Review of Philosophy and Psychology
https://doi.org/10.1007/s13164-024-00755-8

The Nature of Worry(ing)

Ed Armitage[1]

Accepted: 19 September 2024

Abstract
We all find ourselves worrying at one point or another, and we have an intuitive sense of what is communicated by phrases such as 'I'm worried about this' or 'I can't stop worrying about that'. Despite worry's ubiquity, however, it is not altogether clear what exactly worrying is, or why it is we worry. And, surprisingly, there has been no dedicated philosophical account given of the nature of worry specifically, although there is a body of psychological literature concerned with it as well as a recent insurgence of philosophical literature concerned with the nature of anxiety. My aim in this paper, therefore, is to provide such an account. I here provide an account of the nature of worry.

On the view I develop, worry is to be understood as a form of *affectively motivated cognition*. More specifically, I argue that worrying is a cognitive activity constituted by our engagement with forms of practical or epistemic reasoning, supplemented by imaginative engagement and motivated by anxiety. I develop this view primarily by marrying together considerations from the psychological literature on worry and the philosophical literature on anxiety. With this characterization in place, I then go on to make some novel claims about why exactly it is that we worry. The upshot should be an account of worry that addresses the questions of what it is and why we do it.

1 Introduction

Worry is familiar to us all. In contesting with the trials and tribulations of everyday life, we all find ourselves worrying at one point or another. Moreover, we have an intuitive, folk-psychological sense of what is communicated by phrases such as 'I'm worried about this' or 'I can't stop worrying about that'. Yet despite its ubiquity and

✉ Ed Armitage
eddy_a@hotmail.co.uk

[1] Department of Philosophy, The University of Sheffield, Victoria St, Sheffield S3 7QB, UK

Published online: 17 October 2024

apparent familiar nature, it is not altogether clear or obvious what exactly worry is, or what we're doing when we worry. Is worry an affective state, a cognitive process, or something different entirely? When we say that we're 'worrying', what are we describing about our conduct? And why do we worry?

Surprisingly, to my knowledge there has been no dedicated philosophical account given of the nature of worry, although there is a body of psychological literature concerned with it, as well as a recent insurgence of philosophical literature concerned with anxiety. I therefore want to offer a philosophical account of the nature of worry that hopefully contributes to both, as well as our lay understanding of it. This account will primarily aim to shed light on what worrying is and what we're doing when we worry, in a way that is informed by relevant empirical and psychological theory and remains true to worry's experiential character. Ultimately, I'll propose that worrying can be understood as a form of affectively motivated cognition that we engage with in response to possible yet uncertain future threats. More precisely, I'll suggest that it is the typical cognitive output of anxiety. I'll also suggest that worrying can often play an adaptive role in responding to those threats.

The paper will go as follows. In Sect. 2 I'll make some preliminary remarks that will lay the foundations for my account. In Sect. 3 I'll go on to develop that account: first, I'll marry considerations from the psychological literature on worry with the philosophical literature on anxiety to shed light on the kinds of cognitive activity that constitute worrying. I'll then show how the imagination, a central phenomenological feature of worrying, figures within that cognitive activity. In Sect. 4 I'll discuss the relationship between worrying and affect, given the characteristically negative affective colour that the overall experience of worrying has. This will give us a picture of what exactly worry is. With this account of the nature of worry in place, in Sect. 5 I'll consider the question of why it is we worry at all. I'll frame this question in terms of asking what kind of adaptive roles might worrying play in responding to threats. The upshot should be a clearer understanding of the nature of worry and why we do it.

2 Preliminary Considerations

A preliminary distinction I want to make is between 'being worried' and 'worrying'. I'm particularly concerned here with the latter, namely the *activity* of worrying, rather than the state of being worried. This is because 'being worried' suggests that worry is merely an emotional or affective state. This is an intuition I want to reject. As we'll see, despite being closely connected to our emotional and affective states in important ways, worry is not simply one of such states. The term 'worry' seems to naturally pick out something that we can *do* in a way that emotion terms, used in verb form, do not. If, for example, I say to you 'I've been worrying about whether or not I'll get the job', I'm describing something that I've been *doing*. Or if I say that a friend of mine is a 'worrier', I'm referring to the fact that she has a tendency to worry about things. By contrast, even though emotion terms such as fear and hope can be used in verb form (e.g. 'I fear the walls have been breached' or 'I'm hoping that the weather will be good'), these *only* seem to describe one's state, rather than one's conduct. These terms do not have any verb form that suggest the emotional agent is

actually up to something in the way that 'worry' does. Of course, these are simply semantic distinctions, but they are ones that reflect important underlying conceptual distinctions; these will become more apparent as the article progresses. Worrying is thus to be understood here as something that we *do*. Indeed, as I'll argue, the state of 'being worried' can be understood in terms related to the activity of worrying. It is therefore the nature of this activity that I'll be providing an account of.[1] Further, an accurate account of such an activity should aim to remain true to what the experience of engaging with it is like. I'll briefly say something about this before I proceed.

It seems obvious that worrying is a predominantly cognitive activity. That is, worrying about something involves *thinking* about it in one way or another. This is relatively uncontroversial. In order to understand what we're up to when we worry, I'll therefore need to determine what kind of thought processes constitute that cognitive activity. Beyond these thought processes, it also seems that much of our worrying involves imaginative content. Worrying about some future event will ordinarily involve us imagining that event, or the possible consequences of it. If the account I'm developing is to remain true to what the experience of worrying about something is like, I'll therefore also need to account for why the imagination is such a prominent phenomenological feature of it too.

Further, it seems obvious that the overall experience of worrying about something has a distinctly affective colour. Worrying certainly involves a degree of - as psychologists like to say – 'negatively valenced' affect, and is a fundamentally unpleasant experience. This is also an aspect of worrying I'll need to account for. I'll therefore seek to explain why although worrying is a cognitive activity, the *experience* of worrying is characteristically negative, in affective terms. As I'll argue, this is because we worry when motivated to do so by anxiety, and it is this motivating anxiety that provides the kind of affective backdrop that characterizes the overall experience of it. This should therefore capture the intuition that worrying is a cognitive activity that is related to our affective and emotional states in important ways.

3 What are We Doing When We Worry?

3.1 Worrying as Practical Reasoning

The consensus within the psychological literature is that worrying is something we do in response to perceived possible threats to us, our goals, or something/someone we care about. It has been described by some as the 'cognitive component' of anxiety (Andrews et al. 2010; Mathews 1990). However, in a landmark preliminary paper on worry, Borkovec (1985) argued against the then-prevailing view that worry can simply be lumped in with a conceptual analysis of anxiety, stating that, whilst related to and connected to anxiety in important ways, it is instead to be defined and understood in its own terms. This will be a sentiment that informs my own account.

Borkovec went on to develop arguably the most influential psychological theory of worry (Borkovec et al. 1998, 2004). Often referred to as the 'avoidance theory' of

[1] I'll often simply use the term 'worry' – by this I'm referring to the activity of worrying as described.

worry, it is a view that is cited in much of the subsequent empirical and psychological literature on it, and arguably laid the foundations for all further work on the topic. In it, Borkovec describes worry as involving 'a predominance of negatively valenced verbal thought activity', claiming that 'when we worry, we're talking to ourselves a lot about negative things, most often about negative events that we're afraid might happen in the future' (Borkovec et al. 1998). Citing empirical data from his own studies, he proposes that we can understand worry in terms of the two 'avoidance' functions it serves: avoidance of the negative affect that's generated by recognising possible threats, and avoidance of possible threats themselves (Borkovec and Roemer 1995).

