Emotion and Attention

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Abstract: This paper first demonstrates that recognition of the diversity of ways that emotional responses modulate ongoing attention generates what I call the *puzzle of emotional attention*, which turns on recognising that distinct emotions (e.g., fear, happiness, disgust, admiration etc.) have different attentional profiles. The puzzle concerns why this is the case, such that a solution consists in explaining why distinct emotions have the distinct attentional profiles they do. It then provides an account of the functional roles of different emotions, as tied to their evaluative themes, which explains and further elucidates the distinctive attentional profiles of different emotions, so solving the puzzle of emotional attention. Following that, it outlines how such attentional profiles are reflected in the character of emotional experience and its attentional phenomenology. The resulting picture is a more detailed account of the connections between emotion and attention than is currently on offer in the philosophical literature.

Introduction

Everyday experience, along with empirical research, suggests that emotion and attention are closely linked. Outside of experimental settings, in the 'natural environment', much of what captures our attention does so due to its emotional significance.[1] Consider the following example. I am in the park for a gentle stroll and then suddenly, out of nowhere, I see a barking Alsatian darting towards me with its teeth bared, and I am overcome with fear. Part of my fear-response involves an involuntary shift of attention to the emotionally salient object. However, this is not all. The emotional response further modulates the character and direction of ongoing attention once attention is so captured. As the dog gets closer, I 'fixate' on its movements, maintaining attention on it, and for as long as this dog remains a threat to me, it *consumes* my (ongoing) attention, resulting in a *narrowing* of my 'attentional gaze'.

Based on cases like the above, we can distinguish two fundamental respects in which emotion and attention interact. In the first instance, emotionally relevant stimuli passively *capture* attention. In paradigm cases this takes the form of what is described in the philosophical and psychological

[1] See Lang, Bradly and Cuthbert 1998.

literature as 'selective attention'.[2] This usually takes the form of a *diachronic attention shift,* involving 'overt' attention in the sense of the movement of one's sensory apparatus (usually a sense-organ) to achieve optimal orientation for gathering information about the 'selected' object (for example, movement of one's head such that the object stimulates the fovea, that is the region of the eye that yields the highest degree of visual acuity).[3] Following this attention capture, as characteristic of our emotional responses, there is a further effect. As we saw in the case of the fear-response above, the emotional state (with the ongoing perception of the emotional stimuli) further *modulates* the way we are attending to the object of our emotion, or as I will put it modulates *ongoing attention*.

My goal in this paper is first to show that recognition of the diversity of ways that emotional responses modulate ongoing attention generates what I call the *puzzle of emotional attention*, which turns on recognising that distinct emotions (e.g., fear, happiness, disgust, admiration, boredom etc.) have different attentional profiles. The puzzle concerns why this is the case, such that a solution consists in explaining why distinct emotions have the distinct attentional profiles they do (section 1). I then provide an account of the functional roles of different emotions, as tied to their evaluative themes, which explains and further elucidates the distinctive attentional profiles of different emotions (section 2). Following that, I outline how such attentional profiles are reflected in the character of emotional experience and its attentional phenomenology (section 3). The resulting picture is a more detailed account of the connections between emotion and attention than is currently on offer in the philosophical literature, and a detailed account of distinctive attentional profiles of different emotions.[4]

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[2] In the psychological literature, attention is defined as the *selection of an object for ongoing information processing*. For overviews of the emotion-attention link in psychology see Derryberry and Tucker (1994) and Vuilleumier *et al.* 2003. The psychological literature on emotion and attention is extensive; I will be drawing on it where relevant.

[3] This kind of *passive attention capture* in paradigm cases of emotion (and emotional experience) is plausibly what allows the subject to demonstratively identify the intentional object of their emotion. For more on the connection between attention and demonstrative reference, see Campbell (2002); Husserl (1973: sections 17-8); Wu 2011.

[4] For consonant work which discusses related phenomena, albeit which takes a slightly different tact (and is framed using different terminology) see Scarantino (2014: 158), on the kinds of 'cognitive biases' effected by emotion, and Morton (2013: 37ff) on what he calls the 'cognitive pressure' exerted by emotion. Although, the phenomena discussed by Scarantino (2014) and Morton (2013) have a broader and somewhat different focus

Before proceeding let me speak to the broader motivation for focusing on the role of specifically *attention* in emotion. As will become clear in what follows focusing on the distinctive attentional profiles of different emotions provides us with further criteria for individuating different types of emotions. Connected to this, the focus on attention allows us to highlight the distinct *functional roles* of emotions and groups of emotions, in connection with their 'evaluative themes', tying these together in what (I hope to show) is illuminating for understanding emotions and distinct emotion-types. Finally, detailing how the attentional profiles of emotion affect the character of emotional experience and its attentional phenomenology promises to shed further light on emotional phenomenology. These issues – the individuation of emotions as distinct emotion types and emotional phenomenology – represent central topics of ongoing debate and importance in philosophical and psychological work on emotion, and the study here promises to shed further light on these, and related issues, by exploring the role of attention in emotion.

1. Setting up the Puzzle

Returning to our distinctions in the introduction, we might be tempted to think that we can capture the way emotion affects attention by modelling all cases after fear-responses (or consonant negative emotions). This would run as follows: in any given emotional response, there is an initial instance of attention capture followed by a maintaining of attention of the emotional object, which involves a 'narrowing' of attentional focus. Insofar as this kind of view has it that the structure of attention in emotional response is 'capture' followed by 'consumption', we can call this (following Michael Brady) the 'capture-consumption' model.[5]

than the attentional effects discussed here, with Scarantino more concerned with detailing a range of cognitive processes that are 'hampered' by subjects in the grip of emotion, and Morton with the way emotions motivate certain patterns of thought (specifically imaginative representations). Additionally, neither provide a detailed account of distinctive attentional profiles of different emotions.

[5] See Brady 2013: Ch.1; 2014 (cf. Tappolet 2016: 33-35). For more on this initial attention capture in the emotional case, and its importance to broader issues in the philosophy of emotion, see Brady 2013 (who emphasises epistemic issues); Robinson 1995: 53-74; de Sousa 1987: 195; Elgin 2008: 43.

