toward imagination essentially unfitting?

The emotions we experience when we engage with fiction, that is, with works of art that involve elaborate, imagined scenarios intentionally created by others, are also relevant to this discussion. Just as we do when we imagine, we experience emotions when we read a novel or watch a film despite knowing the fiction is not real. Activities related to our engagement with fiction, such as reading, have been recently associated with mindwandering (Fabry & Kukkonen, 2019),[13] and we argue that there are important similarities between engagement with fiction and imagination. Fiction allows individuals to escape from the present moment into imaginary worlds created by others, while imagination allows us to engage in worlds of our own invention. There are certainly differences between imagination and engagement with fiction (henceforth, simply "fiction"), such as the lack of prescribed narrative in mindwandering. While we do not want to overstate the similarity between imagination and fiction, fiction plays an important role in our discussion.

Moreover, in addition to the closeness between imagination and fiction, there exists an additional justification for considering the examination of emotional responses to fiction in the analysis of the fittingness of dream emotions within the framework of the imagination model. Emotions toward fiction or "fictional emotions" have been extensively explored in the philosophical literature (for recent reviews, see Friend, 2016, 2022; Matravers, 2014; Vendrell-Ferran, 2009, 2018, 2021), and were perhaps the earliest type of emotions to be considered "essentially unfitting", to apply our terminology. Previously, these emotions have been deemed as irrational, incoherent and inconsistent (Radford, 1990; Radford & Weston, 1975) instead of "unfitting".[14] Although we believe that fictional entities do not exist, we still feel emotions in response to them; this is why emotional reactions toward fiction have been described as irrational or incoherent. This argument, which has come to be known as the "paradox of fiction" (Radford & Weston, 1975; Walton, 1978),[15] can be also applied to emotions felt toward certain types of imagination, such as fantastic imagination and counterfactual imagination. For example, when imagining being at the funeral of a loved one, despite judging or realizing that our loved one is alive and in perfect health, we can nonetheless feel sadness. We can feel joy when imagining an alternative life despite knowing that it does not correspond to reality. According to this line of thought, these emotions are *essentially* unfitting because they do not respond to our beliefs, and as a result, they do not fit the object. Given that under the imagination model, dreams are a type of imaginative mindwandering, dream emotions should also be essentially unfitting, since under this model, we do not believe that dream objects exist. Dream emotions would in principle have the same essential unfittingness attributed to fictional emotions and some types of imagination emotions: in particular, fantastical imaginative mindwandering.[16] As Ichikawa stated, "dreams don't involve emotions, except in the way that fictions do" (Ichikawa, 2007). Thus if there is a paradox of fiction, there is also a paradox of dreaming.

Despite the prima facie essential unfittingness of dream emotions under the imagination model, we argue that more needs to be said before this conclusion is reached. Dream emotions are only essentially unfitting under particular interpretations of the imagination model. Following Sosa (2005), it could be argued that when we dream, we do not have genuine beliefs about the veracity of the dream content, but just "dreamed" beliefs. When one says "I dreamed that I was being chased by a lion", adding "I dreamed that" to "it happened" indicates that it did not actually happen. The same that applies to "it happened" also applies to "I believed". In Sosa's view, when you say "I dreamed that I believed I was being chased by a lion", the addition of "I dreamed" also indicates that you did not really believe you were being chased by a lion. In fact, everything that happens in the dream is

under this "in the dream" operator (Sosa, 2005). Dream occurrences do not *really* occur, and neither do dreamed mental states, since "in dreaming there is no real thinking and no real experiencing" (Sosa, 2005, p. 12). Because dream emotions are also under this "in the dream" operator, there are no real emotions present, only dreamed ones. If all aspects of dreaming are under the "in the dream" operator, beliefs, events and emotions are all under the same non-existent ontological status. Therefore, in this conceptualization, a "paradox of dreaming" akin to the paradox of fiction does not arise and dream emotions cannot be said to be essentially unfitting since they do not occur at all. There is nonetheless a problem with this strong reading of Sosa's view: it not only dissolves the "paradox of dreaming" but also the existence of dream emotions themselves. Dream emotions, as a particular kind of mental state, simply do not exist. An alternative reading of Sosa's claim may be nonetheless more plausible given the nuances of emotions in both dreams and imagination, as we explain in the following.

What exactly is going on emotionally when we imagine? Here we make an important analytic distinction between imagining *having* emotions, which we will refer to as "imagined emotions", and emotions *felt whilst* imagining or "imagination emotions".[17] I could imagine that tomorrow at the party I will feel happy, or imagine that a student is stressed while going into an exam, or imagine that I would be extremely sad if I had the fate of Anna Karenina without feeling those emotions myself. The imagined emotions could be attributed to the imagined self or the imagined other, but I myself do not feel the emotion. In contrast, when I mindwander and, for example, imagine being at the funeral of a loved one, I might *feel* something that seems to be sadness about this imagined event rather than supposing or counterfactually thinking that I *could* have such emotions. I can feel anger at the actions of a fictional character. So the idea that dream emotions are similar to emotions evoked by imagination and fiction could be interpreted either as being ontologically similar to imagined emotions or, alternatively, imagination emotions. In the "imagined emotions" reading, dream emotions, call them "dreamed emotions", have some sort of pseudo-existence as mental states, but only under the "in the dream" operator. If we only have dreamed emotions when we dream, similar to imagined emotions, this avoids the essential unfittingness of dream emotions. Although this reading of Sosa seems more plausible than the previous one, at least for certain cases, it is nonetheless problematic as a description of all dream emotions.

It is unlikely that we only ever dream of having an emotion in a similar way to "imagined emotions". If dreams are a type of imagination and we can have imagination emotions that have a phenomenal feel similar to real emotions, there is reason to think dreams would have an analogous type of emotion. Further, dream emotions appear to present many phenomenal properties characteristic of emotions that are unlike imagined emotions: bad

dreams and nightmares, for example, are rated as high in emotional intensity (Fukuda, 2005; Schredl, 2018; Zadra et al., 2006) and fear and anxiety experienced while dreaming have been described as heightened and intensified (Hobson et al., 2000). Sometimes, dream emotions present manifestations of hyperarousal such as palpitations, increased respiration, excessive sweating, and even bodily movements. These responses are particularly common in post-traumatic nightmares (Schreuder et al., 2001). In fact, dream emotions can be so intense that they wake the dreamer (Hobson et al., 2000). Even good dreams frequently present changes in respiratory rate, heart rate, and skin potential responses (Hauri & Van de Castle, 1973). Positive emotions such as feeling happiness can also be intense, for example, "I felt so happy the entire dream that I didn't want to wake up" (Selterman et al., 2014, p. 117).. An "imagined emotion" that occurs during mindwandering, such as the fear one imagines one would experience while being chased by someone in a cemetery at night, has in principle no emotional intensity itself and probably no signs of hyperarousal or bodily movements. But when I dream about this same event, I might wake up sweating and breathing heavily, feeling extremely afraid, with my heart beating faster than normal. Such emotions are therefore more akin to the aforementioned "imagination emotions", call them "dreaming emotions". To conclude, although some dream emotions may indeed involve "dreamed emotions" akin to "imagined emotions", there are also "dreaming emotions" that are akin to "imagination emotions". Dreaming emotions are experienced with intensity, possibly even surpassing the intensity of many imagination emotions.