The first of these functions is served on the sub-personal level. Worrying, it's claimed, allows us to avoid acute affective responses to mental imagery of threats, since evidence shows that engaging in verbal thought processes – i.e., worrying, on Borkovec's account - about a threat prior to mental imagery of that threat suppresses our somatic responses to that imagery (Borkovec et al. 1998; Borkovec et al. 1993; Borkovec and Hu 1990). Worrying can therefore dampen our affective responses to mental images of threats, thereby in principle dampening our potential affective response should the threat occur, too.

Similar claims are made by Newman and Llera (2011), whose account has its roots in 'affective contrast' theory: this is the theory that the acuteness of our emotional or affective responses to things is contingent on the degree to which they contrast with the affective state preceding them (Harris 1929; Williams 1942; Dermer et al. 1979). On Newman and Llera's account, worrying about some possible threat allows the worrier to sustain a mildly negative emotional state, meaning that if and when that threat occurs their negative affective response is less acute than it would be had they not previously been in such a state, given the reduced contrast in affective valence. Like Borkovec's account, this thereby suggests that worrying ultimately helps us to avoid entering into acutely negative affective states should threats occur. Where Borkovec suggests this is by dampening our affective responses, Newman and Llera claim it is by essentially inoculating us affectively should the threat we're worrying about occur.

The second 'avoidance' function Borkovec attributes to worry is that it allows the worrier to determine practical strategies for avoiding or preparing ourselves for possible threats. On this view, worrying is thus closely akin to problem solving (Borkovec et al. 1998). This attributes a practical function to worry, an attribution also found in many other psychological accounts (see Hirsch and Mathews 2012; Wells 2005, 1995; Tallis and Eysenck 1994; Mathews 1990). Tallis and Eysenck, for example, similarly suggest that worry serves a threat avoidance function by (1) drawing the worrier's attention to a possible threat, (2) reminding – or 'prompting' - them that the threat remains when their attention moves elsewhere, and (3) facilitating preparation for possible necessary action.

For Borkovec, then, worrying is a cognitive process that allows us to (1) avoid negative affective responses to possible threats, and (2) avoid possible threats themselves. As stated, this latter threat avoidance function is widely accepted within the psychological literature. Generally, it's agreed that typically what we're *doing* when worrying is attempting to determine how to avoid bad things happening to us or those

we care about, or preparing ourselves for possible necessary action should they occur. This seems intuitive. Worrying about a job interview going badly, for example, will likely involve attempting to determine what to do in order avoid it going wrong, or what to do to prepare for it. Or, worrying about not being able to pay rent will likely involve reasoning about what to do to avoid this happening. This psychological proposal therefore chimes with our common-sense ideas about what the activity of worrying involves. And, as stated, it is a view that enjoys empirical support: Borkovec builds his theory on data taken from surveys which showed that the most common reasons given for worrying are that it helps individuals work out how to avoid possible future threats (Borkovec and Roemer 1995).

Borkovec's view thus seems plausible. Moreover, it helps shed light on the kinds of cognitive activity that constitute worrying, since it provides an explanation as to the nature of the cognitive processes involved: worrying involves attempting to determine strategies for avoiding or preparing ourselves for potential threats. In other words, worrying involves engagement with reasoning that is practical in nature. This is because determining how to avoid or prepare for threats will involve reasoning aimed at settling the question of how one should act in order to do so. The psychological proposal described above can thus be understood in terms of the idea that worrying involves a form *practical reasoning*.[2]

Note that the accounts cited do not propose that this is true of all cases of worry. It is simply widely accepted that this is ordinarily what worrying involves. And, as stated, this reflects our common-sense ideas about worry. The proposal is thus a plausible one. However, presumably worrying will quite often involve *other* modes of cognition, either in addition to or in place of the kind of practical reasoning highlighted. It may involve us reasoning about whether or not a threat will occur, for example, rather than how we might deal with it. There is little attention given to what these forms of cognition might be within the psychological literature. The majority of extant literature, as stated, tends to regard worry simply as a mode of practical problem solving, which would imply that the cognitions involved in worrying are strictly practically orientated, i.e. aimed at working out what to do. One might glean from this that engagement with practical reasoning characterises standard cases of worrying, meaning that cases of worry that involve other forms of cognition are non-standard.

This doesn't seem entirely accurate, since some seemingly paradigmatic cases of worry will not involve any form of practical reasoning. For example, we may worry about an ache in our chest without engaging in any practical reasoning about what to

[2] A clarification must be made here about what is meant here by 'threat' in the case of worry. I take it that when we worry, the 'threat' we're concerned with avoiding or preparing ourselves for is a specific event that may occur that threatens us or our goals, rather than simply the circumstances in which this event may occur. Take the job interview case: despite it being grammatically correct to say that I'm worrying about the job interview, the *threat* I'm focused on 'dealing with' in worrying is not simply the interview itself, since this is not a threat per se. Rather, the threat I'm focused on is, for instance, *the job interview going badly*. This is the possibility that, in worrying, I'm either determining how to avoid (what I can do to avoid the interview going badly) or preparing myself for should it occur (what I should do if it does go badly). Importantly, both of these necessitate a form of practical reasoning, which I'm here attributing to worry. This ties into a claim I'll make shortly that worry is concerned with specifically *uncertain* threats; it is, specifically, the uncertain proposition 'that the job interview will go wrong' that I'm focused on in worrying about the job interview.

do about it. In worrying we may simply be trying to work out whether the cause of the pain is a particular illness or not.[3] This suggests that to assume that worrying ordinarily involves practical reasoning - as it seems many accounts within the psychological literature do - would be to overlook some paradigmatic cases. These cases, I propose, can be explained by considerations from the more recent philosophical literature on anxiety.

3.2 Worrying as Epistemic Reasoning

As mentioned earlier, worry is widely understood to be related in important ways to anxiety. The nature of anxiety has been the focus of much philosophical interest in recent years. Although the term 'worry' is often used with little elaboration or definition in the accounts within the anxiety literature, we can appeal to these accounts to help shed light on the cases of worry that aren't captured by the psychological accounts discussed in the previous section, i.e. those where our worrying doesn't involve being engaged in practical reasoning.

Anxiety is generally taken to be the unpleasant and negatively valenced affective state that is elicited when faced with possible yet uncertain future threats. Notable contributions to the recent literature on anxiety include accounts of its nature (Vazard 2022; Miceli and Castelfranchi 2005), utility (Vazard 2022; Kurth 2018a, b; Miceli and Castelfranchi 2005), fittingness conditions (Fritz 2021b), and dysfunction (Levy 2016). A prevailing theme that bridges these accounts with psychological accounts of worry is anxiety's sensitivity to *uncertain* threats in particular. This is widely taken to be the characteristic feature of anxiety. For example, according to Kurth (2018a, b), anxiety is an affective state that is elicited specifically when we recognise a 'problematic uncertainty'. This view is echoed in many psychological accounts of worry, such as Koerner and Dugas's (2006) theory that cases of 'pathological' worry are caused by the worrier's elevated intolerance to uncertainty surrounding the future.[4]

Many philosophical accounts of anxiety, particularly those offered by Vazard (2022); Kurth 2018a, b; Miceli and Castelfranchi (2005), examine how anxiety moves us to respond to possible yet uncertain threats. Notably, they claim that anxiety motivates us to 'resolve' the uncertainty of those threats by attempting to improve the accuracy of our beliefs about them, thereby gaining a better epistemic perspective on them. In other words, anxiety motivates us to work out what is going to happen with as much accuracy as possible. This will ordinarily involve attempting to determine how likely the possible threat is, what factors may contribute towards this likelihood, and whether we'll be able to cope with the threat should it occur. For Vazard (2022), we do this by forming mental representations of a world in which the threat

[3] This is not to say such cases of worry couldn't involve any kind of practical reasoning. However, we can imagine that such cases may not.