However, this view looks to be problematic. Reflection on everyday experience and a growing body of empirical research suggests that positive emotions, such as happiness and joy, have effects on ongoing attention (after initial attention capture) which are significantly different from the kind of consumption of attention that is paradigmatic of fear-responses (and perhaps consonant emotions). For example, happiness leads to a *widening* rather than a *narrowing* of attention, which in many cases shifts attentional focus away from the initial emotional stimuli.[6] Also, the character of ongoing attention in some appreciation emotions involves a 'zooming out' effect, focusing on global features of the object which contrasts with the 'zooming in' effect we see in the case of fear-responses. Emotion psychologist Nico Frijda describes the kinds of attentional modulations connected with the emotional-response of joy in similar terms: 'it is in part aimless, unasked-for readiness to engage in whatever interaction presents itself and in part readiness to engage in enjoyments'.[7] These descriptions are somewhat vague, but they nonetheless suggest that the 'capture-consumption' model involves an unwarranted generalisation from how attention works in the case of fear (and consonant negative emotions).

Perhaps then we might opt for a *valence-view* of the link between emotion and ongoing modulations of attention. We might say that we can explain the different effects that different emotions have on ongoing attention, in terms of their being either 'positive' or 'negative' emotions, where this correlates with the contrast between 'widening' (positive) vs 'narrowing' (negative) of ongoing attention.[8] It is a further question on what we base such valence classifications, such that emotional-responses like *fear, anger, hatred,* and *disgust* turn out to be 'negative' whereas *joy, happiness, elation,* and *admiration* turn out to be 'positive'. Plausible suggestions would be in terms of contrasting phenomenal qualities such that in some sense positive emotions 'feel good' whereas negative emotions 'feel bad', or perhaps we

[6] See Fredrickson 1998: Fredrickson and Branigan 2005; Derryberry and Tucker 1994.

[7] Frijda 1986: 89. Frijda (1986; 2007) also talks of the 'free activation' involved in positive emotions. I provide more detailed attentional profiles for a range of emotions in section 2.

[8] See Ford *et al.* for a challenge to the valence-view in affective psychology. See Brady 2014: 65-69 for discussion.

might explain these valence classifications in terms of the kinds of *valent* evaluative properties that such emotions are often claimed to be related to or represent.[9]

However, Brady, in the course of defending the thesis that emotions have epistemic value by facilitating more accurate representations of their objects, as a thesis dependant on a version of the 'capture-consumption' model where there is a necessary *persistence of attentional focus* on the relevant object (putatively allowing for yet more accurate representation), responds to the above challenge of 'positive emotions'.[10] Brady accepts that the empirical evidence – and we might add reflection of everyday experience – shows that different emotions (principally positive and negative) have the above-documented differing effects on ongoing attention. However, he argues that once we distinguish between *constitutive attention*, as the relevant attention constitutive of the emotional episode, which is attention directed primarily (if not exclusively) at or concerned with the *emotional object or event itself*, and *consequential attention*, as 'downstream' forms of attention and attentional focus which while generated by the emotional experience focus on things other than the original 'emotion eliciting object', then the capture-consumption model is no longer under threat. For example, the kinds of *widening* of attentional focus documented in cases of happiness might be said to be forms of *consequential attention*, which is compatible with the attention *constitutive* of happiness involving persistence of attentional focus.

Whether this is a plausible thing to say about the specific attentional profile of happiness, and whether it has the means to capture the subtlety of the way different emotions affect attention – see section 2.2 for a somewhat different picture – we might ask the following question. Are there forms of *ongoing attention* in certain emotions which are plausibly constitutive in Brady's sense – that is not merely being the downstream focusing on objects strictly 'other' than the of the original emotional event – but nonetheless don't involve the *persistence of attentional focus* which is the hallmark of the 'capture-and-consumption' model? Arguably there are at least two key examples. First consider disgust: disgust, which is standardly classified as a negative emotional-response – and so one which

[9] The idea that emotions, in particular emotional experiences, represent evaluative properties is a recurrent claim in contemporary philosophy of emotion, which runs through both Judgementalism (Nussbaum 2001; Solomon 1993) and Perceptualism (see Tappolet 2016; Poellner 2016), cf. Deonna and Teroni 2015.

[10] See Brady 2014.

we might expect to involve the kind of narrowing of attentional focus and persistence of focus – typically has an effect on the ongoing modulation of attention which involves *turning away* from the 'offensive stimuli', such that there is no narrowing of attentional focus on the object of the emotional-response, but rather a modulation of attention which seems geared towards *not* keeping attention fixed on the object or event that elicited it. The more precise attentional profile of disgust will concern us latter, but it exhibits a 'constitutive' attentional profile, that doesn't fit the capture-consumption model. Alternatively, consider the way boredom exhibits 'attentional drift', in which attention is not widened *per se*, but rather disperses or perhaps it just 'lost' (rather than say 'consequentially' focusing on some other object). Indeed, the feeling of a *loss or scattering of attention* characteristic of certain forms of boredom points to an interesting attentional phenomenon, which is sufficiently distinctive of that type of emotion, and which the capture-consumption looks too simplistic to capture.

Should we, in the light of these issues, default to the valence-view mooted above rather than 'capture-consumption' model then? Arguably not, since it also faces several significant counter-examples, given what it predicts about how attention is modulated in emotion, and also turns out to be too restrictive. Let me explain these problems in turn. If the valence-view were correct, then it should be the case that we can read off the effects on attention an emotion will have simply by knowing whether it is a positive or negative type. Simply: any positive emotion will involve a 'widening' of attention, whereas any negative emotion will involve a 'narrowing' of attention (or at least this would be the fundamental distinction). However, reflection on a wider range of different types of emotions suggests that the effects that they have on ongoing attention does not fit the 'widening' vs 'narrowing' model. As we saw above disgust and boredom don't neatly fit the bipartite model of the valence view, and we might also think appreciation emotions, and their 'zooming out' effects, aren't obviously a case of 'widening' attention in the same supposed way as happiness. Simply put: reflection on a range of cases suggests that the ongoing modulations of attention in emotion are sufficiently varied and distinctive across emotion-types such that the valence-view is going to be too simplistic to capture the relevant fine-grained differences.

If the above reflections on the shortcomings of the 'capture-consumption' model and 'valence-view' are right, then there is an interesting upshot, namely the hypothesis that distinct emotions (or

at least distinct 'family groupings' of emotion) involve what I will call distinct *attentional profiles*.[11] An attentional profile can be initially characterised as the effect the relevant emotion has on the modulation of ongoing attention, in terms of the character, form or direction attention takes after initial attentional capture (I give a more precise characterisation in section 2). Something in the vicinity of this idea arguably finds reflection in de Sousa's claim that emotions are 'species of determinate patterns salience among objects of attention, lines of inquiry and inferential strategies'.[12] For my purposes here, I would revise this claim by saying that different emotions *involve* different determinate patterns of 'salience' (where salience is another word for *attention* – to say something is 'salient' for me is to say it currently, in some respect or other, occupies my attention). Part of my project here is to detail those *determinate patterns of salience*, which plausibly differ for different emotions – to do that is to specify distinct *attentional profiles* for the different emotions.

