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Frightening Times

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Frightening Times

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Abstract. In this paper, we discuss the inherent temporal orientation of fear, a matter on which philosophers seem to have contrasting opinions. According to some, fear is inherently *present*-oriented; others instead maintain that it is inherently *future*-oriented or that it has *no* inherent temporal orientation at all. Despite the differences, however, all these views seem to understand fear’s temporal orientation as *one*-dimensional—that is, as uniquely determined by the represented temporal location of the intentional object of fear. By contrast, we present a view that introduces a *two*-dimensional account of fear’s temporal orientation. On such a view, we can say that fear is inherently future-oriented, independently of its being about something in the present or in the future.

Keywords. Fear; emotion; future; time; intentionality; phenomenal character.

1 Introduction

There are at least three different ways in which the connections between emotions and temporality can be considered.

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First, emotions are mental/psychological events that *happen in*, and *unfold through*, time. In other words, they have a *temporal structure*. For example, when arguing with a friend, you might experience an initial feeling of uneasiness that changes to a state of being upset and, after a fit of rage, smooths off into disappointment.

Second, emotions have a *temporal orientation*: they orient the focus of our conscious awareness towards what is past, present or future by having a content that can be described in tensed terms. For instance, Mary can be sad that her best friend, John, *has lost* his job; but she might also be happy that he *will be hired* again soon by a new company or disgusted by the way John's current boss *is treating him* right now. Certain types of emotion appear to have no inherent temporal orientation: they can be about the present as much as the past or the future. Consider again Mary and her sadness: she can be sad that John *lost* his job; but she could just as well be sad that John *will lose* his job or that he *is being fired right now* by his boss. The same seems to apply to other emotions like happiness, for example. By contrast, at least some other types of emotion do appear to have a special connection with the past, the present or the future: they are *inherently* temporally oriented. A standard example is regret, which seems to be essentially directed towards the past. More controversially, according to some (e.g., Ortony, Clore and Collins, 1988), hope is inherently oriented towards the future (for denials, see, e.g., Prinz, 2004, and Deonna and Teroni, 2012).

Finally, emotions interact with our experience of time. Typically, they can *modify* purely temporal experiences, such as felt duration or the purported feeling of passage of time. For instance, survivors often recall the emotionally involving experience of a car crash as if time were "slowed down". This feature we call *temporal modification*.

Temporal structure, orientation, and modification are aspects of what we call the *temporal profile* of an emotion. In this paper, we will focus on the temporal orientation of fear,

given that it is a matter of some controversy, and we will say something about temporal modification too in the last part.

A longstanding idea—which arguably can be traced back to Aristotle (see, e.g., *Rhetoric* 2.5, 1382a21-25)—is that fear essentially involves an ‘anticipation’ of the future. While such an idea is quite popular among psychologists, who often consider fear as an ‘anticipatory,’ and thus future-oriented, emotion (see, e.g., Ortony et al., 1988; Loewenstein et al., 2001; Loewenstein and Lerner, 2003; Baumgartner et al., 2008), it is significantly less so among philosophers. Some (Davis, 1987, 1988; but see also Gordon, 1980, 1987) do agree that fear is *inherently future-oriented* in that, they maintain, it is always about something located in the future. This view, *futurism*, is not the only game in town, however. The existing literature suggests that (at least) two other views can be singled out: *presentism*¹ claims that fear is *inherently present-oriented* (Price, 2006); *indifferentism* claims that fear has *no* inherent temporal orientation, as it can be indifferently oriented towards the past, the present or the future (e.g., Roberts, 2003; Prinz, 2004).

Like futurists, we agree on the Aristotelian idea that fear is inherently future-oriented. However, we want to submit a new, quite different, account of such an inherent future-orientation—one that sets us apart not only from futurism itself, but also from any other view. Spelling out the details of these differences is part of the job of this paper, so we will do that in due course. For the moment, we just anticipate the following two points. First, while all positions (to the best of our knowledge) presuppose a *one-dimensional* (1D) understanding of fear’s temporal orientation, ours presupposes a *two-dimensional* (2D) understanding, as we will clarify in Section 3. This allows us to say that fear is inherently future-oriented, independently of its being about something in the present, in the future or perhaps even in the

¹ Of course, the label ‘presentism’ here is used to refer to something very different from the metaphysical view that only the present exists.

past—even though we will not explicitly discuss this possibility in this paper (see footnote 19). We can thus preserve and explain the insights of the other views, thereby offering a unitary picture as opposed to a mixed bag of contrasting explanatory projects (that is, presentism and one-dimensional futurism). Second, unlike the other positions, we attribute a prominent role to temporal experience in fear’s future-orientation. This allows us to explain certain phenomenological features of fear experiences and the connections between fear and motivation to act.

In Section 2, we begin with laying down the central assumptions we will make. In Section 3, by contrasting it with futurism and presentism, we present our 2D framework and argue that it offers the best way to account for fear’s temporal orientation. In Section 4, we refine the proposal and introduce the second crucial element of it: the role of the experience of passage of time. In Section 5, we wrap up and conclude the paper.

2 Some preliminary distinctions and assumptions

2.1 Distinctions

We begin with some distinctions that will help us individuate the phenomenon which we are targeting. Firstly, we distinguish *genuine* from *non-genuine* episodes of fear. Although we often use a fear vocabulary to report our own as well as other people’s mental attitudes, our ordinary speech does not always latch onto experiences of fear. For example, consider the following claims:

- (1) I am afraid that it will rain tomorrow
- (2) I am afraid that I will not make it for dinner.²

² Cases of this kind are discussed by Gordon (1980) and Davis (1987, 1988).