To explain dreaming emotions and justify their fittingness, we might instead try to ascribe dream emotions to a "dreamed self" who is different from the waking self. This is another way of putting dream emotions under an "in the dream" operator aside from claiming they are all "dreamed emotions". Attributing dream emotions to the dreamed self could be like attributing emotions to another dreamed character, although this appears to be more akin to dreamed emotions rather than dreaming emotions. Another reading would be to say that the dreamed self is not the same individual as the waking self in some other sense, such as being a different person or identity than the dreamer. We can dream of being someone else just as we imagine being someone else (Velleman, 1996). In both readings, beliefs, objects, emotions, and also the self or character who experiences the emotion would all be part of the dream world. While this move could in principle count against the essential unfittingness of dream emotions, it is nonetheless also problematic. The assumption of a sharp distinction between the dreamed self and the dreamer is not a very plausible interpretation of common dreams. Although one might argue that the same brain can generate distinct individuals at different times (Rosen & Sutton, 2013) or distinct conscious streams simultaneously (Nagel, 1971; Schechter, 2018), the relationship between the dreamed

self and the dreamer is more in continuity than in dissociation (Rosen & Sutton, 2013; Schredl & Hofmann, 2003) since individuals usually identify the dream self as the same person as their waking selves (Schredl, 2020). Dream selves usually look like and behave as the waking selves do. This continuity supports the idea that the self in my dream is most likely to be *me*, just under a different mode of awareness and attention (Thompson, 2014). Furthermore, if there are bodily reactions indicative of emotions during a dream such as heightened arousal or physical movements, it is *my* physical body that reacts and undergoes these changes rather than an imagined or dreamed body.

In addition to this, waking individuals often continue to feel the emotion that occurred in the dream after waking, known as emotional carry-over (Lara-Carrasco et al., 2009). This also counts against a sharp distinction between dreaming and waking. Even if it is a dissociated or imagined dream character that experiences fear during my nightmare, on waking *I* feel fear – that is, my waking self feels fear, at least for a time. This emotional carry-over, in particular, fear due to nightmares, generally lasts for a short period of time, but this is not always the case. Dream emotions can persist, influence waking mood (Mallett et al., 2022; Schredl & Reinhard, 2010), and also influence specific behaviors. For example, feeling jealousy in response to the infidelity of one's partner in a dream has been associated with less intimate feelings and more conflict with the partner during subsequent days (Selterman et al., 2014). This long-term emotional carry-over of dream emotions is another reason in favor not only of the continuity of the self between dreaming and waking but also of the existence of dreaming emotions and not merely dreamed emotions.

Thus, dreams may involve both "dreamed emotions" and "dreaming emotions". The former is a non-issue regarding the essential unfittingness of emotions. Either these emotions, as a particular kind of emotional state, do not exist, thus need not be fitting, or they are in some other sense in the same ontological category as dream occurrences. They can then be judged to be specifically fitting or not within the dream world. This is similar to judging a fictional character's emotional responses as fitting or unfitting to the fictional world. However, what should be made of the other type – the dreaming emotions? Ascribing all such emotions to a dreamed self, distinct from the waking self, appears to be problematic and not plausible. Conversely, harnessing the resources of fiction can provide a more credible framework for circumventing their inherent lack of fittingness.

In order to avoid the paradox of fiction, Walton conceived fictional emotions as *quasi-emotions* (Walton, 1990). These are emotions felt in our imagination that differ from emotions directed toward non-fictional objects. They are based on fictional beliefs and fictional truths about the characters and events but may have a similar phenomenology (Walton, 1978, 1990; K. Walton, 1997). The difference in the cognitive basis of quasi-emotions can be

interpreted as a difference in their ontological status as mental states: "when it is said that someone pities Willy Loman (…) the person is actually in a distinctive psychological (emotional?) state, even if that state is not pity" (Walton, 1978, p. 21).[18] Quasi-emotions may nonetheless have phenomenal and physiological responses that appear similar to real emotion (Stecker, 2011). Dream emotions could then analogously be considered as quasi-emotions – similar from the first-person perspective, but not the same ontological *kind* of emotions we feel toward similar waking events.

Under this framework, dream emotions are grounded in objects and beliefs that are under an "in the dream" operator, but neither the quasi-emotion itself nor the self who experiences the quasi-emotion is under an "in the dream" operator. With both fiction and dream emotions, the self who feels should be the same self who reads the book or dreams the dream, respectively. What changes then is the ontological status of the dream emotions: dream emotions are not equal to waking emotions but are also not merely "dreamed emotions", and the dreamer can feel something *akin to* an emotion. We can allow for the same kind of fittingness of dreaming emotions that Walton ascribes to emotions toward fiction. Allowing that the dreamer feels the quasi-emotion can account for emotional carry-over and physiological and bodily reactions displayed by sleeping individuals. It is the dreamer who simulates this particular emotional state and who feels something akin to emotion. We need not postulate a sharp distinction between the dreamer and the dream self. The emotional carry-over after waking is explained by the fact that it was the dreamer, and not simply a dreamed self, who felt quasi-emotions while dreaming. The dreamer simply continues to feel these quasi-emotions after waking. A quasi-emotion in some circumstances may be physiologically or phenomenally indistinguishable from a normal emotion, explaining some cases of intense fear-like experience continuing after waking from a nightmare.

In sum, although prima facie the imagination model seems to imply that dream emotions are essentially unfitting, it need not do so. It can instead conceptualize dream emotions as being under an "in the dream" operator according to which they are only experienced by a dreamed self, or it can allow that the dreamer does feel something physiologically or qualitatively similar to real emotions that are nonetheless ontologically different, akin to "quasi-emotions". We distinguished between *imagined* emotions that are ascribed to an imagined self but not felt by the imaginer and *imagination* emotions, which the imaginer does experience. In dreams, we might similarly have *dreamed* emotions that the dreamer themselves does not experience and *dreaming* emotions, which are experienced. Dreamed emotions are on the same ontological level as dreamed objects, thus should not be classed as essentially unfitting. However, this does not apply to dreaming emotions, which can exhibit intense phenomenological qualities, involve bodily

movements and physiological changes, and may even manifest emotional carry-over effects. Because of these qualities, the "in the dream operator" view is not plausible as an explanation of all dream emotions. Drawing on an analogy with emotions toward fiction, we might deem such emotions to be quasi-emotions; mental states that can share features of regular waking emotions but have a different ontological status. Because of this different ontological status, they need not be essentially unfitting. This last proposal then constitutes the more plausible account, that dream emotions a are not essentially unfitting under the imagination model of dreaming. An alternative that we consider in the next section is that when we dream, we feel emotions in response to hallucinated scenarios we believe to be real.

5. Essential Unfittingness of Dreaming under the Hallucination Model

The hallucination model of dreams does not present, in principle, the same problem of the essential unfittingness of dream emotions as the imagination model since under the hallucination model, we inaccurately believe what we are dreaming is real. The aforementioned paradox of dreaming thus does not arise. Furthermore, the distinction between dreamed and dreaming emotions introduced in our discussion about the imagination model of dreams does not apply to the hallucination model. We do not think there is an analogous case of "hallucinated emotions" that are akin to imagined emotions. It is unclear what it would mean to hallucinate having an emotion. If I was to hallucinate and believe that there was a dangerous dog in front of me, I perceive or quasi-perceive (McCreery, 2006) the dog and fear the danger it poses to me. It is possible to realize that these experiences are simply hallucinations, and in such a case, the same issue arises as for emotions toward fiction and imagination. However, we do not usually realize we are dreaming. Here we focus on non-lucid dreams, dreaming in which the dreamer does not realize they are dreaming (LaBerge, 1981, 1992).