[4] As I'll discuss in more detail further on, this feature notably distinguishes anxiety as an emotion from other nearby emotions such as fear, which seem to be concerned more with proximate and certain threats rather than future uncertain ones (Miceli and Castelfranchi 2005). For example, upon coming across a huge, mean-looking grizzly bear in the forest, it would be strange to describe myself as being 'anxious' about the bear. By the same token, it would seem strange to say that I'm 'afraid' of my imminent job interview.

obtains and assessing those representations, and engaging in suppositional reasoning about what may cause it to come about. For Kurth (2018a, b), anxiety motivates 'epistemic [cognitive] behaviours' such as inquiry, reflection, reasoning, and reassessment, aimed at reducing the subjective uncertainty of the threat. And similarly, for Miceli and Castelfranchi (2005) anxiety motivates a pursuit of 'epistemic control' over the possible threat, again by cognitively attempting to reduce the uncertainty surrounding it as much as possible.

What these accounts all point to is that anxiety often motivates a mode of reasoning that is specifically *epistemic* in nature. This reasoning aims at improving the accuracy of our beliefs about the threat, e.g. how likely it is, how likely certain consequences of the threat occurring would be, whether or not we would be able to cope with it if it occurred, what might cause it to occur, etc.[5] In engaging with this reasoning we aim to reduce the uncertainty surrounding that threat through improving our epistemic perspective on it. This, I propose, can described as a form of *worrying*. This would chime with the consensus view that worrying is related to anxiety in important ways. Indeed, among others Vazard (2022) does use the term 'worry' to describe the cognitions anxiety motivates, although she also uses the term 'rumination' to do so. But it's worth noting that such a conflation is rejected in the psychological literature on worry, where it is stated that worry is typically concerned with future threats, whereas rumination is typically directed towards past negative events or negative personal attributes (Hirsch and Mathews 2012; Papageorgiou 2006). This draws a conceptual distinction between the two forms of cognitive activity. Nevertheless, as stated it seems that the accounts mentioned above pick out a mode of cognition that seems plausibly describable as worrying, constituted by reasoning that is specifically *epistemic* in nature.

Indeed, as many of these accounts recognise, reducing the uncertainty of threats by engaging in the kind of epistemic reasoning identified will often be instrumental in the functioning of the practical reasoning attributed to worry in the psychological literature. That is, determining how to deal with some possible threat may necessitate working out the likelihood of it, or other relevant contributory factors (Vazard 2022; Kurth 2018a, b; Miceli and Castelfranchi 2005). For example, when worrying about your job interview, you may need to work out the possible ways that the interview might go wrong and assign likelihood estimates to these possibilities (epistemic reasoning) in order to effectively determine how to avoid them (practical reasoning). It may even be argued that most effective practical reasoning necessitates at least some degree of epistemic inquiry about the world, in order for us to be able to determine how to act within it. This gives us further reason to think that the epistemic reasoning that anxiety is said to motivate can be understood as a form of worrying.

Crucially, however, understanding worrying to involve epistemic reasoning allows us to see what the activity of worrying involves in those cases that *don't* involve practical reasoning. Worrying may involve reasoning that is purely epistemic. In worrying about the ache in your chest, for example, as stated it may be the case that you're not engaged in any practical reasoning at all. Rather, your worrying may very well

[5] Reasoning aimed at improving the accuracy of one's beliefs is also often referred to as theoretical reasoning.

be a purely epistemic endeavour aimed at trying to ascertain whether the cause of the pain is a particular illness, attempting to reduce the uncertainty surrounding such a prospect. Moreover, in some cases we may worry about possible threats that we simply can't do anything about. A mother whose son is away fighting in a foreign war will likely worry about his wellbeing despite having no means of influencing the possibility of his injury or death. Her worrying may thus not involve any practical reasoning at all. We can instead imagine it to involve reasoning about how much risk her son is in and how likely or unlikely it is that he will be injured, for example. This is a form of purely epistemic reasoning of the kind described in the anxiety literature.[6]

So, despite the psychological proposals outlined in the previous section, we have good reason to think that in many paradigmatic cases worrying involves attempting to resolve the uncertainty of a possible threat in an epistemic sense, rather than determining how to avoid or prepare for it it in a practical sense. This tells us that worrying does not merely involve practical reasoning. It can also involve epistemic reasoning. It thus seems plausible that worrying, as a cognitive activity, can be understood in terms of an engagement with specific forms of reasoning that are either practical *or* epistemic in nature - or both. This gives us a picture of what we're up to when we're worrying.

3.3 The Imagination in Worry

I've so far identified two modes of reasoning that describe what the activity of worrying involves. One is a mode of practical reasoning, aimed at determining how to deal with possible threats, and the other is a mode of epistemic reasoning, aimed at resolving the uncertainty surrounding those threats. In many cases the latter may factor into the former. I propose that understanding worry in this way can also explain a central phenomenological feature of it, one which a faithful account of its overall nature ought to capture. This, as stated earlier, is the use of the imagination. When worrying about some possible threat, we'll most likely *imagine* that threat, or mentally represent a state of affairs in which it obtains. This, I propose, can be explained and accounted for in terms of either the epistemic or practical reasoning I've claimed constitutes worry, insofar as the imagination is intimately connected with both.

With respect to cases of worry that are constituted by epistemic reasoning, I propose that the prevalence of imaginative activity in such cases can be explained in terms of how the imagination is utilised in that reasoning. Indeed, Vazard (2022) states this explicitly in her account. On her view, imagining what we're anxious about, or a world in which what we're anxious about is true, is central to the kinds of epistemic reasoning she says our anxiety motivates, i.e. worry. This is because imagining the threat we're worrying about is often instrumental in resolving the uncertainty surrounding it. To assess how likely some uncertain threat is, for example, thereby improving our epistemic perspective on it, we'll typically need to use our imagination to anticipate possibilities and features of the situation that may contribute towards our assessment of likelihood. In forming such an assessment, we may

[6] Again, this is not to say her worrying *could not* involve forms of practical reasoning. The claim here is simply that it may very well only involve epistemic reasoning.

also need to imagine the potential threat occurring, or the possible ways it might occur, in order to help us assess how plausible such possibilities are. The imagination is thus utilised when attempting to improve our epistemic perspective on threats, which is what we're doing in many cases of worry as we've seen. This explains why, for instance, the mother may very well imagine her son on the battlefield when worrying about him. Doing so is part of her attempt to resolve the uncertainty of her son's possible misfortune, contributing towards the effective functioning of the epistemic reasoning she is engaged with.