Both (1) and (2) can be true even though the speaker is not in the grip of fear. Rather, in most ordinary contexts, they will simply be reports about some state of uncertainty or worry concerning the future. By contrast, as we will understand it here, a genuine episode of fear is an experience with characteristic phenomenal and intentional features (see assumptions 1 to 4 below, in section 2.2).

Secondly, we often talk in terms of *types* of fear: fear of snakes, fear of heights, fear of losing one's job, etc. When we attribute fear types to persons, and say that someone is afraid of snakes, heights, etc., we are not necessarily talking about an occurrent *fear episode*. We can correctly say that someone is afraid of snakes even when she is nowhere near snakes, and in no sense "under the grip of fear" (she may, for instance, be sleeping). A full account of types of fear outstrips the scope of this paper. However, it seems clear that attribution of a type of fear is attribution of a disposition. This disposition may concern a large span of one's life—if not all of it (e.g., fear of snakes or fear of heights); or it can be more temporally delimited, as (say) when someone is afraid of losing their job given the economic crisis. Besides, the disposition may have been acquired in different ways. Fears of heights or snakes are probably based on acquisition mechanisms that are cognitively less demanding than those that ground one's fear of losing one's job.

Relatedly, both at the level of occurrent emotions and dispositional emotions, fear can involve cognitive states of different degrees: instinctive phobias seem to require very little cognitive involvement when compared to fear of being arrested by the police or of losing one's investments in an economic crisis. In this paper, we are interested only in those *occurrent* fear episodes that involve higher cognition *to an important degree*. Although vague, the idea is that phobia-induced panics, gut fears and the like do not necessarily qualify for the *phenomenology* in which we are interested here. What it is like to be startled by a spider unexpectedly dropping

on your arm if you are arachnophobe and what it is like to be afraid of a menacing person that is approaching you may have not much in common, after all.³ Roughly, we are interested in the phenomenology of what may be called *rationally evaluable fear episodes*. A fit of panic due to the view of a snake or a spider by someone who has ophidiophobia or arachnophobia does not seem to be assessable for appropriateness with respect to the representational states of the subject. There is clearly a sense in which if that state has been triggered by a plastic snake or a shadow, it is less appropriate than if it has been triggered by an actual animal. But the state of fear does not involve representations that are more or less correct in the relevant respect. In contrast, if I see a dog in front of me that growls and approaches me aggressively, and as a consequence I start feeling afraid, my state of fear may be more or less appropriate depending on whether the dog is actually dangerous or I misread her behaviour (maybe she was just happy to see me).

Thirdly, genuine cases of fear do not come all with the same overall intensity. Our working hypothesis will be that there is a whole spectrum of cases that ranges from *core* cases, which are phenomenally more intense and vivid, to *non-core* ones, whose phenomenology is somewhat impoverished.⁴

Fourthly, among the core cases of fear that are rationally evaluable we can distinguish between *basic* and *non-basic* cases. Episodes of basic fear are normally triggered by perceptual

³ Note that nothing of what we say in this paper entails that there is no common element between the two cases. Our account is neutral with respect to this last point. As a referee rightly pointed out, one may think that the difference between primitive and sophisticated cases of fear lies in how a certain distinctive phenomenological element arises, as for basic emotions and non-basic emotions in Prinz (2004).

⁴ Notice that even though there may be borderline cases between genuine and non-genuine episodes of fear, the distinction between core and non-core is meant to be internal to the genuine cases of fear, namely the ones that are phenomenally charged. Contrariwise, one might even doubt that cases like (1)-(2) need to be phenomenally conscious.

situations (e.g., I see a growling dog approaching me), involve phenomenologically salient bodily reactions (e.g., my heart starts to beat fast), and often lead to unintentional actions (e.g., I startle or freeze). Episodes of non-basic fear, instead, are usually elicited by circumstances that involve not just perception, but also higher order cognitive faculties (e.g., I recognise from a distance in a dark alley the silhouette of a person that I take to be dangerous). They are more often associated with actions that follow from intentional deliberations (e.g., I think of the best way to avoid crossing their way), although, *qua* core cases, they still typically involve phenomenologically salient bodily reactions (e.g., my heart pounds while I seek for a way out). Note that basic cases of rationally evaluable fear episodes may sometimes be hard to clearly differentiate from gut fears or phobia-induced panics. Again, the distinction is vague, but the idea is that basic episodes of fear are rationally evaluable and not *mere* consequences (or *mere* manifestations) of a disposition.⁵

2.2 Assumptions

With those distinctions in place, we want to put forward some basic assumptions that we will be making concerning genuine episodes of fear.

⁵ In other words, we acknowledge that core fear episodes may be manifestations of dispositional fears; nonetheless, they show a richer underlying mental structure, as it were: phobias and gut fears are manifestations of dispositions that are triggered by some mental episode (for instance, a perception or an hallucination); core fears require that the subject appraise something as dangerous, regardless of whether or not they involve the manifestation of some disposition (more on this in what follows). To elaborate on a previous example, not all occurrent episodes of fear due to the fact that I see and feel a spider running up my arms are the mere manifestation of a (specific) phobia of spiders. I might be afraid of this spider crawling now on me, but this does not mean that I have arachnophobia. I might simply be appraising the spider in the way that is relevant for me to have an occurrent experience of fear (more on this below).