However, given we accept this as a *working hypothesis* – that distinct emotions involve distinct *attentional profiles* - there arises a puzzle which we can frame as follows: what it is about specific emotions in general that leads them to have the distinct attentional profiles that they do.[13] Why, given that emotions form a unified class of mental states (arguably distinct from belief, desire, perception, imagination etc.), is it that we see such disparate attentional profiles for different emotions. A solution

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[11] This idea of *distinct attentional profiles for distinct emotions* is gestured at in Faucher and Tappolet 2002: 106 (and Fredrickson 1998: 305), but the former authors only consider fear (although, Tappolet 2016 explicitly mentions that different emotions come with different attentional profiles). NB: a *family group* of emotion is a set of emotions that are (broadly) thought to be of a similar kind, for example, *fear, anxiety, panic* form one family grouping, *anger, offensive, indignation* would be another. Plausibly what grounds these classifications are that the relevant emotions in the group speak to similar (if not identical) *evaluative themes* (e.g., the threatening or fearsome, the offensive or rude etc.), see section 2 for more discussion.

[12] de Sousa 1987: 196.

[13] Brady 2014: 64, comes close to recognising this problem, but frames it too narrowly, in terms of 'why positive affects broadens, and negative affect narrows, attentional focus'. Brady's own explanation to this problem appeals to the *content of the evaluations* partly constitutive of positive and negative emotional experience (evaluating something as *good* or *bad*). Drawing on some interesting material on intrinsic value from Robert Nozick, Brady (2014: 64-69) suggests that considerations relating to 'seeing the world' as *unified, integrated and coherent* in positive emotion, and as lacking those features in negative emotion, explain the question he poses concerning the relation between affect and attention. A detailed treatment of this suggestion will have to be saved for a separate occasion, although it is worth noting that if discrete emotion-types have discrete attentional profiles then one might be sceptical that their attentional profiles can be explained in this bipartite fashion.

to this puzzle should offer a convincing explanation of why different emotions have the distinct attentional profiles they do, and in doing so it should also provide significantly more detail than is currently on offer in theory of emotion on the precise character of these different attentional profiles.

Before providing my solution to the puzzle of emotional attention, I note important caveats and qualifications about the account that will follow. First, my focus will be on the emotion-attention connection (and the attentional profiles of different emotions) of *non-pathological subjects* undergoing paradigmatic emotions. There may be pathological cases in which these connections and the relevant attentional profiles are 'skewed' or 'abnormal' (e.g., a form of fixation in disgust), but these won't be my focus here.[14] Second, the account in section 2 will be reasonably theory-neutral concerning contemporary theories of emotion, in that it does not require the adoption of any particular theory of what emotions are. Third, my focus throughout will be on the link between emotion and attention *qua* occurrent emotional episodes, as temporally extended, but typically short-lived states we are apt to describe as emotional responses (rather than dispositions to undergo emotions) where the paradigm cases are *emotional experiences* which involve a distinctive *what-it-is-likeness* (and so with respect to which phenomenological descriptions are helpful in accounting for the relevant links between emotion and attention).

Finally, as should be evident from the discussion thus far, my interest is in the way ongoing attention is modulated in emotional responses as concerning the *objects* or *stimuli* of the emotional response. Put otherwise, the focus is on how attention modulates our ongoing relation to the *objects of our emotions*.[15] Note, one might pause here to question whether in those cases noted in which ongoing attentional focus is *broadened or widened,* say in the positive emotion of happiness, it really makes sense to talk of an *ongoing relation to the object of emotion*? Arguably it does, since part of the way ongoing attention is modulated *in happiness* might be to allow attention to only *somewhat* 'wander away' from the original emotional object, always keeping the original emotional object partially 'in view' (see section 2.2 for more on the attentional profile of happiness). In any case, the attentional

[14] For an overview of psychological work on the emotion-attention link with a particular focus of psychopathology, see Yiend 2010.

[15] For more general discussion of the intentionality of emotion see Teroni 2007; [Redacted]

phenomena and ongoing attentional modulations I will be concerned with are not merely the 'narrow case', exemplified in the fear-response case, of ongoing *selective attention* or 'fixation', but will be seen to cover range of distinctive attentional phenomena and modulations, such as *mental turning away, vigilance, mental drift, dwelling, ruminating* and others. It this context it also worth noting that my focus will principally be on detailing *actual changes* in the character and direction of ongoing attention in emotional episodes, as manifest in the emotional episodes themselves, rather than *mere dispositions* to such changes (this will be clear in the foregoing analysis; see section 2.2).[16]

Finally, I will not be concerned with issues surrounding the way in which one might attend to one's emotion itself (or indeed 'one's feelings'), as an introspective or reflective form of *attention to emotion*. There are interesting questions about what might precipitate the kinds of (usually reflective) attention shifts from the object of one's emotion to one's own experiences and feelings (and the precise form and character that those episodes of attending take), but such attention shifts are downstream of the more basic topic I am concerned with here, namely the relevant attentional profiles constitutive of distinct emotional episodes and an explanation thereof.[17]

2. Solving the Puzzle: Function, Evaluative Theme and Attentional Profile

2.1 Functional Role and Evaluative Theme

I begin this section by introducing a piece of theory about emotions that runs through both philosophical and psychological research, namely the idea that different emotions are importantly tied to what are referred to as their *core relational themes* (CRT).[18] I want to focus here on three basic cases of emotional responses:

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[16] 'Vigilance' as key to the attentional profile of 'anxiety-emotions' provides an interesting problem case here – see 2.2 for discussion.

[17] For discussion of this different sense in which attention, and the focus of attention, can vary in emotion and emotional experience see Frijda 2007; Marcel and Lambie 2002.

[18] See Lazarus 1991; Frijda 1992: 357. My characterisations of the core relational themes of fear, happiness and disgust reflect those offered in Lazarus 1991. A similar idea is found in the idea that emotions are in some sense connected to their *formal objects* (as evaluative properties which individuate or discriminate them); for discussion see Kenny 1963 and Teroni 2007.