Given that under the hallucination model of dreaming we usually – but wrongly – believe the content of dreams to be real, we might still question the fittingness of dream emotions in two senses. Firstly, whether emotions require a real object, one that exists independently of the mind, to be fitting[19]; and secondly, whether beliefs about the dream content that emotions arise from are rational. If we require that a real dog which has the property of dangerousness is the object of my fear, feeling fear while hallucinating or dreaming of a dog that looks dangerous is unfitting irrespective of my belief. Fear can fit the *belief* about present danger, making my emotion reasonable or justified, but fit between belief and emotion would not be sufficient to make the emotion entirely fitting. On the understanding of fittingness mentioned in section 1, object, belief and emotion need to align, so the beliefs that ground the emotion must be accurate and reflect a good pattern of reasoning in order

for an emotion to be fitting. Given that the objects of dream emotions are hallucinated and thus non-existent, they cannot, in principle, have properties such as being dangerous so, while dreaming, we might conclude that my belief about the dangerousness of the dog is ill-grounded. This line of reasoning would imply that dream emotions under the hallucination model are essentially unfitting as a category. We come to the same conclusion if we require the beliefs not only about the object of the emotion but about the whole evoking scenario to be rational for the emotion to be fitting. In this sense, dream emotions would be unfitting since dreamers can be considered to lack rationality in not realizing that they are in fact dreaming (Domhoff, 2007; Rosen, 2018). A counter-example is lucid dreams, dreams in which the dreamer realizes they are dreaming (LaBerge, 1981, 1992), but these dreams are quite rare (Saunders et al., 2016).[20]

This argument can nonetheless be questioned. One response to the issue of the nonexistence of the object of the emotion is to adopt a Meinongian approach (see Kroon & Voltolini, 2023; Meinong, 1961). According to this approach, non-existent objects can have properties: every object, whether it exists or not, "is yet constituted in some way or other and thus may be made the subject of true predication" (Chisholm, 1967, p. 114). For example, it is true that unicorns have horns and that Sherlock Holmes is a detective despite unicorns and Sherlock Holmes not existing. This argument could also be applied to hallucinated objects, including dreamed objects according to the hallucination model. While the dangerous dream dog does not exist, it can have the property of being dangerous in a dream. The property of being dangerous can then be a true predicate of the dream dog, so the belief about its dangerousness is not ill-grounded and dream emotions are not unfitting in this sense. Beyond the Meinongian approach, other realist positions about fictional entities such as possibilism (see Kroon & Voltolini, 2023; Lewis, 1978) could also be adopted to avoid the essential unfittingness of dream emotions. Dream objects that do not exist in the actual world could exist in merely possible worlds, such as one particular dream world (Valberg, 2007). Within this dream world, dream objects would have certain properties and we can correctly ascribe predicates to objects in that world, so beliefs about those objects would not necessarily be false. Thus, if dreamed objects have some sort of reality within the dream world and those objects can have properties, there is, again, no reason to think that dream emotions are essentially unfitting.

The issue of essential unfittingness because of a general lack of rationality still stands. It could be argued that while beliefs about dream objects are not inherently false, they may be deemed irrational as they are ill-grounded, ultimately relying on the false belief that one is awake. In fact, dream cognition can be seen as lacking rationality in several ways. Other than the fact that we *should* realize when we are dreaming, something that happens only rarely in lucid dreams[21] (LaBerge, 1981, 1992), dream report

analysis suggests that dreamers think and act irrationally in response to dream events in several ways, making irrational decisions and choosing poorly (Hobson, 1997; Hobson et al., 1987). Dreamers might, for example, overreact or underreact to a situation, killing someone that is annoying them or ignoring a threat, or make inferences about a situation that do not make sense to the dreamer after they have woken. However, it is questionable whether dream cognition should be considered as *necessarily* irrational or even *more likely than not* irrational. Our argument draws on three main misconceptions about dreams. Firstly, it is not always irrational to believe one is awake while dreaming. Secondly, the inferences we make and beliefs we have about objects and occurrences in dreams are not always irrational. Thirdly, many of the emotions described in dream reports appear to be fitting were they to occur in the same scenario while someone was awake. Due to these features, it is not plausible to say dream emotions are *essentially* unfitting due to a general irrationality. Consider the following dream report:

> I woke up (false awakening) thinking I heard my phone beep. Checking my phone, I found a message from a friend saying they would be coming over later today. Happy and surprised to receive an unplanned visitor, I went back to sleep. On waking up later, I checked my phone again to see the details, but on discovering that I had received no messages, I realised that the previous episode was a false awakening (personal dream report, 2009).

Similar to the previous example, many dreams are "mundane" – wake-like scenarios that do not necessarily differ from normal waking experiences (Domhoff, 2007; Rosen, 2018). It is not clear that failing to realize that one is dreaming in such circumstances is necessarily irrational given the lack of bizarreness. While irrationality is a feature of some dream beliefs and behaviors, this is not a consistent feature (Kahan & LaBerge, 1994), especially in mundane scenarios. Furthermore, false awakenings in which the dreamer believes they have just woken up can be highly realistic and emulate one's real surroundings (Buzzi, 2011). Believing one has woken up in such cases appears rational. In the above dream report, there seems to be no reason why the dreamer would realize they were dreaming, especially given the fact that they were still unsure whether they had been dreaming after waking. The happiness and surprise experienced in the dream seem fitting. Further to this, it is unclear whether we should ascribe irrationality to dreamers who generally fail to realize they are dreaming. In day-to-day waking life, we are not constantly questioning the nature of our reality or thinking about whether this could be a dream. In a mundane dream, our acceptance of the dream as reality seems akin to accepting a regular mundane event during waking as reality. Finally, many dream emotions seem "normal" from the perspective of the dreamer. In a study of 94 dream reports, Foulkes et

al. (1988) found that participants reported that the presence or absence of emotions in dreams was "appropriate" 60% of the time (see also Domhoff, 2022, chapter 8). In sum, if our cognition in dreams is not necessarily irrational, dream content can lack bizarreness and our emotions can seem "appropriate" to the dream scenario, *essential* unfittingness due to irrationality is not plausible.

Another approach to the essential unfittingness of dream emotions under the hallucination model comes from dream behavior and motivation. Dream emotions do not appear to motivate behavior the way waking emotions do. They share this with fiction emotions: we do not run from the theater when the monster arrives on screen. This is considered a reason that fiction emotions are essentially unfitting, or "incoherent" and "irrational" in the original terminology (Radford, 1990; Radford & Weston, 1975). Similarly, dream emotions could also be considered to be essentially unfitting because they do not motivate the dreamer to act outside the dream world. If dreams are imaginations, then we have already accounted for dream emotions by saying they are ontologically different from other emotions – they are quasi-emotions. Failing to motivate behavior may simply be a feature of quasi-emotions. However, the quasi-emotions explanation is not available to the hallucination model, since, in this model, we do believe that the content of non-lucid dreams is real. This means the failure to motivate action is more problematic and unexpected for the hallucination model theorist. Under the hallucination model, failure to act out dreams may in part be due to REM sleep muscle atonia (Hobson, 1999) – we are paralyzed while we dream. Further, it makes sense that we do not act in response to dreams after waking since on waking, we realize that we were dreaming.

Nevertheless, sometimes the sleeping body does act out dreams. People with REM sleep behavior disorder (RBD) regularly talk, make noises and perform complex motor behaviors during REM sleep (Arnulf, 2019). A more common occurrence in those of us that do not have RBD is that our sleeping eyes move, bodies twitch, and other physiological changes occur in response to dreams (Hauri & Van de Castle, 1973).

Furthermore, the idea that emotions necessarily motivate us to act is questionable in itself. Emotions toward real-life people and events do not always motivate action (Frijda, 2004; Vendrell-Ferran, 2009). I can feel compassion toward a homeless person without doing anything at all. Although emotions can motivate us to act and prepare us for action, the link between emotion and actual action is quite weak. There are many reasons to refrain from acting: the desired action is not possible, the effort required to accomplish the action is too great, the emotional event is not sufficiently urgent or important, the result of a cost-benefit analysis of action for the totality of our concerns is unfavorable, or the action is socially unacceptable, among others (Frijda, 2004).