1. *Phenomenal character*. As we will be understanding it here, fear is a kind of experience. As such, it has distinctive *phenomenal character*: there is something it is like to be in it. And as we have already pointed out, it is specifically the phenomenology of rationally evaluable fear episodes that interests us here.⁶

2. *Intentional object*. In addition to phenomenal character, fear has *intentionality*: when afraid, one is always afraid *of* something. Whatever one is afraid *of* is the *intentional object* of the episode of fear one is undergoing. For example, if I am afraid of a dog, the dog is the *intentional object* of the episode of fear I am undergoing. For the purposes of this paper, we will assume quite a broad notion of *intentional object* encompassing not only particular material objects, but also things like propositions, events, state of affairs, etc.⁷

3. *Formal object*. Like any other emotion, fear has a formal object (e.g., Kenny, 1963; de Sousa, 1987, 2013; Prinz, 2004). The formal object of an emotion-type is usually understood as the evaluative property to which that emotion-type is sensitive. Roughly, the idea is the

⁶ It is disputable whether emotional phenomenal character is proprietary, i.e., *sui generis*. For example, Kriegel (2015) explicitly argues that emotional phenomenal character is not *sui generis*, but derivative and delivered by a combination of cognitive, conative, algedonic, and proprioceptual phenomenal character. Prinz (2004) maintains that emotional phenomenal character is simply a case of proprioception. Minimally, we maintain that emotions have a *distinctive* phenomenal character. That is, any emotion-type has a phenomenal character that can be distinguished from both the phenomenal character of any other emotion-type and that of any other type of phenomenal state. Phenomenal character's being distinctive does not imply its being proprietary. For more on this distinction, see Pitt (2004).

⁷ We will not get into the debate on the nature of intentional objects (e.g., Crane, 2013). We need only a terminological caveat. When the intentional object is a proposition, e.g. the proposition that *p*, it is (usually) wrong to say that someone is afraid *of* (or fears) the proposition that *p* (after all, why should one be afraid of a theoretical construct?). Rather, we will say that when someone is afraid (or fears) that *p*, then the intentional object of her fear is the proposition that *p*.

following. Single episodes of an emotion-type can be intentionally directed upon different intentional objects. What unites episodes of the same emotion-type is the fact that they all involve the same evaluative appraisal of their intentional objects (Deonna and Teroni, 2012). That is, they all have the same *formal* object. Formal objects, then, are standardly taken to (i) individuate emotion-types, (ii) make them intelligible, and (iii) provide their appropriateness conditions (see, e.g., de Sousa, 1987; Scarantino and de Sousa, 2018).

A common assumption is that *dangerousness* is the formal object of *fear*—we will follow this assumption here.⁸ Thus, fear inherently involves an appraisal of dangerousness.⁹ When I am afraid of the dog, my experience is intentionally directed upon the dog, but also involves an appraisal of the dog as *dangerous*.¹⁰ Such an evaluative appraisal of the dog makes my emotional state intelligible and type-individuates it as an episode of fear. Dangerousness also contributes to fix the *appropriateness conditions* (the satisfaction conditions for emotions)

⁸ Properties like dangerousness, threatening-ness, menacing-ness (or others in the vicinity) are all good candidates to capture the formal object of fear. Given our purposes, all these properties are similar enough to be interchangeable. So, for the sake of convenience and simplicity, we will assume that the formal object of fear is dangerousness.

⁹ It is a matter of controversy how the evaluative property that constitutes the formal object of an emotion-type is to be understood. According to a standard view, it is a represented property and, as such, a component of content (e.g., Prinz, 2004; Tye, 2008; Mendelovici, 2013). According to a non-standard view, it is an intrinsic feature of the specific emotional attitude-type (e.g., Deonna and Teroni, 2012, 2015; Kriegel, 2015). As such, it is not *represented*, even though it can still play a crucial role in *representing*. We will be neutral on whether dangerousness is part of the content or of the attitude—and so on whether it is a represented property or just something that contributes to the representing.

¹⁰ Notice that when the intentional object is a proposition, what is appraised as dangerous is the state of affairs that the proposition represents—and possibly, perhaps indirectly, objects and events the proposition is about. E.g., if I am afraid that the dog is approaching me, I am appraising as dangerous the state of affairs consisting in the dog getting closer and possibly also the dog.

of an episode of fear. If I am afraid of the dog, my fear is *appropriate* if and only if that dog is dangerous. Once again, here we are not considering mental episodes that we may ordinarily call “fear” but do not have appropriateness conditions, such as phobia-induced reactions or gut fears.

4. *Motivation to act.* As with any other emotion, fear has motivational effects. It plays a great role in our process of forming intentions and in providing us with motivations to act. Clearly, this is connected to its having dangerousness as formal object. When I see the dog and start to be afraid of it, my fear elicits in me some immediate reactions.

3 The future-orientation of fear

As mentioned in Section 1, we believe that fear is inherently future-oriented. This section explains what this amounts to by contrasting our view with presentism and futurism. In particular, we will argue that, even though both rival views have some interesting insight to offer, none of them provides a satisfying account of fear’s temporal orientation, ultimately due to their presupposing a 1D understanding of fear’s temporal orientation. This motivates the adoption of a 2D framework. For reason of space we will not discuss indifferentism, but for few remarks (see footnote 19)—a proper comparison with that view is the topic for another paper.