Fear CRT: facing an immediate, concrete and overwhelming physical danger

Happiness CRT: Making reasonable progress towards the realisation of a goal (or the complete realisation of said goal)

Disgust CRT: Taking in or being too close to a contaminating object or idea (metaphorically speaking)

The idea with these CRTs (or 'evaluative themes' as I will call them) is not that the emotions in question should necessarily be taken as involving explicit conscious representations of these themes in precisely these terms, where the CRTs so stated would necessarily figure as the *conscious intentional contents* of the relevant emotions. Rather for the purposes of our discussion, we can take these evaluative themes to pick out *paradigm scenarios* or *basic situations* that the relevant emotions discriminate *in some way or other*.[19] Although rarely noted in the literature, the evaluative themes of emotions do not just have implications for attention, but when combined with what I call a 'functional role' for the given emotion, suggest what modulations of ongoing attention would be *appropriate or best suited* for satisfying or realising the relevant functional role of the emotion as connected to these evaluative themes.

First though, let me say something on the idea of 'function' or the 'functional role' of emotion. There is a strong sense of the function of emotion, which links it to claims concerning biological function (tied to evolution through a process of natural selection). Given this strong sense of the function of emotion, one might offer a general hypothesis concerning the link between emotion and attention; indeed, Ronald de Sousa claims that the biological function of emotion is to direct the agent's attention.[20] The sense of the 'functional role' of emotion as I will be understanding it, however, is not tied to either (a) a strong biological sense of function or (b) the claim that it is the function of emotion (in any sense) to direct the agent's attention. Rather, I want to operate with a

[19] On paradigm scenarios for emotions, see de Sousa 1987: 181-4.

[20] See de Sousa 1987: 195-6 (see also Damasio 1994: 197-8)

less committal, *weaker* notion of the 'functional role' of an emotion, as merely *something for which the emotion is useful*. Moreover, in our context, I am interested in the claim that the relevant functional roles implicate or suggest what modulations of ongoing attention might best serve the relevant function role (understood in this way).[21]

Let me now detail the functional roles of our three candidate emotions, which tie those functional roles to the evaluative themes for those emotions as specified above:

Functional role of fear: not just to detect that we are facing an immediate, concrete, physical danger, but to get the subject to avoid physical harm.[22]

Functional role of happiness: not just to detect that we are making reasonable progress towards the realisation of a goal, or have realised said goal, but to promote further such achievements and the discovery of further potential sources of value.

Functional role of disgust: not just to detect that we are close or too close to a 'contaminant', but to steer the subject away from such contaminants.[23]

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[21] It is plausible that the initial capture of attention in emotional responses, which, as Brady puts it, 'enable us to quickly and efficiently notice things that are important for us to notice', is at least *part* of the function of emotion in this weaker sense (see Brady 2013: fn.16: 93). My interest, however, is in the functional role of emotions as tied to the ongoing modulations of attention.

[22] One might worry that this specification of the functional role of fear is too narrow, and would not capture cases where there is no obvious physical harm, for example, being afraid of an impending and immediate *psychological threat* or *psychological harm*. Note though, the functional role is tied to the CRT for that emotion-type (in the fear case: facing an immediate, concrete and overwhelming physical danger). Perhaps then if one felt the functional role so specified in the text were too narrow we should *broaden* the CRT to something like *facing an immediate, concrete and overwhelming physical or psychological danger/threat*, and then also broaden the functional role in the same respect.

[23] NB: In section 2.2 I discuss examples of emotions with functional roles, tied to evaluative themes, that are either not or not essentially tied to *bodily* actions or *bodily* action tendencies (such as boredom, aesthetic emotions, and sadness), although the relevant modification of ongoing attention in those cases which are in service of the relevant (putatively non-bodily actional) functional roles can framed as forms of *mental action* (sufficiently broadly conceived). See discussion in Scarantino 2014 and Brady 2014: 62, of potential problems

Intuitions may clash over the precise best way to formulate these functional roles (as tied to the relevant evaluative themes). However, the characterisations offered are *prima facie* plausible as working definitions. It should also be noted that cognate proposals have been made by a range of authors, including, for example, Scarantino, who argues that emotions possess an informational-cum-motivational function,[24] and Nico Frijda's idea of emotions as 'action tendencies',[25] with Scarantino following Frijda in claiming that emotions have what he calls *relational goals*. Indeed, one might prefer to talk of the 'relational goals' of emotions rather than their 'functional roles' (although see above on my 'weak' notion of function) – and if someone prefers that terminology that is fine.

So understood, I want to argue that the functional roles of these emotions have implications for what specific modulations of ongoing attention would be 'appropriate' as best serving the satisfaction or realisation of that functional role, that is if that functional role (as specifying, even if in relatively broad terms, an emotion-specific aim or goal) is going to have the best chance of being achieved (e.g., actually avoiding harm, finding further sources of value, steering away from contaminants).

However, let me emphasise an important point about the account that is being developed to avoid confusion. The claim is not that the functional role of a given emotion *is itself* to modulate ongoing attention in an (emotion-specific) 'appropriate' way. Rather the idea, to emphasise, is that given a specified functional role for an emotion (as tied to a specific evaluative theme), a certain modulation of attention 'suggests itself' as an appropriate way of realising that function. For example, the functional role of fear, so defined above, is not to modulate attention in a specific way. Rather the functional role of fear is to *detect danger and avoid physical harm*. Given this functional role, the claim is that a specific modulation of ongoing attention emerges as the best or appropriate way of realising that function (or so I argue in what follows).

If this picture is along the right lines, then we can give a more precise definition of an attentional profile for an emotion:

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linking functional roles to forms of action and action tendencies, given emotions that seem in relevant respects less related to action or action-tendencies.

[24] Scarantino 2014: 178.

[25] Frijda 1986; 2007.

APforEmotion def: An attentional profile for any given emotion is the specific modulations of ongoing attention that are appropriate such as to realise the functional role of the emotion.[26]

Before giving detailed examples of attentional profiles for specific emotions (section 2.2), I want to consider an important objection to the account thus far, which motivates an amendment to the above definition.

It might be said that no modulation of ongoing attention, however supposedly 'appropriate' to the functional role of the relevant emotion, is going to *in and of itself* satisfy or realise that functional role. Take the case of fear-responses. As is well-documented in the psychological literature on the link between fear-responses and attention, the relevant attentive modification we typically get involves a narrowing of focus on the emotional stimuli (after initial attention capture). The label usually given to the attentional profile of fear-responses is *object-fixation*.[27] Now there is much more to be said about the attentional profile of fear, but off-the-bat it is fair to say that object-fixation *in and of itself* is not going to realise a significant feature of the functional role of fear (as specified above), namely that of *avoiding immediate physical harm*. This is correct, so we need to be clearer about what the account being developed claims. What we want to say is that the appropriate modulations of ongoing attention (for a specific emotion) are *necessary* but not sufficient for the realisation or satisfaction of the functional role. Put otherwise, the modifications of ongoing attention should be strictly said to be *in the service* of the relevant functional role.