Understanding worry to involve practical reasoning also explains the prevalence of imaginative activity in worrying too. This is because, as identified by Williamson (2016) and Spaulding (2016), the imagination plays an important role in effective practical reasoning. For example, as Spaulding notes, working out how to manoeuvre a sofa through a doorway will involve imagining how to do it beforehand. Or, working out how to avoid bumping into someone at a social gathering may involve imagining yourself manoeuvring through the crowd. In other words, we typically need to imagine scenarios in order to work out how to act in them. When worrying, then, if we're engaged in practical reasoning, attempting to determine how to act in order to avoid some possible threat, it will be necessary to imagine that threat occurring in order for this reasoning to be effective. Worrying about a job interview going badly, for example, will likely involve you imagining yourself sat in front of your interviewers, or imagining the possible negative scenarios that might play out. The imagination is here being utilised to assist you in determining how to act in such a scenario, and how to deal with the possible negative uncertainties that may arise.

These considerations thus provide an explanation as to why the imagination is a faculty of mind that is employed in worry. It supplements the forms of reasoning we're engaged in and contributes towards their effective functioning. So, not only does understanding worry in terms of an engagement with epistemic or practical reasoning explain what the activity of worrying involves, but it also explains why the imagination is such a central phenomenological feature of our experience of it. It simply figures within the modes of reasoning that constitute it.

4 Worry, Anxiety and 'Being Worried'

So far I've proposed that the activity of worrying can be understood as an engagement with modes of either practical or epistemic reasoning (or both). Understanding worrying in these terms explains the prevalence of imaginative activity involved. However, we can engage in the modes of reasoning I've identified in ways that wouldn't be described as worrying. I might engage in practical reasoning about how to avoid a car crash when I see that it has snowed heavily before driving to work, but I may not be worrying. Or I may engage in epistemic reasoning to determine how likely or unlikely a crash is – again, I may not be worrying. What, then, qualifies our engagement with these forms of reasoning as worrying?

I propose that engaging with these modes of reasoning qualifies as worrying when that engagement is motivated by our affective state: specifically, anxiety. That is, worrying is a cognitive activity that is necessarily *affectively motivated*. I take anxi-

ety to be the unpleasant and negatively valenced affective state that is elicited when we face possible yet uncertain future threats, as it is generally understood in the literature. What reasons are there for thinking that it motivates worrying?

For one, this would explain why the experience of worrying clearly occurs against a characteristically negative affective backdrop. The motivating anxiety would be what gives the experience of worrying its negatively valenced affective colour, and would explain why the overall experience of worrying is by definition an unpleasant one. Secondly, my account so far suggests as much. We've seen how the epistemic reasoning that I've labelled as worry is generated by anxiety, something we know from the anxiety literature. Vazard (2022), for example, explicitly states that anxiety 'triggers' that epistemic reasoning. There's no reason to think that this doesn't also apply to cases of worry that involve practical reasoning too. And this also means that the proposal that worrying is motivated by anxiety fits with current theory. Not only is it supported by considerations from the philosophical anxiety literature as mentioned, but much of the psychological literature also agrees that worrying and anxiety are closely connected.

Moreover, my proposal that worry is motivated by anxiety aligns within the more general view that emotional and affective states influence our thoughts in ways that are relevant to the content of those states (Brady 2014; Deonna and Teroni 2012; Tappolet 2009; Clore 1994). For instance, anger, ordinarily being responsive to the judgement that one has been wronged in some way, will often motivate thoughts about how to attain revenge. In being sensitive to uncertain possible future threats, anxiety will thus motivate cognitions that are relevant to our recognition of such a threat, thereby providing the object and content for those cognitions. The forms of practical and epistemic reasoning I've said constitute worrying seem like the best candidates for what these cognitions might be.

So, my proposal is that our anxiety towards some uncertain future threat is what motivates the modes of reasoning that constitute worrying. It is by being motivated by anxiety that this reasoning can be described as worrying. It's thus plausible to suggest that when we worry, we're simply engaging with the cognitions that anxiety typically motivates. That is, worrying is the *typical cognitive output* of anxiety. We perceive an uncertain future threat, feel anxiety towards it, and are motivated to worry, either to resolve the uncertainty surrounding it or determine practical strategies for avoiding it.[7] That motivating anxiety provides the object and content for our worrying, as well as the negatively valenced affective backdrop that characterises the overall experience of it.

Note that despite anxiety standing in this motivational relationship to worry, there is a clear ontological distinction that can be drawn between the two: anxiety is an affective state, whereas worrying is a cognitive process. This distinction echoes Borkovec's (1985) sentiment that worry can and should be defined in its own terms, rather than being lumped in with a conceptual analysis of anxiety. On the view I've

[7] It must be noted that it is only these forms of reasoning that I am proposing qualify as worry, since these are the forms of reasoning anxiety *typically* motivates. Of course, anxiety may motivate other forms of reasoning in some cases – higher-order reasoning or self-reassurance, for instance. However, it seems clear that these do not count as worrying.

developed, the link between them is that worrying is motivated by anxiety. Worry is thus simply a mode of affectively motivated cognition, the typical cognitive output of anxiety.

What, then, makes worry particularly interesting? As just recognised, most - if not all - emotions motivate cognitions that are germane to that emotion's content. We may joyfully reason about where to go on holiday in the summer, or angrily weigh up what the most pernicious means of revenge might be. What makes worrying – anxiously reasoning about how to deal with a possible threat or reduce the uncertainty of it – worth the kind of philosophical attention I'm giving it here?

On the one hand, we might argue that it is the ubiquity of worry that makes it worthy of such attention, over and above other forms of affectively motivated cognition. As stated earlier, worry is familiar to us all and yet surprisingly hard to define, and so arguably my account fills a philosophically interesting conceptual gap. Moreover, I'd also argue that worrying is a particularly interesting form of affectively motivated cognition given certain aspects of its nature. That is, in being motivated by anxiety, an affective state that is defined by its sensitivity to *uncertain* threats in particular, we engage in worry from a distinctive epistemic position of uncertainty. This notably distinguishes it from other affectively motivated cognitive threat responses, like fearfully working out how to avoid the grizzly bear I've encountered whilst walking through the forest. The object of my worry will necessarily be some possible future threat that I'm unsure will happen or not: in worrying about a job interview going wrong, I cannot accurately make a judgement as to whether this will obtain. By contrast, the bear in my path will certainly motivate fearful cognitions about how to avoid it or escape, but I'm not in the kind of epistemic position that would make *worrying* about the bear appropriate. The threat of a bear attack is immediate and highly likely to occur should I not act immediately and appropriately.

This is something recognised by Fritz (2021a), who claims that worrying that p is only fitting if the worrier is in an epistemic position such that it is rational to suspend judgement as to whether p. Similarly, Gordon (1987) takes 'being worried that p' to be a distinctly *epistemic* state, one that we find ourselves in 'only if [we] do not know that p' (more on worry as a state shortly).[8] Worrying can thus be understood as a threat response that has the distinctive feature of dealing solely with the uncertain, aimed at threats situated in a 'non-existent future' in the words of Borkovec et al. (1998).[9] Because of this, worry is somewhat anomalous within the wider spectrums of both threat responses and affectively motivated cognitions.

Another challenge that may be raised for my account is that it still doesn't characterise all cases. As I've claimed, worrying aims at possible uncertain future threats, and it involves us either working out how to avoid those threats or reduce the uncertainty surrounding them. However, it could be argued that this does not account for worrying about *past* events, in a way that is completely unproductive and does not involve either of the modes of reasoning I've identified. One might claim, for exam-

[8] Despite their use of the term, neither Fritz nor Gordon give a characterization of what worrying itself is.