3.1 Presentism: fear is inherently about the present

Price claims:

[T]he content of ... fearful appraisals will include a *temporal* element. ... [F]earful appraisals ... [represent] the *presence* of a threat [= danger]. (Price, 2006, 61, 63, our emphasis)

According to Price, this is what distinguishes fear from a mood of apprehension—which, on her view, is instead always directed upon some future danger. So, the idea is: it is a distinctive trait of fear, *qua* emotion-type, that it is always intentionally directed upon some danger located in the present. Hence, fear is inherently *present-oriented*.¹¹

The main problem of this proposal is that it seems at odds with what the psychological literature suggests, i.e., that fear encompasses some element of ‘anticipation’ of the future—which is also mirrored in some of our ordinary intuitions about fear. Such an anticipation remains completely neglected and mysterious, given presentism.¹² Consider Jack, a person who broke the law and is now afraid of his imminent arrest. Jack knows that the police are onto him (perhaps, they are already on their way to his hideout) and he has strong reasons to believe that he is going to be arrested unless something else happens. In this case, the dangerous event (the arrest) is not located in Jack’s present, but in his (near) future. The presentist therefore seems forced to say that Jack cannot really be afraid of his arrest. In particular, according to Price’s story, he should be in some state of apprehension because of his imminent arrest. We disagree: we think it is quite natural, and makes perfect sense, to describe Jack’s experience as an episode of fear rather than as a mere apprehension—and for good reasons.

First, it is quite plausible that, as he thinks about his imminent arrest, Jack experiences a quite vivid phenomenology—one that is more vivid than it would be, if he was in a state of

¹¹ According to Price (2006), the other distinctive trait of fear is that, *qua* emotion, it is an appraisal and not a signal. On this we agree with Price: *qua* emotion, fear involves an appraisal of an object, an event or a situation as dangerous

¹² One might be tempted to see cases like (1) and (2) above (see subsection 2.1) as immediate counterexamples to presentism. As we have already pointed out in Section 2, we do not take these to be genuine cases of fear.

apprehension. He is not simply more attentive and prone to react to his environment: he is likely to experience a pounding heart and rapid pulse, sweating, a dry mouth, etc.¹³

Second, Jack's experience does not seem to be about some generic or unspecified future danger or threat—as it would be, if he was in a mood of apprehension—, but has a *manifest* and *very specific* intentional object: his impending arrest.

Third, Jack is likely to be directly motivated to act—or might directly form some intention to act—in a certain way, based on his current experience. For example, he might want to try and escape or, even more desperately, he might decide to prepare to confront the police. Moods (such as apprehension) instead, as Price herself explicitly acknowledges, do not directly motivate us to act (see also Goldie, 2000 and Tappolet, 2018).

If this is correct, then there are at least some cases in which one is genuinely afraid of some danger that is not present but is likely to happen in the future. So, *pace* Price, fear has no privileged relation to the present, as it *can* be directed upon dangers that are not in the present, but in the future.¹⁴

¹³ These are bodily feelings that are part of the phenomenology of fear. This is why we are citing them here. However, we do not want to suggest that the phenomenal character of fear is exhausted or entirely constituted by bodily phenomenology

¹⁴ Perhaps, Price would reply that Jack's fear is oriented towards a present danger. After all, she might say, Jack's current situation is dangerous as long as it is now such that he might be arrested. We are grateful to an anonymous referee for pressing us on this point. Setting aside the worry that this might still cast Jack's state as a mood of apprehension as opposed to a case of fear, we want to highlight the following point. If Price redescribes the case along those lines, then we suspect that she is already granting the main point we are making—and her account comes very close to ours. For if she describes Jack's fear as a detection of the current danger that he might be arrested, then she must acknowledge that there is some future-element in the content of Jack's fear ('there is the danger *now* that I will be arrested'). But unlike hers, our account constitutively acknowledges this future-oriented element and explains how it relates to the present-oriented one by introducing the two-dimensional framework.

3.2 Futurism: Fear is inherently about the future

Some have gone further and have held something stronger. Davis (1987, 1988) maintains that fear is *always* about the future in that it ‘requires a [representation] of a *future* harm’ (Davis, 1988, 472, our emphasis).¹⁵ More precisely, a subject S is experientially afraid of an X *if and only if* the following two conditions are met:

(Condition 1) S represents that something will be harmed by X; and

(Condition 2) S undergoes an involuntary state of arousal and unhappiness *caused* by such a representation that something will be harmed by X.

On this account, an experience of fear is the result of the combination of two components:

(For more details, see section 3.3.) So, even if that was the best way to describe Jack’s case, our proposal seems to be the best way to account for it.

¹⁵ In fact, Davis says that ‘fear requires fear of a *future* harm.’ One might be a bit confused and worried that this analysis is circular. However, Davis distinguishes what he calls ‘propositional fear’ (see also Gordon, 1980) from experiential fear—i.e., what in this paper we are just calling ‘fear:’ for him, they are two different types of states, and this explains why his analysis is not circular. Propositional fear is something very close to the cases that we dismissed as non-genuine experiences of fear. More precisely, Davis (1987: 292) argues that the attributions of propositional attitudes of the form ‘S fears that *p*’ are equivalent (but for pragmatic nuances) to attributions of the form ‘S hopes that not-*p*,’ while an experience of fear (and its phenomenology) is not reducible to the emotional import of hope. To avoid confusions, we prefer not to stick to Davis’ own terminology, but use a slightly different one to report his view. Namely, instead of ‘propositional fear,’ we use the more generic term ‘representation’ (see condition 2 and component A, few lines below in the text) since what matters for our purposes is that propositional fear is a certain kind of (propositional) attitude that represents some future-tensed proposition concerning some harm. We keep using ‘fear’ as made clear in Section 2, i.e., just to refer to fear understood as a kind of experience.