On the other hand, dream emotions can in fact motivate action. Sadness while dreaming about the death of a loved one can lead one to express their love toward that person more often. In fact, emotions experienced in dreams related to interactions with one's significant other, such as feeling jealousy due to infidelity, can predict subsequent relational behavior with them, such as less love and intimacy during following days (Selterman et al., 2014). Selterman et al. (2014) have suggested that the process through which dreams and dream emotions influence interpersonal activity and social behavior may be similar to priming: a stimulus (in this case, the dream emotion) triggers an internal cognitive reaction that produces a response or behavior. Alternatively, given dreams' apparent randomness and internal generation in the absence of immediate external stimuli, people can treat their content as even more meaningful than the content of similar waking thoughts (Morewedge & Norton, 2009). This greater weight would increase the likelihood that it will impact subsequent judgment, mood, and behavior. For example, whereas mindwandering about one's partner being unfaithful may be attributed to an external stimulus (a new charming colleague to whom one's partner is likely to be attracted), a dream with similar content is more difficult to attribute to an external source, so the person may consider it to be more meaningful (for example, by providing unfiltered insight into their "unconscious" beliefs, or by foreshadowing future events) and confront their partner (Morewedge & Norton, 2009).[22] While our behavioral response to dream emotions may involve distinct mechanisms or explanations from our behavioral response to waking emotions, dream emotions are simply another emotional state that can sometimes motivate actions. However, similar to waking emotions, dream emotions need not always motivate us to act. The motivation argument is thus not a plausible reason to claim that dream emotions are essentially unfitting.

In sum, we have not found strong support for the view that dream emotions under the hallucination model are essentially unfitting. Requiring that the object has a physical, material existence is a very strict requirement. Objects that do not exist or that only exist in a dream world can have properties. That is why beliefs that ascribe these properties to dream objects do not necessarily have to be false or unjustified. Further to this, the purported irrationality of dreams does not apply across all dream cognition. Because dream cognition is not *necessarily* irrational and it is not always irrational to not realize one is dreaming, dream irrationality is not a reason to claim *essential* unfittingness of dream emotions. Some dream emotions could be a response to rational beliefs about the dream world. Finally, the fact that dream emotions often fail to motivate action is not a good reason to claim their essential unfittingness since sometimes dream emotions do motivate action while waking emotions can fail to do so.

6. Conclusion

While overlooked in philosophy, dream emotions emerge as particularly intriguing among the diverse array of features within dreams. Understanding the nature of these emotions holds the potential to contribute to a more comprehensive understanding of both emotional experiences and the phenomenon of dreams. To initiate a philosophical dialogue on the matter, our focus in this article has been directed toward one facet of dream emotions: evaluating their fittingness within two influential models of dreams. We have argued that dreaming, much like fiction, presents an interesting case for analyzing the fittingness of emotions due to the unusualness of experiencing emotions toward objects or events that do not exist. The concept of "essential unfittingness" seems prima facie to be a plausible description of the emotions we feel in dreams, as fittingness is about the relationship between the emotion and the evaluative properties of objects, and dream objects do not have properties. Further, under the imagination model of dreams, the dreamer does not *believe* the objects and events occurring within the dream are real, which evokes a "paradox of dreaming" akin to the paradox of fiction.

If dreams are imagination, we might say that having emotions toward objects or properties of objects we know are not real is necessarily unfitting. If dreams are hallucinations, the fact that hallucinated objects do not exist but we irrationally believe they exist might also make such emotions unfitting. Upon further analysis, however, we have found that neither of these models of dreaming need to arrive at the conclusion that dream emotions are essentially unfitting. Concerning the imagination model, because dream emotions can involve bodily movements and physiological changes and appear to have a strong phenomenology which can even carry over into waking life, it is implausible to describe all dream emotions as being under an "in the dream" operator. However, a more plausible case can be made for dream emotions being quasi-emotions. While dream emotions may present characteristics similar to those of typical waking emotions, they can be considered to exhibit a different ontological status. Therefore, being rooted in dream beliefs and objects does not need to render them essentially unfitting. Concerning the hallucination model, it is plausible to avoid essential unfittingness by taking a Meinongian approach – that even non-existent objects can have properties that our emotions could fit to. Further, the necessary irrationality of dream cognition as well as of the dreamer's belief about the reality of dreamed objects and events, which may have led us to believe in the essential unfittingess of dream emotions, is ultimately unfounded. Similarly unfounded is the argument based on the supposed loose relationship between dream emotions and action.

Furthermore, if dream emotions are essentially unfitting, we would be unable to account for the vast array of dream emotions: it seems that some

dream emotions are more fitting than others, such as fearing a lion while dreaming is more fitting than fearing a little cute dog. While assessing the specific fit of dream emotions is not our aim in this article and would likely require a broader focus than the one we have taken here, we find it plausible to leave open the possibility that dream emotions are at times fitting and at others unfitting, such as it happens with waking emotions. Dream emotions need to be assessed for fittingness on a case by case basis and we should not simply ascribe essential unfittingness to them, either under the imagination model or the hallucination model of dreaming.

Notes

1. Lucid Dreams 2010 Gackenbach:lucid:357 10–30-2010, sleepanddreamdatabase.org
2. Note that, while Tappolet (2016) considers that emotions are informationally encapsulated, "in the sense that the other mental states of the person have a limited impact on the emotions she experiences" (p. 21), she maintains that the concept of rationality can appropriately characterize emotions: "though there is often little we can do about it at the time we experience the emotion, there is nonetheless good reason to subject emotions to requirements of rationality and to consider inappropriate emotional responses as not just inappropriate but also as irrational. The irrationality accusation is an indication that something might be wrong with the emotional system that is responsible for the emotional reaction. But it is also the claim that if there is something wrong, some action ought to be taken to improve the reliability of the emotional system." (p. 38).
3. We do not conceive emotions as mere judgments and beliefs, as they have been conceptualized in pure cognitive theories of emotions (for an overview of different theories of emotions, see, for example, Prinz, 2004). Instead, we are sympathetic to hybrid theories, which consider emotions as complex and dynamic processes that involve multiple and heterogeneous components (appraisals, action tendencies, physiological changes, facial, vocal and behavioral expressions, and/or subjective feelings). Hybrid theories are widespread nowadays and seem to be effective in elucidating a broad range of emotional phenomena (Barrett, 2017; Lambie & Marcel, 2002; Russell & Barrett, 1999; Scherer et al., 2001). However, it is important to note that we do not espouse any specific hybrid theory of emotions here, nor do we assess their suitability in explaining dream emotions. This topic would be the subject of another paper.
4. It is not our goal to evaluate these arguments here; for reviews, see Rosen (2019) and Whiteley (2021).
5. The distinction between imaginative mindwandering and propositional mindwandering is presented here as an analytic distinction. This distinction may nonetheless be blurred in many concrete instances of mindwandering, e.g., when propositional mindwandering comes with sensory imagery or vice versa. Just like waking mindwandering, when dreaming we can both experience imagery and propositional thought simultaneously. However, we would not class mindwandering that is entirely propositional as dreaming.
6. The content of imaginative mindwandering is often about scenarios that do not reflect real events, such as fantasies and possible future events (Smallwood et al., 2011). One can, however, also mindwander about present events, counterfactual past events, or

past events one did not experience first-hand. I can mindwander about what is happening in the next room right now, about the French Revolution, or about how my birthday could have unfolded had I acted differently. While dreaming generally does not replay past events, like with mindwandering, this can occur. Replaying events in dreams is more likely to happen in post-traumatic nightmares (Spoormaker, 2008).

7. From now on, "imagination" in relation to our discussion on dreams will refer to "imaginative mindwandering" as it was previously defined.

8. Domhoff (2022) describes dreaming as a type of simulation like mindwandering except "during dreaming, the mental imagery involved in embodied simulation is usually so vivid that dreaming is subjectively experienced as the person in action within a real environment" (p. 3). Since, in this view, the dreamer believes the dream environment is real, the implications regarding fittingness of emotion are the same as for the hallucination model rather than the imagination model.