[9] Perhaps this is what informs often-heard dictums such as 'worrying gets you nowhere'. It might be natural to assume that worrying is unproductive and unnecessary if, by definition, the things we worry about are mere possibilities that we cannot be sure will even happen or not.

ple, that tossing thoughts around in my head about yesterday's poor performance in a job interview could be described as worrying, even though I'm not engaged in the kind of cognitive activity that I've attributed to worry. Indeed, it seems like the modes of practical and epistemic reasoning that constitute worrying on my account can only ever aim at future events. The idea of 'backwards-looking' cases of worrying could therefore cause problems for my account.

However, a straightforward response to this challenge would be to say that such cases are simply not cases of worry. This is a claim supported by conceptual distinctions drawn within the psychological literature. As stated earlier, a distinction is often drawn between worrying and the admittedly similar cognitive activity of *rumination* (Hirsch and Mathews 2012; Papageorgiou 2006). Rumination, it is widely held, is generally aimed at past events and personal attributes, whereas worrying is aimed at uncertain future events. So, in a temporal sense rumination is characteristically backwards-looking, whereas worrying is characteristically forwards-looking.[10] We thus can't worry about past events. This fits with my proposal that worry is motivated by anxiety, since by the same token it seems obvious that we can't be anxious about past events too. Of course, we may worry about how past events may affect our future. I may worry that my misjudged remark in yesterday's interview may hurt my chances of getting the job; the epistemic reasoning that constitutes my worrying may involve going over how the interview went in order to work out how likely it is that I've not got the job, for instance. But here the object of my worry is still future directed. I'm worrying about the *future* possibility of not getting the job, something about which I'm still uncertain. So, the cases of 'worry' described above are therefore more accurately described as cases of rumination.

It's also worth re-iterating that the account I've given aims to describe what we're doing when engaged in the activity of worrying, rather than the 'state of being worried', which may not involve the specific modes of cognitive activity I've outlined, or indeed any cognitive activity at all. But I think my account provides a framework for characterising such a state. We can simply explain it in dispositional terms, i.e. in terms of a disposition to engage in the activity of worrying as I've described it. That is, if I say that I'm worried about my upcoming job interview, I'm reporting that I have a disposition to engage in the modes of practical or epistemic reasoning attributed to worry on my account, even if that disposition is not active and I'm not currently engaged in those modes of reasoning. I'm disposed to determine how to avoid the job interview going wrong or attempt to reduce the uncertainty surrounding it, even if I'm not currently doing so. Given that anxiety is worry-motivating on my account, this would of course be akin to saying that I'm anxious about the upcoming job interview – being anxious will involve a similar disposition. But this is reflective of our intuition that 'being worried' about something and 'being anxious' about something are very similar states. Of course, more work could be done to distinguish these from one another, however my focus here is understanding what the nature of worrying is as an activity specifically. Tracing the boundaries that distinguish these states is a task for another day.

[10] We might tentatively suggest that rumination stands in a similar relationship to regret that worry stands in to anxiety.

Further, it could be argued that 'being worried' may involve cognitions other than the ones I've described. Why not say these count as worrying too? The simple answer is that extending our understanding of worry to capture any old mode of negatively valenced future directed thinking would risk diluting the concept of it too much. Whilst it may be true that some cases of 'worry', understood in folk-psychological terms, may slip through the net according to the account I've given, the idea here is to pin down a specific understanding of what worrying is - ideally a more specific one than folk psychology currently offers. So naturally there may be some senses of the term 'worry' that stand outside the definition I've offered. Nevertheless, I think my account is broad enough to capture most cases that we would intuitively label as worrying, yet specific enough to have clear conceptual and ontological boundaries.

We now have in place an account of the nature of worry. On the view I've developed, worrying is a form of affectively motivated cognition that we engage with in response to some possible yet uncertain future threat. It is constituted by our engagement with either (1) practical reasoning, aimed at determining strategies for avoiding or preparing for the threat, or (2) epistemic reasoning, aimed at reducing the uncertainty of the threat. These modes of reasoning are supplemented by the imagination and are motivated by anxiety. This motivating anxiety provides the object and content for our worrying as well as the negatively valenced affective backdrop that characterises the overall experience of it. It is in being motivated by anxiety that the modes of reasoning I've identified can be described as worrying. This provides answers to the questions of what worry is, and what we're up to when we worry. In the next section, I'll consider why exactly it is that we worry by exploring the adaptive roles that worrying can play in responding to possible future threats.

5 Why Do We Worry?

Why, then, do we worry? This is the question I'll now turn my attention to. The 'why' is one that is here meant in a teleological sense. I'll therefore frame such a question in terms of the following: what kind of positive adaptive *roles* can our worrying play in responding to possible, uncertain future threats?

The most tempting and intuitive claim would be that worrying can simply help us avoid bad things happening to us. This is what psychological accounts of worry tend to conclude. As we've seen, the reasoning involved in worrying is often aimed at determining how to avoid possible threats to us, our goals, or to the people and things we care about. Clearly this has adaptive value. Avoiding and preparing for danger, misfortune and suffering is instrumental in our continued survival and wellbeing. And making sure those we care about avoid danger is important to us as social creatures. So, worrying about the job interview going wrong may allow me to determine what to do to avoid this happening - here my worrying clearly has adaptive value insofar as it helps protect my attainment of important goals. Understanding the adaptive role that worrying serves in strictly practical terms therefore seems attractive.

However, as we've seen, there are paradigmatic cases of worry that do not involve any practical reasoning: the worrying mother, for example, whose worrying is constituted by purely epistemic reasoning. It therefore seems that worrying cannot *merely*

serve a strictly practical adaptive role of helping us avoid possible threats, since in cases like this there is no practical output that our worrying can aim at. Perhaps one might respond that in worrying the mother is *attempting* to determine means of avoiding the threat, even though there is nothing she can do about it since this is just how her threat responses are configured. Maybe hopelessly attempting to determine such strategies is all she can do. But this would suggest that such cases involve a form of 'doomed' practical reasoning, one that aims at practical solutions that aren't attainable. This doesn't seem accurate. As we've seen, the reasoning involved in the mother's worrying can be understood as purely epistemic and may not factor into, or involve, any mode of practical reasoning at all. It is thus not plausible to suggest that the *only* adaptive role that worrying can play is a practical one, one that is simply failing to be served in these cases.

We need to think about how worrying might have adaptive value in cases of purely 'epistemic worry' like the worrying mother. That is, we need to ask the following question: what kind of adaptive role can worrying serve when in worrying we're simply attempting to resolve the uncertainty of some threat, even if there is no practical value to doing so, i.e. no avoidance strategy to determine? Claims made by Miceli and Castelfranchi in their 'uncertainty theory' of anxiety are particularly relevant here. They argue that the epistemic reasoning anxiety motivates – i.e. worry - can have adaptive value independently of any kind of practical application. That is, reducing the subjective uncertainty of threats can be adaptive regardless of whether we can do anything about the threat, as a 'need and search for knowledge for its own sake, […] not only as a means for acting on the world' (Miceli and Castelfranchi 2005). What, then, might be adaptive about improving our epistemic perspective on threats through worrying in such a way?