- (A) A representation of a future harm, which provides the content of the experience and is thereby *entirely* responsible for its intentionality, and
- (B) A feeling of unhappiness and arousal, which provides the phenomenal character of the experience.

For example, here is what happens when Johnny is afraid of the bully (Davis' own example): Johnny is afraid *that* something (in this case, Johnny himself) *will be* harmed by the bully, and this elicits (causes) in him an involuntary state of arousal and unhappiness. Johnny is *not* afraid of the bully in the sense that his fear is intentionally directed upon the bully. On Davis' story, the link between Johnny's fear and the bully is *not* intentional, but merely causal: the bully is the distal cause of Johnny's fear, the proximal cause being the representation of the future harm. In other words, Johnny's experience is a *reaction* to the bully, but not a representation of him ('reactive' fear, in Davis' terminology). So, the bully is not the *intentional object* of Johnny's fear. The latter, instead, is intentionally directed upon a future state of affairs: something will be harmed by the bully. According to Davis, this generalises to every experience of fear: fear is always intentionally directed upon *a future-tensed state of affairs* concerning some harm. Hence the inherent *future-orientation*.

This view easily makes sense of the idea that fear 'anticipates' the future, because fear inherently involves the representation of some future harm. Various worries can be raised against Davis' approach.¹⁶ We will not consider them here. Instead, we would like to highlight

¹⁶ For example, one might find it problematic that Davis' story is a version of cognitivism—i.e., the view that emotions are (ultimately dependent on) cognitive states (see, e.g., Solomon, 1976; Gordon, 1987; Nussbaum, 2001). A second problem is that, on this account, emotions are necessarily propositional attitudes, which many have disputed recently (see, e.g., Montague, 2007, Grzankowski, 2012; for a recent propositionalist reply see Sinhababu, 2015). A third issue is that this account seems to take clearly a separatist stance with respect to the

a problem for any futurist view insofar as it switches the intentional focus of the experience from the presence of a danger to some future harm.

Consider the following statements:

- (3) Johnny is afraid of the bully nearby.
- (4) Johnny is afraid that something will be harmed by the bully.

(3) and (4) seem to report on two distinct intentional states. But how are we to make sense of this difference?

One natural thing to say is that in (3) Johnny represents a *present* danger—i.e., the bully himself; while in (4) he represents a *future* danger—i.e., a possible future state of affairs where something is harmed in some way by the bully, and *that* state of affairs (and not the nearby bully) is appraised as dangerous and is thus the object of Johnny's fear. Of course, one can even be afraid of both, and the two fears may be closely related (sustaining each other causally, for instance). However, this story is not available to Davis' futurism, as it forces us to take (3) and (4) to be the same mental state, even if they differ in their intentional structure. Contra Davis, then, these considerations suggest the following lesson: the object of one's fear might well be a future harm—like in (4); but this only means that such a future harm is the specific danger one represents, and *that* makes it the intentional object of the episode of fear one undergoes. So, even when it takes some future harm as its intentional object, fear remains an appraisal of dangerousness, and dangerousness is its formal object.

relation between phenomenal character and intentionality. That is, it takes them to be two separate/separable dimensions of experience, while nowadays many philosophers tend to be inseparatists and take intentionality and phenomenal character as necessarily connected (for more on this see, e.g., Horgan and Tienson, 2002).

Note that we do not deny that the property of *being dangerous* may ultimately be analysed in terms of the property of *being potentially harmful*, or that they may be indeed one and the same. Our claim is: even if a danger is always connected to some possible harm, the dangerous (that is, potentially harmful) thing is not to be identified with the harm it might produce, since the former is the cause of the latter and is (possibly) located at a different temporal location.¹⁷ And, we maintain, the danger—not the future harm it might cause—is the intentional object of fear, given that the evaluative property fear is sensitive to (its formal object) is dangerousness.

Thus, the problem for futurism is that there is no reason to think that dangers are always located in the future—in fact, they are often in the present. So, we seem to have no independent, strong reason to accept the futurist claim that fear always involves a representation of a future harm, insofar as dangerousness is its formal object.¹⁸ This casts doubts on the futurist way of cashing out the inherent future-orientation of fear: it is simply not clear how the claim that fear requires a representation of some future harm—which gives us the inherent future-orientation of fear—squares with the independently plausible and widely held assumption that

¹⁷ Back to our examples (3) and (4), if Johnny appraises the bully as dangerous, then the (presence of the) bully is the danger he represents. Even on the (plausible) assumption that this boils down to representing the bully as potentially harmful, the bully is not to be identified with the harm he might cause and occupies a different temporal location. Likewise, if Johnny appraises the state of affairs in which something will be harmed by the bully as dangerous, then *that* state of affairs is the danger he represents—regardless of whether or not that state of affairs itself contains a harm caused by something else. Insofar as it is appraised as dangerous, that future state of affairs is taken to have the ability to cause some further harm in the future, but it is not to be identified with the even more future harm it might cause (for more on this see also section 3.3, where we spell out our positive account).

¹⁸ Rejecting this assumption would be even more problematic, as it would amount to severing the strong and intimate connection between fear and dangerousness, which is instead widely acknowledged—or at the very least, it would amount to leave that connection mysterious and puzzling.

dangerousness is the formal object of fear—which spells out the intimate nature of fear as appraisal of danger.