9. The arguments in relation to each model can be applied to the pluralistic model, according to which dreams can be either imaginative, hallucinatory or contain elements of both. How emotions are accounted for will depend on whether the dreamer believes the content of the dream is real. If the dreamer does not believe in the content of the dream, then the arguments in relation to the imagination model apply. If the dreamer does, then the arguments in relation to the hallucination model apply.

10. The sui generis view, rather than a thoroughly defined position on the nature of dreams, appears to be more of an argument by elimination. Thus, assessing its implications for the analysis of dream emotions and their fittingness would only be possible once the model is further clarified.

11. Song (2020) makes a similar distinction between unfittingness or inappropriateness applied to a whole class of emotions and particular instances of emotions that can be more or less fitting or appropriate.

12. Another example of clash between belief and emotion is when the beliefs about the object of an emotion are ill-grounded but the emotion correctly represents or matches the evaluative properties of the object, such as in cases of luck. Nonetheless, this scenario does not seem to apply to dream emotions as a category, so it does not constitute a potential reason for their essential unfittingness.

13. For example, Fabry and Kukkonen (2019) note that "texts often elicit mind-wandering through the construction of task-relevant and attention-driven virtual scenarios in readers' minds" (p. 1).

14. In section 1, we explained why we prefer the term "unfittingness" to "irrational".

15. While Radford and Weston (1975) referenced the term "paradox," the literature does not specify who originally coined this term explicitly. We thank the PHILOS-L community for helping us with the question about the first use of the notion.

16. Note that the paradox applies to forms of imagination where we do not believe in the veracity of the object of the emotion, such as counterfactual imagination and fantasy. When we believe in the veracity of the object of the emotion, such as when we remember what happened in the past or imagine what is happening right now somewhere else, the paradox does not arise. On the other hand, counterfactual imagination may be a less clear-cut case than fantastical imagination, since counterfactual circumstances are closer to reality. It at least makes sense to feel relief that a bad thing did not happen and to worry about what might happen. The more likely the event is to happen or the closer it was to happening, the less cognitive conflict between beliefs and emotions and the less likely it is that the paradox of fiction applies.

17. An imagined emotion can also present a "residual condition", that is, a tendency to feel the imagined emotion (Wollheim, 1984) and experience what we have called here "imagination emotions". So imagined emotions and imagination emotions are probably better conceived as two extremes that are part of a continuum than as two opposite states or an all-or-nothing phenomenon (for a similar position about the different emotional aspects of memory, see Trakas, 2021a, 2021b). However, for the present purposes, it seems sufficient to adopt the more general and simplified framework presented earlier.

18. A strong reading of Walton's notion is that a "quasi-emotion" is "something that is almost an emotion but not quite" (Matravers, 2021, p. 59). According to Matravers, this reading is incorrect. Nonetheless, for our purposes, a thorough interpretation of Walton's work and ideas is not necessary. We instead consider the general and more popular meaning that has been attached to this concept through time: in our interpretation, quasi-emotions can feel like "real" emotions but have a different ontological status. This view seems to be justified by some of Walton's writings (such as the quote that this footnote refers to). This meaning, we think, is also a plausible interpretation of dream emotions under the imagination model.

19. It should be noted that the problem of the nonexistence of dream objects (and so, of their evaluative properties) also applies to our discussion of dreams under the imagination model. However, we discuss it in relation to hallucination because the paradox of dreaming is a more pressing concern for the imagination model and the concept of quasi-emotions seems to provide a response to both issues regarding beliefs and objects. Further, the issue of irrationality of dream beliefs applies to the hallucination model and not the imagination model.

20. Based on a meta-analysis that aggregated information from over 30 studies on lucid dreaming, Saunders et al. (2016) found that approximately 55% of individuals encountered at least one lucid dream throughout their lives, but only 23% reported experiencing one or more lucid dreams per month.

21. The question of the essential unfittingness of lucid dreams is certainly an interesting question given that lucid dreamers do not believe the dream content to be real, but can still feel emotions (see for example, Schredl et al., 2022). Because lucid dreamers realize that the dream is just a dream, the emotions experienced in lucid dreams, under the hallucination model, might in principle share a comparable explanation to dream emotions under the imagination model (though they may exhibit other distinctive characteristics that only further research could unravel).

22. In one of the studies done by Morewedge and Norton (2009), the authors demonstrated that individuals who imagined dreaming about their plane crashing were more inclined to opt for canceling their upcoming flight compared to those who imagined merely thinking about their plane crashing or imagined a real plane crashing in their route. Despite all these being exercises of imagination, the findings indicate that people consider at least certain dreams as a significant source of information that can directly impact their behavior.

Disclosure statement

Funding

Notes on contributors

Melanie Gillespie Rosen is currently an assistant professor at Trent University in Peterborough, Canada. Her Ph.D. was awarded in 2012 at Macquarie University in Sydney, Australia, with a thesis titled 'Dream Pluralism: A Philosophy of the Dreaming Mind.' She was later awarded a Carlsberg distinguished postdoctoral research fellowship at Aarhus University in Denmark. Her interdisciplinary approach focuses on philosophy of mind and cognitive science with special interest in altered states of consciousness, especially dreams. Her latest book is The Dreaming Mind: Understanding Consciousness During Sleep (Routledge, 2024).

Marina Trakas is an Assistant Researcher at the Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Argentina, and is currently affiliated with the Instituto de Investigaciones Filosóficas (IIF-SADAF/CONICET). She holds a PhD in Philosophy from Macquarie University (Australia) and a PhD in Cognitive Science from the Institut Jean Nicod/ Ecole des Hautes Etudes en Sciences Sociales (France). Her work primarily focuses on various aspects of memory, including its affective and emotional components. She is currently involved in several interdisciplinary projects related to both memory and dreams.

ORCID

Melanie Gillespie Rosen 🔵 http://orcid.org/0000-0002-7545-5558
Marina Trakas 🔵 http://orcid.org/0000-0001-6977-140X

References

Arnulf, I. (2019). RBD: A window into the dreaming process. In C. H. Schenck, B. Högl, & A. Videnovic (Eds.), *Rapid-eye-movement sleep behavior disorder* (pp. 223–242). Springer International Publishing.

Barrett, L. F. (2017). *How emotions are made: The secret life of the brain*. Pan Macmillan.

Brady, M. S. (2009). The irrationality of recalcitrant emotions. *Philosophical Studies*, *145*(3), 413–430. https://doi.org/10.1007/s11098-008-9241-1

Buzzi, G. (2011). False awakenings in light of the dream protoconsciousness theory: A study in lucid dreamers. *International Journal of Dream Research*, *4*(2), 110–116. https://doi.org/10.11588/ijodr.2011.2.9085

Calhoun, C. (1989). Subjectivity and emotion. *Philosophical Forum*, *20*, 195–210.

Chisholm, R. M. (1967). Meinong, Alexius. In P. Edwards (Ed.), *Encyclopedia of Philosophy*. Macmillan. The Free Press. 2nd edition: D. M. Borchert (Ed.), Thomson Gale, 2006, (Volume VI, pp. 114–119).

Coltheart, M. (2005). Conscious experience and delusional belief. *Philosophy, Psychiatry, & Psychology*, *12*(2), 153–157. https://doi.org/10.1353/ppp.2005.0035

D'Agostino, A., Castelnovo, A., & Scarone, S. (2013). Dreaming and the neurobiology of self: Recent advances and implications for psychiatry. *Frontiers in Psychology*, *4*, 680. https://doi.org/10.3389/fpsyg.2013.00680

D'Arms, J., & Jacobson, D. (2000). The moralistic fallacy: On the 'appropriateness' of emotions. *Philosophy and Phenomenological Research*, *61*(1), 65–90. https://doi.org/10.2307/2653403

Deonna, J., & Teroni, F. (2022). Emotions and their correctness conditions: A defense of attitudinalism. *Erkenntnis*, *89*(1), 1–20. https://doi.org/10.1007/s10670-022-00522-0

Dijkstra, N., & Fleming, S. M. (2023). Subjective signal strength distinguishes reality from imagination. *Nature Communications*, *14*(1), 1627. https://doi.org/10.1038/s41467-023-37322-1

Domhoff, G. W. (2007). Realistic simulation and bizarreness in dream content: Past findings and suggestions for future research. In D. Barrett & P. McNamara (Eds.), *The new science of dreaming* (pp. 1–28). Praeger Publishers.