Let me explain how this plays out in the case of fear-responses. If part of the functional role of fear is getting the subject to avoid immediate physical harm, then it seems right to say that certain (context-specific) bodily movements will need to be enacted or recruited if the subject is going to avoid the relevant physical danger, say by moving to a different spatial location, or running in a specific direction etc. Yet, and here is the critical point for the account on offer, without the narrowing focus of ongoing attention in fear ('object fixation'), the subject would not 'know' which

[26] NB: this could be applied to family groupings of emotions.

[27] See Faucher and Tappolet 2002 for a comprehensive account.

bodily movements or action strategies are going to serve them as standing the best chance of avoiding physical harm. Applied to a more concrete case, a form of fixated narrow focus on the aggressive approaching dog is going to provide the fearful subject with the necessary (constantly updating) perceptual information about the emotional stimuli, which will allow them to move and respond in a way which will afford them the best chance of avoiding immediate physical harm.[28]

Now, on this issue, we might wonder whether fear-responses are paradigmatic, and so whether we should generalise from what seems true in the case of fear to other cases of emotional response and their attentional profiles. For example, we might look to emotional responses which do not obviously involve any action-ready bodily component, or do not obviously require bodily movements (or indeed their preparation or potentiation) to support the realisation of their functional roles. If such cases exist, then we might be tempted to hold onto a stronger claim for some attentional profiles, namely that the relevant ongoing attentive modifications could *satisfy or realise*, rather than being merely in the service of, the relevant functional role. Take the case of happiness: If part of the functional role of happiness is to *promote further achievements and the discovery of further potential sources of value*, one might think this could be realised solely (as a case of mental action) by allowing one's attention to be widened (as broadly the attentional profile of happiness), rather than moving one's body or preparing to move one's body. However, since this stronger view depends on more or less controversial claims concerning the relation between emotion, action and the body, for our purposes we can adopt the *weaker* claim, namely that in all cases of emotion, the relevant modulations of ongoing attention are *necessary* (albeit arguably not sufficient) for achieving the relevant functional

[28] NB: this kind of account has the added benefit that it needn't commit, as would be implausible in any case, to their being *one definite appropriate bodily-action or bodily-potentiation* for, say fear (see Deonna and Teroni 2015). If fear might motivate 'fight' or 'flight', and one's body might 'potentiate' in a different way depending on context-specific aspects of the fearful situation, it is still nonetheless highly plausible that a subject's 'preparation' to act in the appropriate way is informed by the relevant ongoing attentional modifications, as a kind of 'object-fixation'. Further to this, it is my continued 'fixation' on the object or emotional stimuli (in particular its movements), which informs the precise way my body needs to 'move' or be 'ready to move' to avoid physical harm.

role, such that the attentional modifications are (as I will put it in what follows) *in the service* of the relevant functional role.[29]

In light of the above discussion, we can offer a revised definition of attentional profiles:

APforEmotion def: An attentional profile for any given emotion is the specific modulations of ongoing attention that are appropriate such as to support the realisation/satisfaction of the functional role of the emotion.

With this definition in hand, in the following sub-section I test the theory by generating attentional profiles for our candidate emotions.

2.2 Testing the theory: generating attentional profiles

Let me first take the case of disgust. The functional role of disgust-responses is – as specified in the previous section – to alert us to and steer us away from *contaminants* in our immediate environment. Indeed, the CRT of disgust speaks to this, with the idea of 'too close' being central.[30] Now, what modulations of ongoing attention would be appropriate such as to support the realisation or

[29] Put in the language of Scarantino's (2014; 2015) view of emotions as 'action control systems', which are designed to prioritize the pursuit of certain goals over others, the relevant attentional modulations might be thought of as one way of providing significantly more detail, for different emotion types, concerning how the action control systems *operate* and 'seek to realise' their *relational goals* or functional roles, at least *qua* attention. Although as noted in the text, *more* than the relevant modulation of attention is required to satisfy the relevant functional role, not least the recruitment of certain kinds of motor intentionality. In any case, it should be clear that there is much here that could be taken up by someone partial to Scarantino's motivational theory of emotion.

[30] We might further say that disgust responses *evolved* to serve this function. As such, the relevant functional role would be construed as a biological functional role. While this seems plausible, I want to emphasise (again) that I do not here commit to the idea that the functional roles of all emotions are tied to evolutionary functions, which seems false or at least questionable for emotions like aesthetic admiration, amusement, and a range of other cases (although doubtless speculative evolutionary accounts of their biological function could be given). After all, some of the functional roles of emotions, and the evaluative themes they are tied to, might owe more to cultural-historical developments (e.g., romantic love, amorous feeling, certain kinds of guilt and shame; see de Sousa 1987 and Goldie 2000: ch.4 for discussion)

satisfaction of this functional role, such that the subject of the disgust-response stands the best chance of *avoiding contaminants*. It seems natural to say that what would be appropriate would be a modulation of ongoing attention that served to direct the subject's sensory apparatus *away from the offensive stimuli* – and that would be definitive of the attentional profile of disgust-responses. And that is precisely what empirical studies have found in the idea of so-called 'cognitive avoidance'. As affective scientists Kenneth Hugdahl and Kjell Morten Stormark put it: 'there seems to be a mechanism of rapid disengagement of attention from the cue when it is aversive, moving attention to a different spatial location…The key aspect of the conception of cognitive avoidance is that attention is rapidly shifted, or moved from one spatial location to another'.[31] So the attentional profile of disgust, centred around the concepts of 'cognitive avoidance and rapid disengagement', clearly serves the functional role of disgust.

There will naturally be a contrast between cases of disgust-responses in which the relevant emotional-stimuli are sense-perceptually present (e.g., *seeing* a rotten corpse, *smelling* foul meat) compared with cases in which the relevant object is not sense-perceptually present (e.g., an intrusive thought or mental image one finds disgusting, say a thought about sleeping with a repulsive individual, or a disgusting mental image of a maimed body). In the latter cases, the relevant 'cognitive avoidance and rapid disengagement', would not involve any *literal* turning away of one's sensory apparatus (averting one's gaze) but could be construed along the lines of a *mental turning away* (a rapid redirection of one's mental regard) without any sense-perceptual or (obviously) spatial dimensions.[32]

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[31] Hugdahl and Stormark 2003: 289.