Now, our point is not that a futurist cannot say that fear requires a representation of a future harm *and* its formal object is dangerousness (indeed, we will argue for a version of this thesis). Rather, the problem we are raising is that, given a futurist account *à la* Davis, it is mysterious and somewhat puzzling how one could hold fixed dangerousness as the formal object of fear, while cashing out the anticipatory element of fear in terms of a representation of some future harm. Solving this puzzle comes down to spelling out properly *the characteristic relation* between fear, the representation of dangerousness and the representation of some future harm. This is what we do next.

3.3 Our account: the two-dimensional view

3.3.1 The two dimensions of fear's temporal orientation

Let us go back to Johnny and the bully. Let us suppose that Johnny sees the bully loitering in the school's corridor and starts to be afraid of him. As we have seen, it is very plausible to say that Johnny is afraid of something happening in the present—namely, the fact that the bully is around, very close to Johnny, and has noticed him. So, this means that *this fact* is appraised as dangerous.

Let us now ask: Why is this fact appraised as dangerous? A natural answer is that it is appraised as dangerous *because* the bully is likely to cause Johnny some harm (e.g., he can be beaten up, or humiliated in front of his friends, by the bully) in the near future. In other words, Johnny's fear of the bully does seem to involve an awareness of the future harm that the bully might cause to him. More precisely, the appraisal of his present situation as dangerous *is grounded in* such an awareness (more on this in the next section). His situation would not be

appraised as dangerous, if it was not appreciated by him as something that is likely to bring about some harm *soon*—but has *not* yet.

In short, here is what happens in the case of Johnny and the bully. Johnny's fear involves:

- (i) An appraisal of the presence of the bully as dangerous, which is *not identical to* but is *grounded in* (ii), that is:
- (ii) An awareness of the possible harm that the bully is likely to cause in the (near) future.

The appraisal is *present*-oriented, as the bully's being around is located in the present; the awareness, instead, is *future*-oriented, as the harm is located in the future.

We think that these considerations generalise and typically apply to experiences of rationally evaluable fear. Our idea is that a distinction is to be drawn between two dimensions of the temporal orientation of fear.

The first has to do with the represented temporal location of the *intentional object* an episode of fear is intentionally directed upon. Importantly, in this sense, fear *can* be future-oriented. For it *can* be about objects that are located in the future as well as about objects that are located in the present, as we have seen in sections 3.1 and 3.2. (However, even though we are not arguing for this here, we think that the intentional object of core basic fear episodes is often in the present.)

The second dimension is related to fear's having dangerousness as its *formal object*. In this sense, that fear is future-oriented does *not* mean that one is afraid of some danger located in the future. Rather, it means that something is appraised *now* as dangerous *because* it is likely to cause some harm *in the future*.

So, the take-home lesson is the following. Price's and Davis' stories consider *only one* dimension of the temporal orientation of fear, namely, the one determined by the temporal location of its intentional object—and this is the main problem for their accounts. By contrast, we suggest that the temporal orientation of fear has two dimensions.

More generally, we propose an account of the temporal orientation of fear that articulates in the following three main points.

1. *Grounding claim.* Fear inherently involves an appraisal of the dangerousness of an X, the intentional object of the experience. Such an appraisal is *not* identical to but is *grounded in* the awareness of some harm that X might cause in the future.

2. *2D approach to fear's temporal orientation.* The first dimension is the *temporal topic* (or simply topic) of fear: this is given by the representation of the temporal location of the specific danger (intentional object) appraised in fear. In the core cases, it is typically in the present, but it can be in the future.¹⁹

The second dimension is the *temporal target* (or simply target)²⁰ and is given by the representation of the temporal location of the harm that the intentional object might cause. The

¹⁹ What about the past? In order to allow for core episodes of fear whose topic is in the past, we need to sophisticate our proposal a bit. We do that in another paper, where we also address explicitly the indifferentist option. In short, we argue that indifferentism is explanatorily less satisfactory than our two-dimensional proposal because it fails to explain why when the intentional object of fear is in the present or in the past, the emotional state of fear still involves an element of futurity relative to the temporal location of the intentional object.

²⁰ “Topic” and “target” are labels taken from Fine (2005), who uses them in a different framework for a phenomenon concerning tensed linguistic representations and their evaluation rather than emotions. Helm (2001) talks about the “target” and the “focus” of emotions. In his terminology, the *target* is the intentional object (that is, our *topic*), whereas the *focus* is “a background object having import that is related to the target in such a way as to make intelligible the target's having the evaluative property defined by the formal object” (Helm, 2009:

temporal target is *always* in the future because fear always involves an awareness of a future harm, inasmuch as it involves the attribution of dangerousness to an X (the former grounds the latter). In particular, in core cases of fear, it is in the future with respect to both (a) the time at which the dangerous object is located, and (b) the subject's present (*viz.*, the *deictic centre* of the fear episode).

3. *Inherent future-orientation.* Since it inherently involves an appraisal of dangerousness, which is grounded in the awareness of a future harm, fear *inherently targets* the future, independently of what its *topic* is. In *this* sense, it is *inherently* future-oriented.

Note that our analysis presupposes more than the alleged triviality that being potentially harmful is in some sense analytically equivalent to being dangerous. The three main points right above spell out a substantive view according to which occurrent fears have a *richer* temporal orientation than the one depicted by presentism and futurism. They are not merely oriented towards the location of the danger (e.g., the present) or merely oriented towards the location of the possible harm (e.g., the near future). Our main thesis is that fear is oriented towards *both* temporal locations. And even if the connection between the temporal location of the danger and that of the possible harm is an analytical (and all but trivial) matter, the connection between the two temporal orientations involved in the mental event in question is substantive and lies at the heart of the structure of fear.