Domhoff, G. W. (2017). *The emergence of dreaming: Mind-wandering, embodied simulation, and the default network*. Oxford University Press.

Domhoff, G. W. (2022). *The neurocognitive theory of dreaming: The where, how, when, what, and why of dreams*. MIT Press.

Döring, S. A. (2014). Why recalcitrant emotions are not irrational. In S. Roeser & C. Todd (Eds.), *Emotion and value* (pp. 124–136). Oxford University Press.

Fabry, R. E., & Kukkonen, K. (2019). Reconsidering the mind-wandering reader: Predictive processing, probability designs, and enculturation. *Frontiers in Psychology*, *9*, 2648. https://doi.org/10.3389/fpsyg.2018.02648

Fazekas, P., Nemeth, G., & Overgaard, M. (2019). White dreams are made of colours: What studying contentless dreams can teach about the neural basis of dreaming and conscious experiences. *Sleep Medicine Reviews*, *43*, 84–91. https://doi.org/10.1016/j.smrv.2018.10.005

Foulkes, D., Sullivan, B., Kerr, N. H., & Brown, L. (1988). Appropriateness of dream feelings to dreamed situations. *Cognition and Emotion*, *2*(1), 29–39. https://doi.org/10.1080/02699938808415227

Friend, S. (2016). Fiction and emotion. In A. Kind (Ed.), *The Routledge handbook of philosophy of imagination* (pp. 217–229). Routledge.

Friend, S. (2022). Emotion in Fiction: State of the Art. *British Journal of Aesthetics*, *62*(2), 257–271. https://doi.org/10.1093/aesthj/ayab060

Frijda, N. H. (2004). Emotions and Action. In A. S. R. Manstead, N. Frijda, & A. Fischer (Eds.), *Feelings and emotions: The Amsterdam symposium* (pp. 158–173). Cambridge University Press.

Fukuda, K. (2005). Emotions during sleep paralysis and dreaming. *Sleep and Biological Rhythms*, *3*(3), 166–168. https://doi.org/10.1111/j.1479-8425.2005.00172.x

Goldie, P. (2000). *The emotions: A philosophical exploration*. Oxford University Press.

Greenspan, P. S. (1981). Emotions as evaluations. *Pacific Philosophical Quarterly*, *62*(2), 158–169. https://doi.org/10.1111/j.1468-0114.1981.tb00054.x

Griffiths, P. E. (1997). *What emotions really are*. University of Chicago Press.

Gubka, S. (2022). There are no irrational emotions. *Pacific Philosophical Quarterly*, *103*(2), 293–317. https://doi.org/10.1111/papq.12377

Hauri, P., & Van de Castle, R. L. (1973). Psychophysiological parallels in dreams. *Psychosomatic Medicine*, *35*(4), 297–308. https://doi.org/10.1097/00006842-197307000-00004

Hobson, J. A. (1992). A new model of brain–mind state: Activation level, input source, and mode of processing (AIM). In J. S. A. M. Bertini (Ed.), *The neuropsychology of sleep and dreaming* (pp. 227–245). Erlbaum.

Hobson, J. A. (1997). Dreaming as delirium: A mental status analysis of our nightly madness. *Seminars in Neurology*, *17*(2), 121–128.

Hobson, J. A. (1999). Dreaming. In R. A. Wilson & F. C. Keil (Eds.), *The MIT encyclopedia of the cognitive sciences* (pp. 242–244). MIT Press.

Hobson, J. A. (2004). A model for madness? *Nature*, *430*(6995), 21. https://doi.org/10.1038/430021a

Hobson, J. A. (2013). Ego ergo sum: Toward a psychodynamic neurology. *Contemporary Psychoanalysis*, *49*(2), 142–164. https://doi.org/10.1080/00107530.2013.10746541

Hobson, J. A., & Friston, K. J. (2012). Waking and dreaming consciousness: Neurobiological and functional considerations. *Progress in Neurobiology*, *98*(1), 82–98. https://doi.org/10.1016/j.pneurobio.2012.05.003

Hobson, J. A., Hoffman, S. A., Helfand, R., & Kostner, D. (1987). Dream bizarreness and the activation-synthesis hypothesis. *Human Neurobiology*, *6*(3), 157–164. https://europepmc.org/article/med/3449484

Hobson, J. A., & Kahn, D. (2007). Dream content: Individual and generic aspects. *Consciousness and Cognition*, *16*(4), 850–858. https://doi.org/10.1016/j.concog.2007.07.010

Hobson, J. A., Pace-Schott, E. F., & Stickgold, R. (2000). Dreaming and the brain: Toward a cognitive neuroscience of conscious states. In E. F. Pace-Schott, M. Solms, M. Blagrove, & S. Harnad (Eds.), *Sleep and dreaming: Scientific advances and reconsiderations* (Vol. 23, pp. 793–842). Cambridge University Press.

Ichikawa, J. (2007). Dreaming, belief, and emotion. *The Splintered Mind*. https://schwitzsplinters.blogspot.com/2007/02/dreaming-belief-and-emotion-by-guest.html

Ichikawa, J. (2008). Skepticism and the imagination model of dreaming. *Philosophical Quarterly*, *58*(232), 519–527. https://doi.org/10.1111/j.1467-9213.2007.546.x

Ichikawa, J. (2009). Dreaming and imagination. *Mind and Language*, *24*(1), 103–121. https://doi.org/10.1111/j.1468-0017.2008.01355.x

Ichikawa, J. (2016). Imagination, dreaming, and hallucination. In A. Kind (Ed.), *The Routledge handbook of philosophy of imagination* (pp. 149–162). Routledge.

Ichikawa, J., & Sosa, E. (2009). Dreaming, philosophical perspectives. In T. Bayne, P. Wilken, & A. Cleeremans (Eds.), *Oxford Companion to Consciousness* (pp. 237–240). OUP.

Irving, Z. C., & Glasser, A. (2020). Mind-wandering: A philosophical guide. *Philosophy Compass*, *15*(1), e12644. https://doi.org/10.1111/phc3.12644

Jones, K. (2004). Emotional rationality as practical rationality. In C. Calhoun (Ed.), *Setting the moral compass: Essays by women philosophers* (pp. 333–352). Oxford University Press.

Kahan, T. L., & LaBerge, S. (1994). Lucid dreaming as metacognition: Implications for cognitive science. *Consciousness and Cognition*, *3*(2), 246–264. https://doi.org/10.1006/ccog.1994.1014

Klein, C. (2010). Images are not the evidence in neuroimaging. *The British Journal for the Philosophy of Science*, *61*(2), 265–278. https://doi.org/10.1093/bjps/axp035

Konrad, E. M., Petraschka, T., & Werner, C. (2018). The paradox of fiction–A brief introduction into recent developments, open questions, and current areas of research, including a comprehensive bibliography from 1975 to 2018. *Journal of Literary Theory*, *12*(2), 193–203. https://doi.org/10.1093/bjps/axp035

Kroon, F., & Voltolini, A. (2023). Fictional entities. In N. Z. Edward (Ed.), *The Stanford Encyclopedia of Philosophy (Summer 2020 Edition)*. https://plato.stanford.edu/entries/fictional-entities/

Kubota, Y., Takasu, N. N., Horita, S., Kondo, M., Shimizu, M., Okada, T., … Toichi, M. (2011). Dorsolateral prefrontal cortical oxygenation during REM sleep in humans. *Brain Res*, *1389*, 83–92. https://doi.org/10.1016/j.brainres.2011.02.061

LaBerge, S. (1981). Lucid dreaming: Directing the action as it happens. *Psychology Today*, *15* (1), 48–57.