[32] Arguably this specification of the attentional profile of disgust (as connected to it purported functional role) won't fit those cases in which certain subjects seems to take a certain degree of *delight* in disgusting things (a form of 'delight' which might involve a kind of 'fixation' on the object). But note in those cases it isn't plausible that the subjects experience paradigmatic *disgust responses* anyway. Precisely how to theorize such cases is difficult: perhaps they involve (i) *ambivalent* emotional responses, including not only disgust but also affective *interest* (and in some cases certain forms of arousal); or (ii) a disgust response followed by (for whatever reason) a form of 'delight' which is not directed at the disgusting object *per se* but by the *very fact that one is disgusted* (so one's emotional response itself); or (iii) *sequential emotional responses* in which one is first disgusted by X, and then (for whatever reason), takes interest in it (or vice versa). Sufficed it to say such cases are not the paradigm of disgust responses and in any case, we seem to have a number of options for characterizing them which don't entail denying any of the claims about paradigmatic disgust and its attentional profile made in the text.

Let's now consider the case of fear-responses in more detail. We have already seen that a kind of 'object-fixation' is central to the attentional profile of fear, and moreover that such narrowing of attentional focus serves the functional role of fear, part of which is getting the subject to avoid (immediate) physical danger. Luc Faucher and Christine Tappolet capture this: 'after the initial shifting [that is initial attention capture], the attention will be maintained on the object of one's fear as long as the emotion is experienced, and typically as long as one is being threatened by what one fears'.[33] As previously noted, this kind of object-fixation, involving a narrowing of focus, provides a continually updating source of perceptual information about (amongst other things) the spatial location and movement of the threatening object, which is clearly going to be relevant as supporting the best course of action to take to avoid physical harm. As in the disgust-case, it is instructive to note that in cases where the relevant 'fearful object' is not given in a sense-perceptual modality, but rather on the basis of occurrent thought or judgement, or perhaps various forms of imagination, we still get the same modification of ongoing attention. Take a case in which a fear-response is precipitated by a mental image of a ghoulish face at one's window. While a range of relevant felt bodily action-readiness (and connected motivation) might be absent, my attention, one so captured by this visualisation, will remain fixated on it, such that it 'occupies my mind' typically at the expense of all other (possible) images and thoughts.

It is also worth noting in this context that one might chart out a distinct attentional profile for anxiety or the 'anxiety-group' of emotions which are in certain respects related to but different from the fear case. Note, we are concerned here with 'object-directed' anxiety, rather than a *generalised mood* of anxiety.[34] Although contentious, one might think that the functional role of anxiety is more

[33] Faucher and Tappolet 2002: 128.

[34] Note, some may prefer to think of at least some cases of object-directed anxiety as closer to cases of fear (and undoubtedly the emotion terms 'fear' and 'anxiety' are used in ways which often appear interchangeable). However, in a stricter sense I would prefer to maintain that fear *proper* concerns actual threat/harm, whereas anxiety proper concern the *possibility* of threat/harm. Let me also note that while my focus here has been on the attentional profiles of *emotions*, that it seems plausible that the connected *mood-types* to a given emotion (or family group of emotions) will have an attentional profile that correlates, more or less, with that emotion. I save a detailed account of the emotion-mood connection and the relevant changes in attention as subjects

obviously connected to the avoidance of the *possibility* of harm, as contrasted with the fear case in which the threat or danger is immediate. If that is the case, then the kinds of modulations of ongoing attention that would best serve the detecting and avoidance of *possible future harm* are not 'object-fixation' *per se* – after all, it may not be entirely clear what the relevant threat is, or the threat may be significantly indeterminate or indefinite as to what form it may take – but rather a state of hyper-vigilance. Indeed, vigilance is considered a distinct form of attention, and in the anxiety case, one is (somewhat) actively 'on the lookout' for potential threats.[35] Note vigilance – so construed – is still an *actual ongoing modulation of attention*, rather than a 'mere disposition' to change attentional focus to a relevant 'danger' should it come one's way – we might think human beings are nearly always so disposed, but are not always in a state of *actual vigilance*.

It is interesting to note at this point how the functional role of fear would not be at all well-served by the kinds of modifications of ongoing attention we saw above as appropriate to disgust-responses. Simply 'turning away' or 'rapidly disengaging attention' from the threatening Alsatian which is bounding towards me – say as manifest in a redeployment of one's visual apparatus to a spatial location where the dog happens not to be – will likely result in me being attacked and physically harmed. And likewise, the kind of object-fixation we get in the case of fear-responses clearly would not at all best serve the functional role of disgust of getting us to avoid contaminants but might lead to *more exposure* to such contaminants.

As a final note on the contrast between the attentional profiles of fear and disgust responses, note that the kind of cognitive avoidance or 'rapid disengagement' as definitive of the attentional profile of disgust should be distinguished from *freeze-responses* in some cases of fear. First, it is not clear whether freeze-responses are themselves modulations of attention and not rather a specific kind of extreme bodily response to the fearful object. Secondly, more common-garden variety *freeze-responses* – say freezing in response to the oncoming bear – might be construed as (non-voluntary) 'strategic attempts' to avoid physical harm, which are often married with object-fixation and the narrowing of

switch between emotions and mood for separate work (although I have provided some detail on the connection with reference to attentional effects, in separate work see [Redacted]).

[35] For discussion see Tappolet 2016: 43.

attentional focus. For example, say I have seen a grizzly bear, but do not take it to have seen me, even though it is approaching. In such a case, I might involuntarily *freeze*, with the effect being that my lack of movement might lead to me not being noticed by the bear. But 'frozen' as I am, I will nonetheless remain fixated on the bear and its movements.[36]

Let's now move on to the case of happiness. The functional role of happiness is not just to detect positive value, or even that we have succeeded in securing something of positive value (or at least gone some of the way towards that) but to promote *further such achievements and the discovery of further potential sources of value*. What modulations of ongoing attention would be appropriate such as to support the realisation or satisfaction of this functional role? Plausibly certain patterns of 'broadening' and 'widening' of attention. Interestingly, empirical studies on positive moods, such as *elation and joy* – as positive moods the corresponding emotion of which is *happiness* – have found such moods to have a correlated attentional profile. As psychologist Barbara Fredrickson claim, such positive moods can be 'described as broadening an individual's thought-action repertoire'.[37] More specifically in the emotion-case, we might say that there is a kind of attentional openness to positive value which seems characteristic of happiness and serves its functional role. Indeed, in paradigmatic cases of happiness, attention seems to somewhat *wander away* (albeit it perhaps never entirely) from the specific state of affairs or event (object) that precipitated the happy-response to other (potential) sources of positive value.[38]

Consider this view of the attentional profile of happiness as played out in a specific example. Sitting chatting with my friends, I check my phone to see that I have just received some fantastic news; I am beaming with happiness. Overcome with joy, my attention seems to wander to a range of other things in my environment that seem imbued with positive value. The conversation I was

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[36] For further discussion see Scarantino 2017.