3.3.2 A prediction

251). For instance, if I am afraid that an imminent danger can harm you, *you* are the focus of my fear. Although the notion of focus is very important to understand the evaluative aspect of emotion, it does not play a significant role in temporal orientation, and so we will let it out of the picture.

As just stated, our main claim is that the temporal orientation of genuine episodes of fear is always two dimensional in the sense of having a topic and a more future target. To see this point more vividly, let us consider again the two types of cases that we have seen so far.

Johnny and the bully. Johnny is in the school's corridor and is afraid of the (presence of the) bully. In this case, Johnny's appraisal of dangerousness and what is appraised as dangerous (the bully and his being around) are both located at t_1 . As we have seen, Johnny appraises the fact that the bully is present as dangerous because he envisages the harm that the bully might cause at $t_2 (> t_1)$.

Jack. Jack is afraid of his impending arrest. Jack's experience of fear takes place at t_1 and involves Jack's appraisal of the dangerousness of his own arrest that will happen at t_2 . Crucially, the ground of such an appraisal that characterises fear is the fact that Jack envisages a possible harm (e.g., lack of freedom) happening at $t_3 (> t_2)$ as a consequence of his arrest.

Our theory predicts that any mental episode lacking this articulated temporal orientation is *not* a genuine case of fear, *regardless* of how we ordinarily talk. Thereby, it offers a *criterion* to identify the genuine core cases of fear and tell them apart from the non-genuine ones. Consider, for example, the following statement:

(5) Mary fears that the fire will reach her house.

(5) is ambiguous between (at least) two readings. On one of these readings, Mary is undergoing some genuine fear-experience; on another, Mary hopes that the fire will not reach her house

(but in her occurrent experiential state there is no phenomenological ingredient particularly ‘coloured’ in terms of fear).

Our account provides a criterion to test whether Mary is undergoing a genuine experience of fear: if she experiences genuine fear, then she appraises as dangerous the future arrival of the fire to her house in virtue of an envisaged harm that would follow from it. For example, if (5) correctly states that Mary is undergoing a genuine experience of fear, then (i) Mary while being home envisages physical damages to her belongings and possibly herself and her family, and (ii) this leads to (grounds) an appraisal of the future arrival of the fire as dangerous. If she is not envisaging any possible future harm caused by the arrival of the fire—perhaps, she is very rich, the house is just a secondary one among the many she owns, and she is well prepared to leave her house in case it becomes clear that the fire brigade will not be able to stop it—then (5) is merely a report of what Mary hopes will not happen; but, for this report to be true, we do not need to suppose that Mary is genuinely afraid of the possible arrival of the fire.²¹

4 Fear and experiencing the passage of time

In this section, we look into an aspect of fear that has to do with temporal modification: the sense of imminence that characterises rationally evaluable fear episodes. This will allow us to spell out the connection between the two temporal foci that are constitutive of fear—the topic and the target—and to tell something about how fear can motivate timely action.

²¹ There may be some approximation in the correctness conditions, in the sense that it may be correct to attribute fear that the fire will reach the house to Mary at a time t even if at t she is not afraid, but she was some time before t and she is still in distress because of this.

Consider an example of a case of fear that is both core and basic (according to our initial characterisation, see section 1). You enter a room and see a huge dog growling and approaching you; you immediately start being very much afraid of the dog. Let us distinguish the following aspects of the situation described:

- (i) You are experiencing the dog perceptually (you see it, you hear it, maybe even smell it);
- (ii) You are appraising the dog as dangerous;
- (iii) You are envisaging a harm that the dog might cause to you in the future.

For our present purposes, we can see (i) as the *trigger* of the emotion. The trigger is the mental episode (a perception in the example, in line with the assumption that is a case of basic fear) that, together with other background conditions (such as certain dispositions in the subject), kicks off the fear episode. The details of how the perception of the dog initiates the fear episode depend on one's preferred theory of mental causation and are immaterial here.²² What is important is the temporal information associated with (i). The time at which (i) is occurring is the time relative to which the harm in (iii) is envisaged as future. More precisely, the time of occurrence of your perception of the dog plays the role of the deictic centre of a *tensed* representation of the possible harm caused by the dog. Thus, the deictic centre of the tensed content of (iii) is the time where the point of view of the subject who is experiencing fear is located. In line with the view that we have defended so far, in order for a possible harm to

²² Here we are mimicking Dretske's (1993) theory in which mental events trigger actions, but this is not essential to our point. We also stay neutral on whether (i) the perception of the dog and (ii) the evaluation of it as dangerous are two aspects of the same act or two connected acts (although we suggest they may be different, see the next note). On appraisal processes in emotions in general see Scherer et al. (2001).

ground a fear episode, the harm must be envisaged as future *from the point of view of the subject who experiences fear*.²³

Our hypothesis is that a crucial element of every core and *basic* episode of fear is that the possible harm is in your future *and* is approaching you, it gets closer to your present as time goes by. You are afraid of the dog and you appraise it as dangerous because the harm that it may cause *is about to happen*, it is ‘moving’ towards you. We will say that we represent the future harm *with a feeling of imminence*. Although the harm is typically envisaged as impending upon us, what such a feeling of imminence does not essentially carry precise metric information. Rather, it carries a dynamic element: the information that what is represented as future *unavoidably* will be present—unless, of course, we act in time. We construe this aspect of the phenomenology of basic fears as a form of temporal modification, specifically it is a modification of our feeling of the passage of time. Fear “colours” our experience of passage in such a way that the future is felt as imminent.²⁴