One potential answer alluded to by Miceli and Castelfranchi is that the epistemic clarity worrying often aims at can help alleviate the anxiety we're experiencing. For example, if the worrying mother determines, through worrying, that it is highly unlikely that her son will be injured, her anxiety will likely be somewhat alleviated, and she may feel better about the situation.[11] This positive affective influence, they claim, is part of what makes attaining 'epistemic control' adaptive. Indeed, they state that gaining epistemic control on possible threats 'defends against suffering, and in particular *against the anxiety aroused by such threats*' (Miceli and Castelfranchi 2005; italics added for emphasis). In other words, anxiety is an emotion that is unpleasant in its valence and affective character, and is responsive to uncertainty. Resolving uncertainty via worrying may thereby reduce or extinguish anxiety. This is adaptive.

I won't rule out the possibility that in some cases epistemic worrying may alleviate our anxiety in this way. But it would be restrictive to say that this is the main adaptive role that epistemic worrying can play. This would make epistemic worrying akin to a form of self-soothing; this doesn't seem to apply to many cases. As such, I

[11] Interestingly, Miceli and Castelfranchi (2005) also claim that anxiety will be alleviated if we determine that the threat is *certain* to happen through epistemic reasoning, since this also means that the uncertainty of the threat that our anxiety is sensitive to has been resolved. In such cases, they suggest that our anxiety may be 'converted' to fear.

want to extend the core idea that worrying can be adaptive by helping us avoid negative affective states. I'll do this by proposing that reducing the uncertainty of threats doesn't merely help to extinguish negative affective states we're already in, but it can also help us avoid *further* negative affective states too. This is a further (and arguably more likely) adaptive role that such cases of worry can play. Recall that this is akin to the kind of function Borkovec et al. (1998) and Newman and Llera (2011) attribute to worry in the psychological literature. Both claim that the sub-personal mechanisms underlying worry play a role of dampening our potential affective responses should our worries materialise. What I want to suggest is that this can be achieved not purely via those sub-personal mechanisms as they claim, but also through the success of the epistemic reasoning that often constitutes our worrying.

My proposal is this: reducing the uncertainty of threats through epistemic worrying can allow us to *prime* ourselves for those threats.[12] That is, having a better idea of what might happen can mean we're primed to cope with it more effectively. This is adaptive since our affective response will therefore be less acute should it occur. For example, say the worrying mother determines, through worrying, that the likelihood of her son being injured in the war is roughly x. This improved epistemic perspective may allow her to prime herself for this possibility in a way that is appropriate to this likelihood assessment. She may, for example, consequently allocate a commensurate degree of cognitive and emotional resources towards pre-emptively processing the possibility of her son returning from the war injured. If her worry was then to materialise, presumably she would then be in a better position to cope, meaning her negative affective response to it would be less acute. This aligns with Eysenck's (1992) claim that worrying often constitutes a form of 'anticipatory coping'. How would this work?

As recognised in the anxiety literature, reducing the epistemic uncertainty of a possible threat through worrying will, in principle, give us a better idea of whether or not that threat will occur, and potentially how it might occur. With a better idea of how things will transpire, we have a better sense of what to expect, and, crucially, we will become more *familiar* with what is going to happen. There are two ways that this familiarity might help us to avoid a potentially acute affective response to the threat's occurrence. One is that the threat will now be less of a 'shock to the system', should it occur. We've familiarised ourselves with such a possibility and prepared ourselves for the worst, so to speak. As described above, this may allow us to commit cognitive and emotional resources towards pre-emptively processing the possibility of threat. So, presumably our negative affective response to the threat's occurrence will be less acute, since we have a better idea of what to expect. Indeed, Miceli and Castelfranchi (2005) briefly suggest that reducing the uncertainty of possible threats may be a way of attempting to 'get used' to the possibility that something bad is going to happen. This is similar to what I'm proposing.

Secondly, this increased sense of familiarity may give way to an increased sense that we can cope with the threat should it occur. This influence of familiarity on our self-perceived capacity to cope is something Teroni (2017) argues for, claiming that

[12] The terminology of 'priming' has also been used by Borkovec to describe the function of the sub-personal mechanisms underlying worry (Borkovec et al. 1998).

'[f]amiliarity would manifest itself in a positive feeling reflecting one's capacity to cope with the relevant content, and unfamiliarity in a negative feeling manifesting one's difficulty in coping with it.' In other words, the more familiar we are with potential challenges and problems we face, the better we feel we can cope with or manage them.[13] Miceli and Castelfranchi also recognise a positive correlation between reducing the uncertainty of threats and being in a better position to cope with them. If epistemic worrying can give us an increased sense of familiarity with the threat we're worrying about, then, it thus makes sense to suggest that it can positively influence our self-perceived capacity to cope with it. So not only can familiarising ourselves with what might happen reduce the potential 'shock to the system' should the threat occur, but it may also put us in a better position to cope with it too. That is, we will be *primed* for it. We can reasonably say that, in principle, this means our affective response to it will be less acute should it occur. This would have adaptive value for the same reasons that extinguishing the state of anxiety we're currently in does: we'll have avoided an acute negative affective state.

Of course, my proposal is an empirical one, but it enjoys strong support from the psychological and empirical literature on worry. For one, in his seminal early work on worry, Mathews (1990) suggests that an 'obvious' advantage of worrying is that the worrier may be 'less likely to be taken by surprise when an anticipated threat does in fact materialise and may indeed be better prepared to cope with it as a result.' This 'advantage' presumable denotes adaptive value. Similarly, Sassaroli and Rogeirio (2003) suggest that worrying (or 'brooding', as they refer to it) may act as an 'emotional shield', stating that 'in therapy, clients suffering from a brooding problem […] report that 'even if brooding does not help to solve problems, it can help to tolerate them better when they arrive!' ' And further, Borkovec and Roemer (1995) found that the second highest reported reason for worrying given by test individuals is that it 'prepares them for the worst if they cannot avoid it'.[14]

Moreover, as stated my proposal fits with the accounts of Borkovec et al. (1998) and Newman and Llera (2011) mentioned earlier, both of which involve the view that worrying can help us avoid future potential negative affective states. The difference between our views is that I've suggested this can be achieved via the success of the epistemic reasoning worrying involves and the increased sense of *familiarity* with the possible threat this can bring, rather than via underlying sub-personal mechanisms as they claim. But this is not to say that our views are mutually exclusive. It is not implausible to suggest that the kind of 'priming' role I've attributed to worry may be served alongside those sub-personal mechanisms.

We therefore have good reasons to think that reducing the uncertainty of threats through worrying can play an adaptive role of priming us for possible future threats. This helps us to avoid entering into potentially acute negative affective states should those threats occur. This proposal compliments the psychological literature on worry whilst also extending the considerations put forth by Miceli and Castelfranchi within the anxiety literature. Not only may worrying serve to alleviate states of anxiety

[13] For psychophysiological support for this claim, see Winkielman and Cacioppo 2001.

[14] Unsurprisingly the only more commonly reported reason is that worrying helps individuals avoid future threats – this is the practical adaptive role that the psychological literature tends to focus on as mentioned.

we're already in as they suggest, but it can also help us avoid potential further negative affective states too. This identifies a clear adaptive role that worrying can serve in cases like the worrying mother, where worrying involves no practical reasoning.[15]

As we can now see, worrying can be adaptive in two senses. On the one hand, it can be a way of determining practical avoidance or preparation strategies in response to possible threats. The capacity of worry to facilitate practical reasoning therefore clearly has adaptive value in this sense. On the other hand, worrying can help us get a better epistemic perspective on possible future threats, which can give us a better understanding of what is going to happen or what to expect. This helps us prime ourselves for those threats. In this respect, worrying may help us avoid acute negative affective responses, which again is clearly adaptive.