[37] See Fredrickson 1998: 9; see also Fredrickson and Branigan 2005. See fn.25 for my thoughts on the emotion-mood connection *qua* attentional profile.

[38] It is also worth noting that happiness has been claimed to 'facilitate creative thinking' (see Isen, Daubman, Novicki 1984); as Jesse Prinz (2004; 243) puts it: 'happiness may promote creative thinking because creative thinking leads to new discoveries that can stimulate further happiness', an auxiliary functional aspect of happiness which again is clearly served by the kind of *attentional openness to positive value* which is definitive of its attentional profile.

engaged in now seems somehow 'lighter' and more 'open-ended', with further such interactions seeming unqualifiedly 'good', and my plans for the rest of the day seem surrounded by a halo of positivity and possibility. I do not fixate on my great news or indeed entirely turn away from it (it still remains there in some respect), but its positive quality seems to spread over my environment, coating the world with a positive glow. This description is somewhat metaphorical, but it displays the character of the attentional profile specific to happiness, and it should be obvious this kind of 'attentional openness to positive value' has a significantly different character in terms of the modulation of ongoing attention than the kind of 'object-fixation' we saw in the fear-response cases, or indeed the kind of 'cognitive avoidance and rapid disengagement' we saw in the disgust-response case.

Given we find the attentional profiles that have been detailed for disgust, fear and happiness plausible, I want to consider an important worry about the account on offer. It might be said that this way of resolving the puzzle of emotional attention is committed to the following claim: for each distinct emotion-type, there is a distinct attentional profile that can be generated by considering what modulations of ongoing attention would be appropriate so as to best serve the functional role of that emotion, as giving the subject the best chance of realising or achieving that functional role. But, so the worry might be developed, are there really attentional profiles for each distinct emotion we can identify? Perhaps, it might be conceded, we have seen the account work in the case of disgust, fear, and happiness, but what about a range of different emotions, such as boredom, sadness, anger, and admiration? If convincing accounts cannot be given of the full range of emotions – generating distinct attentional profiles for each of them – then the account looks to be significantly limited (and perhaps there is no real puzzle of emotional attention after all).

A first response to this kind of worry, and one which diffuses some of its force, is to appeal to the idea of *common evaluative themes and functional roles* for family groupings of emotions.[39] For example, it might be said that there is a common evaluative theme to emotions such as fear, panic, terror, namely 'threat' or (immediate) 'harm'. Analogously, the common evaluative theme of emotions such

[39] See Roberts 2003 for a detailed attempt to classify emotions into families of corresponding themes.

as anger, indignation, rage and contempt, is that of 'offence' or 'insult'. Finally, grief, regret, and sadness might be connected to a common evaluative theme of 'personal loss'. If these common evaluative themes can be linked to functional roles (perhaps of a slightly broader inflexion than we considered in the case of fear, disgust and happiness), then it would be sufficient for the account we are considering to go through if it could provide attentional profiles for such distinct *family groupings of emotion*. This response helpfully discharges the burden of generating distinct attentional profiles for every distinct emotion-type we can individuate, which, after all, would be a significant theoretical and empirical undertaking.

Most significantly though, and in more direct response to the above worry, it turns out that a range of further emotions (and groups of emotions) do have distinct attentional profiles. I now detail a number of these. First, consider the emotion of boredom as an occurrent emotion of 'finding something boring' rather than a more generalised mood of boredom.[40] Somewhat speculatively, say that the functional role of boredom, as tied to a specific evaluative theme, is as follows: not just to detect that something 'lacks interest' but to search for objects or activities that might be of (more relative) interest to one. What modulations of ongoing attention would best serve this functional role? It seems fair to say it would be something in the region of 'wandering' attention, such that the attentional profile of boredom is tied to the concept of *attentional drift*. This is supported by the phenomenology of many everyday instances of boredom. For example, if you are finding a speaker's talk particularly boring or dull, as *lacking interest for you,* your 'mind', and in some cases your sensory apparatus 'drift around', perhaps until you find something interesting to latch onto. Perhaps there is an attractive individual playing with their hair, or alternatively (in a particularly bad case), one might find the patterns of paint on the ceiling more interesting than the speaker's talk. In any case, there is a distinct attentional profile linked to boredom, which can be seen as serving its functional role of redirecting our cognitive recourses to (potentially) more interesting objects and stimuli.[41]

Another central case is sadness (and connected to it, certain forms of occurrent grief). Plausibly, the functional role of sadness is not merely to detect personal loss, but to in some sense *reckon with it*

[40] On the emotion-mood distinction see [Redacted]

[41] This view is consonant with what Elpidorou (2018) argues is the functional role of boredom.

or 'process' it, or 'take account of it' (at least in adult humans). This specification somewhat contrasts with Scarantino's (2014) claim that sadness (and related emotions like grief and depression) lead to 'inaction' (rather than action) expressing what he calls *inaction tendencies*, whose generic 'relational goal' or functional role is that of *not relating as such*. Now, this might ring true for depression (and depression as a *mood* can plausibly be bracketed for our purposes here) but I think it misdescribes some central 'active' component of both sadness and grief – neither, at least *prima facie* look to *sever ties* with the emotional object, at least not in the first instance, and if there is some generic 'relational goal' to 'sad emotions', it might be said to be one of wanting to *maintain or establish a relation* that for whatever reason is barred, or ruled-out. But even if we agree that the functional role of sadness does involve a kind of *reckoning with the loss* then we might wonder what the attentional effects are of such an emotion and in what sense they might be thought to contribute to the emotion's functional role?