LaBerge, S. (1992). Physiological studies of lucid dreaming. In J. S. A. M. Bertini (Ed.), *The neuropsychology of sleep and dreaming* (pp. 289–304). Erlbaum.

Lambie, J. A., & Marcel, A. J. (2002). Consciousness and the varieties of emotion experience: A theoretical framework. *Psychological Review*, *109*(2), 219–259. https://doi.org/10.1037/0033-295X.109.2.219

Lara-Carrasco, J., Nielsen, T. A., Solomonova, E., Levrier, K., & Popova, A. (2009). Overnight emotional adaptation to negative stimuli is altered by REM sleep deprivation and is correlated with intervening dream emotions. *Journal of Sleep Research*, *18*(2), 178–187. https://doi.org/10.1111/j.1365-2869.2008.00709.x

Lewis, D. (1978). Truth in fiction. *American Philosophical Quarterly*, *15*(1), 37–46. https://www.jstor.org/stable/20009693

Liao, S., & Gendler, T. (2019). Imagination. In (Summer 2020 Edition) N. Z. Edward (Ed.), *The Stanford Encyclopedia of Philosophy*. https://plato.stanford.edu/archives/sum2020/entries/imagination

Mallett, R., Picard-Deland, C., Pigeon, W., Wary, M., Grewal, A., Blagrove, M., & Carr, M. (2022). The relationship between dreams and subsequent morning mood using self-reports and text analysis. *Affective Science*, *3*(2), 400–405. https://doi.org/10.1007/s42761-021-00080-8

Matravers, D. (2014). *Fiction and narrative*. Oxford University Press.

Matravers, D. (2021). Walton on 'the paradox of fiction': Confusions and misunderstandings. In S. Sedivy (Ed.), *Art, representation, and make-believe* (pp. 58–73). Routledge.

Matthen, M. (2005). *Seeing, doing, and knowing: A philosophical theory of sense perception*. Clarendon Press.

McCreery, C. (2006). *Perception and hallucination. The case for continuity*. Oxford Forum.

Meinong, A. (1961). The theory of objects. In R. M. Chisholm (Ed.), *Realism and the background of phenomenology* (pp. 76–117). The Free Press of Glencoe.

Merritt, J. M., Stickgold, R., Pace-Schott, E., Williams, J., & Hobson, J. A. (1994). Emotion profiles in the dreams of men and women. *Consciousness and Cognition*, *3*(1), 46–60. https://doi.org/10.1006/ccog.1994.1004

Metzinger, T. (2013). Why are dreams interesting for philosophers? The example of minimal phenomenal selfhood, plus an agenda for future research. *Frontiers in Psychology*, *4*, 746. https://doi.org/10.3389/fpsyg.2013.00746

Morewedge, C. K., & Norton, M. I. (2009). When dreaming is believing: The (motivated) interpretation of dreams. *Journal of Personality and Social Psychology*, *96*(2), 249–264. https://doi.org/10.1037/a0013264

Naar, H. (2021). The fittingness of emotions. *Synthese*, *199*(5–6), 13601–13619. https://doi.org/10.1007/s11229-021-03391-2

Nagel, T. (1971). Brain bisection and the unity of consciousness. *Synthese*, *22*(3–4), 396–413. https://doi.org/10.1007/BF00413435

Nanay, B. (2016). Imagination and perception. In A. Kind (Ed.), *The Routledge handbook of philosophy of imagination* (pp. 124–134). Routledge.

Nielsen, T. A., Deslauriers, D., & Baylor, G. W. (1991). Emotions in dream and waking event reports. *Dreaming*, *1*(4), 287–300. https://doi.org/10.1037/h0094340

Noë, A. (2012). *Varieties of presence*. Harvard University Press.

Oblak, A., Boyadzhieva, A., Caporusso, J., Škodlar, B., & Bon, J. (2022). How things take up space: A grounded theory of presence and lived space. *The Qualitative Report*, *27*(11), 2556–2582. https://doi.org/10.46743/2160-3715/2022.5762

Prinz, J. J. (2004). *Gut reactions: A perceptual theory of emotion*. OUP.

Radford, C. (1990). The incoherence and irrationality of philosophers. *Philosophy*, *65*(253), 349–354. https://doi.org/10.1017/S003181910005765X

Radford, C., & Weston, M. (1975). How can we be moved by the fate of Anna Karenina? *Proceedings of the Aristotelian society, supplementary volumes*, *49*, 67–93.

Revonsuo, A. (1995). Consciousness, dreams and virtual realities. *Philosophical Psychology*, *8* (1), 35–58. https://doi.org/10.1080/09515089508573144

Rosen, M. G. (2018). How bizarre? A pluralist approach to dream content. *Consciousness and Cognition*, *62*, 148–162. https://doi.org/10.1016/j.concog.2018.03.009

Rosen, M. G. (2019). Dreaming of a stable world: Vision and action in sleep. *Synthese*, *198* (17), 4107–4142. https://doi.org/10.1007/s11229-019-02149-1

Rosen, M. G. (2021a). I could do that in my sleep: Skilled performance in dreams. *Synthese*, *99*(3), 6495–6522. https://doi.org/10.1007/s11229-021-03079-7

Rosen, M. G. (2021b). Sleeper agents: The sense of agency over the dream body. *Human Studies*, *44*(4), 693–719. https://doi.org/10.1007/s10746-021-09598-z

Rosen, M. G. (2022). Dreaming as a virtual reality delusion simulator: Gaining empathy whilst we sleep. *International Journal of Dream Research*, *15*. https://doi.org/10.11588/ijodr.2022.1.83147

Rosen, M. G. (2024). *The Dreaming mind: Understanding consciousness during sleep*. Taylor & Francis.

Rosen, M. G., & Barkasi, M. (2021). What makes a mental state feel like a memory: Feelings of pastness and presence. *Estudios de Filosofía*, *64*(64), 95–122. https://doi.org/10.17533/udea.ef.n64a05

Rosen, M. G., & Sutton, J. (2013). Self-representation and perspectives in dreams. *Philosophy Compass*, *8*(11), 1041–1053. https://doi.org/10.1111/phc3.12082

Russell, J. A., & Barrett, L. F. (1999). Core affect, prototypical emotional episodes, and other things called emotion: Dissecting the elephant. *Journal of Personality and Social Psychology*, *76*(5), 805–819. https://doi.org/10.1037/0022-3514.76.5.805

Saunders, D. T., Roe, C. A., Smith, G., & Clegg, H. (2016). Lucid dreaming incidence: A quality effects meta-analysis of 50 years of research. *Consciousness and Cognition*, *43*, 197–215. https://doi.org/10.1016/j.concog.2016.06.002

Scarone, S., Manzone, M. L., Gambini, O., Kantzas, I., Limosani, I., D'agostino, A., & Hobson, J. A. (2007). The dream as a model for psychosis: An experimental approach using bizarreness as a cognitive marker. *Schizophrenia Bulletin*, *34*(3), 515–522. https://doi.org/10.1093/schbul/sbm116

Scarpelli, S., Alfonsi, V., Gorgoni, M., & De Gennaro, L. (2022). What about dreams? State of the art and open questions. *Journal of Sleep Research*, *31*(4), e13609. https://doi.org/10.1111/jsr.13609

Schechter, E. (2018). *Self-consciousness and "split" brains: The minds' I*. Oxford University Press.

Scherer, K. R., Schorr, A., & Johnstone, T. (Eds.). (2001). *Appraisal processes in emotion: Theory, methods, research*. OUP.