The adaptive value of worrying becomes evident if we recognise that these outputs cannot be generated by the states of anxiety that motivate it alone. Clearly we can feel anxious without engaging in worry. I may be in a purely affective state of anxiety about my upcoming job interview but simply not be worrying about it. And this anxiety may have adaptive value: anxiety tracks, alerts us to and draws our attention to uncertain threats in the world (see Eysenck et al., 2007; Hoehn-Saric and McLeod 2000). It also causes necessary physiological changes in response to those threats, such as an increased heart rate and pupil dilation. But should it be necessary to determine how to avoid the job interview going wrong, prepare myself for the potential difficult questions that I may be asked, or get a better idea of what is going to happen in order to prime myself effectively, being in a 'raw' state of anxiety alone is not enough. Worrying is how we do these things, since it is via the process of reasoning that we settle questions of what to *do* (i.e. in cases of worry aimed at determining avoidance strategies), or what to *believe* (i.e. in cases of worry aimed at reducing the uncertainty of the threat). When our anxiety alerts us to some possible future threat, and we recognise a need to *respond* to that threat by settling such questions, it is therefore through cognitively engaging with the modes of reasoning I've described as worrying that we're able to do so. Worrying, as a cognitive activity, can therefore yield potential adaptive benefits in and of itself. The cognitive process of reasoning that constitutes worrying means it can facilitate responses to uncertain threats in a way that merely being in a state of anxiety alone cannot. Indeed, this would explain why anxiety motivates worry.

Of course, one may argue that this is a distinction that can only be drawn if worry and anxiety are to be considered as separate. If worrying was simply a part of anxiety, as some may be inclined to assume, then the adaptive benefits of worrying that

[15] One might suggest that the adaptive role I've attributed to cases of epistemic worry collapses into the practical one, since the adaptive role attributed to epistemic worry involves 'preparing' oneself for threats. I think, however, this is a different sense of 'preparation' from the practical sense. My worry about a job interview going wrong may be constituted by practical reasoning aimed at determining how to prepare myself in a practical sense for the interview itself, or the possibility of it going wrong, by working out what to do. On the other hand, my worrying might involve epistemic reasoning aimed at preparing myself for the possibility of it going wrong in the sense of priming as just described. I'm getting myself ready for the worst to happen by familiarising myself with such a possibility. These are clearly different senses of preparing myself. Further, there is nothing to say that a single case of worry may not serve both these roles. We may, for instance, engage in epistemic reasoning to prime ourselves for the possibility of the threat occurring *before* engaging in practical reasoning aimed at determining how best to avoid or prepare for it.

I've identified could just be attributable to anxiety. But as stated earlier, this is not a conflation the account I've given is committed to. We worry when our anxiety motivates us to, but worry is not simply part of anxiety itself. Despite being connected in important ways, the two are ontologically separate: anxiety is an affective state whereas worry is a cognitive process. Moreover, as we can now see, worrying can facilitate the determination of avoidance or preparation strategies or help us gain a better epistemic perspective on possible threats, whereas anxiety alone cannot. When our anxiety motivates us to worry it provides the object and content for that cognitive process, but in doing so it essentially provides a problem that needs to be solved. And this can only be done through engaging with the modes of reasoning that constitute worrying, or indeed via the sub-personal mechanisms underlying the activity of worrying as some psychological theories propose.

We might say then, being the typical cognitive output of anxiety, worry provides a means of cognitively 'processing' the content of anxiety, in order to allow for the adaptive practical and epistemic outputs I've identified to be generated. By 'processing' I mean that worrying aims to facilitate the generation of an appropriate and effective response to what we're anxious about i.e. the uncertain future threat. That is, anxiety alerts us to and draws our attention towards some possible future threat, but that raw affective state alone cannot generate strategies for dealing with the threat or help us improve our epistemic perspective on what might happen in order to prime ourselves for it. For these we must engage with and *process* that content in a strictly cognitive sense. Anxiety therefore motivates us to worry so that we can attempt to respond to uncertain threats effectively. It is in this sense that we can say that worry plays an adaptive role of processing the content of our anxiety.[16] Anxiety alerts us to possible problems, but worrying is how we attempt to solve them.

Bringing all we've considered together, we can thus now give the following definition of worry and the adaptive role it serves:

A is worrying about possible and uncertain future threat T iff:
(1) A is in a state of anxiety about T.
(2) This anxiety motivates A to engage in modes of either practical or epistemic reasoning about T.
(3) This reasoning, often supplemented by the imagination, aims at 'processing' the content of A's anxiety about T.

A piece of reasoning aims at 'processing the content of A's anxiety about T' iff:
(1) It is practical in nature, aimed at determining strategies for avoiding or preparing for T, or
(2) It is epistemic in nature, aimed at improving A's epistemic perspective on T by reducing the uncertainty of T.

[16] Potential analogues of this claim might be the idea that mourning can process the content of grief, or that rumination can process the content of regret.

6 Conclusion

Following the recent theme of understanding anxiety as an important functional feature of our lives, thinking about worry in the way I've described hopefully paints it in a more positive light than we might be inclined to consider it. Despite seeming like an inherently negative aspect of our lives, it should now be evident that worrying actually has the potential to contribute positively to our everyday functioning. Of course, the claim here is not that worrying *always* appropriately serves the kind of adaptive roles I've attributed to it. In fact, it seems that by its very nature worrying might often not end up yielding the kinds of adaptive benefits I've identified. Yet an explanation of why exactly this is true is something I don't have space to address here, although this generally tends to be the focus of the psychological literature on worry.

But this doesn't mean that we shouldn't understand worry in terms of the adaptive roles I've described. There are many features of our cognitive and affective make-up that can contribute positively towards our day to day lives yet often don't serve their roles adequately. This doesn't mean that they can't be understood in terms of those roles. We could argue, for instance, that our fight or flight response mechanism has a clear adaptive role despite rarely contributing towards our ordinary functioning as it is designed to. Often it kicks in when we don't need it. But we still understand it in terms of the adaptive role it is 'designed' to assume. And so, I contend, the same is true of worry. Worrying may not often fully serve its adaptive role effectively, but this doesn't mean it is not to be understood in terms of that role. Indeed, a life completely devoid of worry would presumably involve regularly failing to respond effectively to the trials and tribulations life presents us with. When considered in this way, the necessity of worry is clear.

Acknowledgements Thanks are due to Paul Faulkner, Luca Barlassina, Yonatan Shemmer, Michael Brady, James Turner and two anonymous reviewers for their incredibly helpful comments and suggestions. Earlier versions of this work were presented at the Philosophy and Psychiatry Summer School at The University of Oxford, the 12th Annual Graduate Philosophy Conference at HIW Leuven, the BPPA Philosophy of Mental Health Conference at Senate House, London and the online conference of the International Society for Philosophy of the Sciences of the Mind. Thanks to the audiences at these events for their feedback and discussion.

Funding Financial support for this work was received from the Royal Institute of Philosophy in the form of a Jacobsen Studentship.

Data availability There were no datasets analysed or generated in the production of this work. One can obtain the relevant material from the references below.

Declarations

Conflicts of Interest There are no conflicts of interest, financial or non-financial, to declare.