We have two main reasons for adding this element to our theory. One is *phenomenological*, a feeling of imminence is part of the overall phenomenology of any episode

²³ The way we understand tensed representations here is familiar to most philosophy of mind (e.g. Perry, 1986; Recanati, 2007): a representation that is perspectival and centred, and possesses a dynamic element. Note that we are neutral on whether *perceptual* content is tensed or not. Even ‘snapshot’-like perceptual content can provide deictic information (cf. Arstila, 2018 and Le Poidevin, 2007). This suggests that the perception that kicks off the fear episodes (seeing and hearing the dog) is a distinct mental event from the appraisal characteristic of fear (representing the dog as dangerous). Incidentally, acknowledging that the intentional object, unlike the trigger, does not need to be in the present suggests the same.

²⁴ Different accounts of the phenomenology of temporal passage are given by Paul (2010), Prosser (2016), Torrenco (2017), Sattig (2019). Insofar as our account requires only a connection between the phenomenology of fear and some aspect of our temporal phenomenology, it is compatible also with deflationist views of the experience of passage such as Hoerl (2014) or Miller et al (forthcoming).

of core and basic fear, and it seems adequate to include it in the temporal profile of what it is like to fear something. If our previous points about the target of fear are correct, the possible harm is represented from our perspective in time. In so far as our ordinary belief that time passes has an experiential basis in our ordinary phenomenology, fear modifies such a phenomenology by making us feel the envisaged future harm as impending *on us*.

The other reason is *explanatory*. The feeling of imminence helps explain why envisaging a possible future harm *is the ground* for evaluating its cause as dangerous. The harm is an actual *threat* to us in so much as time ‘drags’ it from the future towards us. If what is future never becomes present, the mere position in time of the possible harm, even if very close and represented from our perspective, would not give us reasons to be afraid. But fear modifies our experience of time in a way that makes *vivid* the temporal proximity of the possible harm. Our hypothesis is that representation of the possible harm in the future, since it is the phenomenally charged by an accompanying feeling of imminence, grounds the appraisal of dangerousness that is experienced with a fear phenomenology. We remain neutral here as to whether this relation of grounding has to be construed from a psychological point of view as a fast and unconscious inference, or in some other more direct way. What is important for our account is that it is *constitutive* of rationally evaluable fear episodes. No (non-defective) fear episode can fail to have a two-dimensional temporal structure characterised by this intimate link between its target and its topic.

Finally, the feeling of imminence allows us to connect our account of what constitutes fear with an account of how fear can motivate action. It is the fact that the harm is imminent, that it will be in our present, which justifies our acting in a *timely* manner. Now, the idea that time flows, and we cannot stop it, slow it down, or reverse it, surely plays a role in explaining why it is rational to behave timely in reaction to events in the close future. However, one may wonder what this has to do with the aim of explaining the connection between fear and action.

Emotions don't need an act of deliberation to lead to action. We agree with that. Still, considerations about justification are often useful to come up with hypotheses on what more basic psychological mechanisms we have developed. It is adaptive to develop a fast and reliable mechanism to ensure timely action, because it is reasonable to act timely when a possible harm is imminent. An organism that has adapted to an environment where it is likely to meet potential causes of imminent harm is likely to be more adaptive, if endowed with a mechanism that by default generates typically useful reactions, such as fleeing from the dangerous item.²⁵

If our considerations about rational justification of timely action are on the right track, then the mechanism is broadly reliable. And if we are also right to suggest that the mechanism is cognitively basic and fast, it is not implausible that its behaviour is connected with a distinctive phenomenology. We restrict our hypothesis to basic cases of fear, which are still of the rationally evaluable category. Fear episodes that are more remotely linked to occurring episodes of perception probably motivate action through more abstract and less fast mental

²⁵ Hoerl and McCormack (2018) distinguish a phylogenetically and ontogenetically more primitive cognitive system of temporal cognition, the *temporal updating system*, from the *temporal reasoning system*, which is the one developed by adult humans. Roughly, the temporal updating system does not require representations of things and event at temporal distances from the present, but only representation of objects and events as “potentially accessible, even though [they are] not in the animal’s sensory scope.” (p. 27). Clearly, our two-dimensional account requires the capacity to represent entities in time and the flow of time, and hence the resources of the temporal reasoning system. However, a system that only possesses the cognitive resources of the temporal update system can show behavioural evidence of fearing imminent threats, even without representing them as future. For instance, in presence of an environmentally appropriate trigger, the system could become more reactive if a determinate ‘potentially accessible’ object in the environment shows up, and the system could remain so alert for a certain period of time. A detailed account of how to adapt our hypothesis to temporal updating systems exceed the purpose of this paper.

processes. But, methodologically, it does not strike us as a bad idea to use core and basic situations to model a more general phenomenon.

5 Conclusion

In this paper we have discussed the temporal orientation of fear and have argued that even though a danger can be present or future, the future always matters to fear. According to our 2D account, any genuine experience of fear requires not only that we are afraid of some danger, but also that we envisage the future harmful consequences of the danger. Our view offers a criterion for identifying genuine cases of fear, thereby enabling the possibility of making (in principle testable) predictions about what counts as a genuine case of fear and what does not. Finally, it allows us to make hypotheses on the relations between fear, dangerousness, and the representation of some future harm that are more explanatory than the ones we find in presentism and futurism.

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