Schredl, M. (2018). Dream behavior and dream content in healthy persons. In M. Schredl (Ed.), *Researching dreams: The fundamentals* (pp. 65–104). Springer International Publishing.

Schredl, M. (2020). Being someone or something else in the dream: Relationship to thin boundaries. *Imagination, Cognition and Personality*, *40*(1), 43–51. https://doi.org/10.1177/0276236619896272

Schredl, M., Fuchs, C., & Mallett, R. (2022). Differences between lucid and nonlucid dream reports: A within-subjects design. *Dreaming*, *32*(4), 345–352. https://doi.org/10.1037/drm0000199

Schredl, M., & Hofmann, F. (2003). Continuity between waking activities and dream activities. *Consciousness and Cognition*, *12*(2), 298–308. https://doi.org/10.1016/S1053-8100(02)00072-7

Schredl, M., & Reinhard, I. (2010). The continuity between waking mood and dream emotions: Direct and second-order effects. *Imagination, Cognition and Personality*, *29* (3), 271–282. https://doi.org/10.2190/IC.29.3.f

Schreuder, B. J. N., Igreja, V., van Dijk, J., & Kleijn, W. (2001). Intrusive re-experiencing of chronic strife or war. *Advances in Psychiatric Treatment*, *7*(2), 102–108. https://doi.org/10.1192/apt.7.2.102

Seli, P., Kane, M. J., Smallwood, J., Schacter, D. L., Maillet, D., Schooler, J. W., & Smilek, D. (2018). Mind-wandering as a natural kind: A family-resemblances view. *Trends in Cognitive Sciences*, *22*(6), 479–490. https://doi.org/10.1016/j.tics.2018.03.010

Selterman, D. F., Apetroaia, A. I., Riela, S., & Aron, A. (2014). Dreaming of you: Behavior and emotion in dreams of significant others predict subsequent relational behaviour. *Social Psychological and Personality Science*, *5*(1), 111–118. https://doi.org/10.1177/1948550613486678

Sikka, P., Revonsuo, A., Sandman, N., Tuominen, J., & Valli, K. (2018). Dream emotions: A comparison of home dream reports with laboratory early and late REM dream reports. *Journal of Sleep Research*, *27*(2), 206–214. https://doi.org/10.1111/jsr.12555

Smallwood, J., Schooler, J. W., Turk, D. J., Cunningham, S. J., Burns, P., & Macrae, C. N. (2011). Self-reflection and the temporal focus of the wandering mind. *Consciousness and Cognition*, *20*(4), 1120–1126. https://doi.org/10.1016/j.concog.2010.12.017

Song, M. (2020). Aptness of fiction-directed emotions. *The British Journal of Aesthetics*, *60* (1), 45–59. https://doi.org/10.1093/aesthj/ayz028

Sosa, E. (2005). Dreams and philosophy. *Proceedings and Addresses of the American Philosophical Association*, *79*(2), 7–18.

Spoormaker, V. I. (2008). A cognitive model of recurrent nightmares. *International Journal of Dream Research*, *1*(1), 15–22. https://archiv.ub.uni-heidelberg.de/volltextserver/8436/

States, B. O. (2000). Dream bizarreness and inner thought. *Dreaming*, *10*(4), 179–192. https://doi.org/10.1023/A:1009438406510

Stecker, R. (2011). Should we still care about the paradox of fiction? *The British Journal of Aesthetics*, *51*(3), 295–308. https://doi.org/10.1093/aesthj/ayr019

Tappolet, C. (2000). *Emotions et valeurs*. Presses Universitaires de France.

Tappolet, C. (2016). *Emotions, values, and agency*. Oxford University Press.

Thompson, E. (2014). *Waking, dreaming, being*. Columbia University Press.

Thompson, E. (2016). Response to commentators on waking, dreaming, being. *Philosophy East and West*, *66*(3), 982–1000. https://doi.org/10.1353/pew.2016.0053

Trakas, M. (2021a). No trace beyond their name? Affective memories, a forgotten concept. *L'Année psychologique/Topics in Cognitive Psychology*, *121*(2), 129–173. https://doi.org/10.3917/anpsy1.212.0129

Trakas, M. (2021b). Dimensiones de análisis de los recuerdos personales como recuerdos afectivos. *Revista de Psicología*, *20*(1), 256–284. https://doi.org/10.24215/2422572Xe126

Tullmann, K., & Buckwalter, W. (2014). Does the paradox of fiction exist? *Erkenntnis*, *79*(4), 779–796. https://doi.org/10.1007/s10670-013-9563-z

Valberg, J. J. (2007). *Dream, death, and the self*. Princeton University Press.

Velleman, J. D. (1996). Self to self. *The Philosophical Review*, *105*(1), 39–76. https://doi.org/10.2307/2185763

Vendrell-Ferran, Í. (2009). Emociones ficcionales: ¿Un desafío para la racionalidad? *Revista de Filosofía (Madrid)*, *34*(1), 91–117. https://core.ac.uk/download/pdf/38842172.pdf

Vendrell-Ferran, Í. (2018). Emotion in the Appreciation of Fiction. *Journal of Literary Theory*, *12*(2), 204–223. https://doi.org/10.1515/jlt-2018-0012

Vendrell-Ferran, Í. (2021). La paradoja de la ficción. *Enciclopedia de la Sociedad Española de Filosofía Analítica* http://www.sefaweb.es/paradoja-de-la-ficcion-la/

Walton, K. (1997). Spelunking, simulation, and slime: On being moved by fiction. In M. Hjort & S. Laver (Eds.), *Emotions and the Arts* (pp. 37–49). Oxford University Press.

Walton, K. L. (1978). Fearing fictions. *The Journal of Philosophy*, *75*(1), 5–27. https://doi.org/10.2307/2025831

Walton, K. L. (1990). *Mimesis as make-believe: On the foundations of the representational arts*. Harvard University Press.

Whiteley, C. M. (2021). Aphantasia, imagination and dreaming. *Philosophical Studies*, *178*(6), 2111–2132. https://doi.org/10.1007/s11098-020-01526-8

Windt, J. M. (2010). The immersive spatiotemporal hallucination model of dreaming. *Phenomenology and the Cognitive Sciences*, *9*(2), 295–316. https://doi.org/10.1007/s11097-010-9163-1

Windt, J. M. (2015). *Dreaming: A conceptual framework for philosophy of mind and empirical research*. MIT press.

Windt, J. M. (2017). Predictive brains, dreaming selves, sleeping bodies: How the analysis of dream movement can inform a theory of self-and world-simulation in dreams. *Synthese*, *195*(6), 2577–2625. https://doi.org/10.1007/s11229-017-1525–6

Windt, J. M. (2021). How deep is the rift between conscious states in sleep and wakefulness? Spontaneous experience over the sleep–wake cycle. *Philosophical Transactions of the Royal Society B*, *376*(1817), 20190696. https://doi.org/10.1098/rstb.2019.0696

Windt, J. M., & Metzinger, T. (2007). The philosophy of dreaming and self-consciousness: What happens to the experiential subject during the dream state? In D. B. P. McNamara (Ed.), *Praeger perspectives. The new science of dreaming. Cultural and theoretical perspectives* (Vol. 3, pp. 193–247). Praeger Publishers/Greenwood Publishing Group.

Wollheim, R. (1984). *The thread of life*. Yale University Press.

Zadra, A., Pilon, M., & Donderi, D. C. (2006). Variety and intensity of emotions in nightmares and bad dreams. *The Journal of Nervous and Mental Disease*, *194*(4), 249–254. https://doi.org/10.1097/01.nmd.0000207359.46223.dc

Zedelius, C. M., & Schooler, J. W. (2018). Unraveling what's on our minds: How different types of mind-wandering affect cognition and behavior. In K. C. Fox & K. Christoff (Eds.), *The Oxford handbook of spontaneous thought: Mind-wandering, creativity, and dreaming* (pp. 233–247). OUP.