References

Andrews, G., M. J. Hobbs, T. D. Borkovec, K. Beesdo, M. G. Craske, and R. G. Heimberg. 2010. Generalized worry disorder: A review of DSM-IV generalized anxiety disorder and options for DSM-V. *Depression and Anxiety* 27(2): 134–147.

Borkovec, T. D. 1985. Worry: A potentially valuable concept. *Behaviour Research and Therapy* 23(4): 481–482.

Borkovec, T. D., and S. Hu. 1990. The effect of worry on cardiovascular response to phobic imagery. *Behaviour Research and Therapy* 28: 69–73.

Borkovec, T. D., and L. Roemer. 1995. Perceived functions of worry among generalized anxiety disorder subjects - distraction from more emotionally distressing topics. *Journal of Behaviour Therapy and Experimental Psychiatry* 26(1): 25–30.

Borkovec, T. D., J. D. Lyonfields, S. L. Wiser, and L. Diehl. 1993. The role of worrisome thinking in the suppression of cardiovascular response to phobic imagery. *Behaviour Research and Therapy* 31: 321–324.

Borkovec, T. D., William Ray, and Joachim Stober. 1998. Worry: A cognitive phenomenon intimately linked to affective, physiological, and interpersonal behavioural processes. *Cognitive Therapy and Research* 22(6): 561–576.

Borkovec, T. D., O. Alcaine, and E. S. Behar. 2004. 'Avoidance Theory of Worry and Generalized Anxiety Disorder'. In *Generalized Anxiety Disorder: Advances in Research and Practice*, ed. R. G. Heimberg, D. S. Mennin, and C. L. Turk. New York: Guilford.

Brady, M. 2014. *Emotional insight: The Epistemic Role of Emotional Experience*. Oxford: Oxford University Press.

Clore, G. 1994. 'Why Emotions Are Felt', in *The Nature of Emotion*, ed. Paul Ekman and Richard Davidson. New York, Oxford: Oxford University Press

Deonna, A., and F. Teroni. 2012. *The Emotions: A Philosophical Introduction*. Routledge.

Dermer, M., S. J. Cohen, E. Jacobsen, and E. A. Anderson. 1979. Evaluative judgments of aspects of life as a function of vicarious exposure to hedonic extremes. *Journal of Social Psychology* 37(2): 247–260.

Eysenck, M. 1992. *Anxiety: The Cognitive Perspective*. East Sussex: Laurence Erlbaum Ltd.

Eysenck, M., Derakshan, N., Santos, R., Calvo, M. G. 2007. Anxiety and cognitive performance: Attentional control theory. *Emotion* 7(2) 336–253

Fritz, J. 2021a. Hope, worry, and suspension of judgment. *Canadian Journal of Philosophy* 51(8): 573–587.

Fritz, J. 2021b. Fitting anxiety and prudent anxiety. *Synthese* 199(3–4): 8555–8578.

Gordon, R. 1987. *The Structure of Emotions: Investigations in Cognitive Philosophy*. Cambridge and New York: Cambridge University Press.

Harris, A. J. 1929. An experiment on affective contrast. *American Journal of Psychology* 41(4): 617–624.

Hirsch, C. R., and A. Mathews. 2012. A cognitive model of pathological worry. *Behaviour Research Therapy* 50(10): 636–646.

Hoehn-Saric, R., and D. R. McLeod. 2000. Anxiety and arousal: Physiological changes and their perception. *Journal of Affective Disorders* 61(3): 217–224.

Koerner, N., and M. J. Dugas. 2006. 'A Cognitive Model of Generalized Anxiety Disorder: The Role of Intolerance of Uncertainty' in *Worry and Its Psychological Disorders*, ed. Graham C.L Davey and Adrian Wells. Wiley Series In Clinical Psychology.

Kurth, C. 2018a. *The Anxious Mind: An Investigation Into the Varieties and Virtues of Anxiety*. Cambridge, Massachusetts: MIT Press.

Kurth, C. 2018b. Emotion, deliberation, and the skill model of virtuous agency. *Mind & Language* 33(3): 299–317.

Levy, N. 2016. Have I turned the stove off? Explaining everyday anxiety. *Philosophers' Imprint* 16(2): 1–10.

Mathews, A. 1990. Why worry? The cognitive function of anxiety. *Behaviour Research Therapy* 28(6): 455–468.

Miceli, M., and C. Castelfranchi. 2005. Anxiety as an 'epistemic' emotion: An uncertainty theory of anxiety. *Anxiety Stress & Coping* 18(4): 291–319.

Newman, M. G., and S. J. Llera. 2011. A novel theory of experiential avoidance in generalized anxiety disorder: A review and synthesis of research supporting a contrast avoidance model of worry. *Clinical Psychology Review* 31(3): 371–382.

Papageorgiou, C. 2006. 'Worry and Rumination: Styles of Persistent Negative Thinking in Anxiety and Depression', in *Worry and Its Psychological Disorders*, ed. Graham C.L Davey and Adrian Wells, Wiley Series In Clinical Psychology.

Sassaroli, S., and G. M. Ruggiero. 2003. *La Psicopatologia Cognitiva del Rimuginio (worry). Psicoterapia Cognitiva e Comportamentale*, (9):31–45.

Spaulding, S. 2016. 'Imagination Through Knowledge'. In *Knowledge Through Imagination*, ed. Amy Kind and Peter Kung, Oxford University Press.

Tallis, F., and M. W. Eysenck. 1994. Worry: Mechanisms and modulating influences. *Behavioural and Cognitive Psychotherapy* 22(1): 37–56.

Tallis, F., C. L. Davey, and G. Capuzzo, N. 1994. 'The Phenomenology of Non-pathological Worry: A Preliminary Investigation'. In *Worrying: Perspectives on Theory, Treatment and Assessment*, ed. Graham Davey, and Frank Tallis. Chichester, West Sussex: Wiley.

Tappolet, C. 2009. 'Emotion, Motivation, and Action: The Case of Fear'. In *The Oxford Handbook of Philosophy of Emotion*, ed. Peter Goldie. Oxford: Oxford University Press.

Teroni, F. 2017. 'The Phenomenology of Memory'. In *The Routledge Handbook of Philosophy of Memory*, ed. S. Bernecker, and K. Michaelian. New York: Routledge.

Vazard, J. 2022. Everyday Anxious Doubt. *Synthese* 200(3).

Wells, A. 1994. 'Attention and the Control of Worry'. In *Worrying: Perspectives on Theory, Treatment and Assessment*, ed. Graham Davey, and Frank Tallis. Chichester,West Sussex: Wiley.

Wells, A. 1995. Meta-cognition and worry: A cognitive model of generalized anxiety disorder. *Behavioural Cognitive Psychotherapy* 23(3): 301–320.

Wells, A. 2005. The metacognitive model of GAD: Assessment of meta-worry and relationship with DSM-IV generalized anxiety disorder. *Cognitive Therapy and Research* 29(1): 107–121.

Williams, G. D. 1942. The effect of order of appearance on the appreciation of musical selections. *Journal of General Psychology* 27: 295–310.

Williamson, T. 2016. 'Knowing by Imagining'. In *Knowledge Through Imagination*, ed. Amy Kind and Peter Kung, Oxford University Press.

Winkielman, P., and J. Cacioppo. 2001. Mind at ease puts a smile on the face: Psychological evidence that processing facilitation elicits positive affect. *Journal of Personality and Social Psychology* 81(6): 989–1000.