In this context, the relevant modulations of ongoing attention that would best serve that functional role are what we might call a kind of *drawing-back-to-the-object*, often in a way that is connected to forms of contemplation or cognition of the relevant loss. Speaking somewhat metaphorically, the distinctive attentional profile of sadness involves a kind of 'dwelling' with the object, ruminating over the loss and its significance, perhaps with some recognition that this form of rumination acts as a kind of *surrogate* for the lack of a real or previous relation to the object. If this is along the right lines, then it unsurprising that various forms of sadness are often linked to what is sometimes labelled 'backwards thinking' and which can often concern itself with the personal flaws of the emotional subject.[42]

We can also chart out a distinctive attentional profile for the group of what are often called the *appreciation emotions*, paradigms of which are admiration and awe. Part of the functional role of appreciation emotions, as connected to their evaluative themes, is not merely to detect positive value or 'excellence', but arguably to appreciate the relevant objects 'full value', or 'why the object is *excellent or beautiful*' (connected to the precise respects in which the object is admirable). Indeed, as the label *appreciation* emotions goes to show, part of the functional role of these kinds of emotions is to afford

[42] See Alloy and Abrahamson 1998.

a more comprehensive evaluative understanding (an appreciation) of the emotional stimuli (that is part of what they are 'useful for').[43] Now, what modifications of ongoing attention would best serve this role? What would do the job would be a kind of *expanding contemplative exploration* of the object, which often has the character of a voluntary synchronic selective attention (often connected to 'zooming out' as focusing on global features).

Consider, for example, being struck by the sheer majesty and beauty of Michelangelo's *The Creation of Adam* (c. 1512) as one peers up at the ceiling of the Sistine Chapel. After initial attention capture, one's attention takes the form of an attentive exploration of the painting, studying its finer details (which might involve instances of overt attention, bringing certain parts of the painting into 'better view' by foveal stimulation, or 'zooming out' by moving backwards to bring the entire painting into view). One is seeking a 'comprehensive look' at the masterpiece, seeking to appreciate it or contemplate it in all its glory. It is worth noting the contrast between the attentional profile of these kinds of appreciation emotions and that which is characteristic of the *fearful emotions*. Both involve a kind of 'object-fixation', or at least there is a central object which in one sense is the specific theme or focus of the ongoing modulations of attention. However, in the case of fear, there is no suggestion of an expanding attentive 'exploration' of the object as a means to *appreciate it*. Rather the kind of 'narrowing' or 'zooming in' effects we see in cases of fear and panic tend to hone in on the *sharp knife, the big teeth, the loaded gun* – focusing on relative 'trees rather than the forest' so to speak – which is a kind of attentional modulation well-suited to avoiding immediate physical harm, but which is significantly ill-suited to promoting to the kind 'full' or 'global' *appreciation of the object's value* characteristic of aesthetic and appreciation emotions.

Finally, anger and the offence-related emotions (indignation, rage) are arguably one of the more difficult cases to specify a discrete attentional profile for. However, say we agree with Joseph Ledoux that part of the 'adaptive value' of emotions in this family grouping is that of enabling subjects to the take appropriate measures to deal with some form of 'insult' or 'offense' to themselves caused by another.[44] A central aspect of the functional role of anger would therefore turn on securing some

[43] On evaluative understanding see Brady 2013; Ch.4; Deonna and Teroni 2012; Ch.8

[44] Ledoux 1996.

form of *reparation against the presumed offence or insult*. The kinds of modulations of ongoing attention that would seem to best serve this functional role would doubtless involve something in the vicinity of a form of 'narrowing' of attention as we see in paradigm cases of fear-response.[45] However, rather than being threat-focused, so fixating on *the big teeth, the loaded gun, the aggressive approach*, we would see a 'reparation-focus', so focusing on *weaknesses of the offender, possible means to hurt them, ways of opening hostilities*.[46] This links to the idea that there is sense in which in anger or offensive-related emotions one has been 'slighted' or suffered some 'degradation' and so needs to 'recover' something back from the object (or more broadly in the situation), securing some form of 'repair', which will require quite different modulations of ongoing attention than would be apt for avoiding immediate physical harm.

Let me now summarise. What has been presented are further examples of attentional profiles for distinct emotions and distinct family groupings of emotions, moving from (broadly specified) functional roles to appropriate modulations of ongoing attention. While it is a matter of further empirical study and detailed phenomenological reflection to chart out similar proposals for yet more emotions, the prospects for the account on offer look promising.

We now have a plausible solution to the puzzle of emotional attention. Remember, the puzzle was originally framed as follows: (given the working hypothesis that distinct emotions, or at least distinct family groupings of emotions, have distinct effects of ongoing attention) we asked 'what it is about specific emotions in general that lead them to have the distinct attentional profiles that they do'. Why, given that emotions form a unified class of mental states (arguably distinct from belief, desire, perception, imagination etc.), is it that we see such disparate attentional profiles for different emotions? The account on offer has answered by appealing to the functional roles of different emotions, as tied to their distinctive evaluative themes. Distinct emotions have the distinct attentional profiles they do insofar as the relevant different modulations of ongoing attention best serve the realisation or satisfaction of the relevant functional role. In this context, we have seen how we can move from broad specifications of the functional roles of certain emotions (as tied to their evaluative

[45] See Finucane 2011: 970-74.

[46] Similar ideas are present in Ford *et al.* (2010), who found that anger boosts attention to 'rewarding' rather than 'threating' information.

themes) to substantive characterisations of their attentional profiles. As such, we have provided significantly more detail than is currently on offer in the philosophy of emotion on the precise character of these different attentional profiles as tied to different emotions. In short, the account told us why distinct emotions (or distinct family groupings of emotions) have the different effects on ongoing attention that they do and what those effects are.

Let me close this section by noting a general worry about the account. It might said be that some of the attentional effects of emotion don't obviously contribute to their functional roles – and if that is true, then isn't it the case that the contribution made to an emotion's functional role *is not* the only role that an emotions' modulation of ongoing attention plays. A key example here might be the way in which certain modulations of attention contribute to certain kinds of *expressive behaviours or actions*. For example, consider how the narrowing of attention combined with 'reparation-focus' in anger might give one the necessary directed-focus to strike 'the offender where it hurts'! Now there are a number of responses to this kind of the worry. The first, and most general, might be to distinguish between the *primary role* of the relevant attention modifications, as serving the emotion's functional role, and perhaps certain *secondary* or auxiliary role of the relevant attentive modification, perhaps as supporting certain kinds of behaviour, expression or action. Perhaps then we might qualify the conclusion from our previous paragraph to say that the account has told us *primarily* why distinct emotions (or distinct family groupings of emotions) have the different effects on ongoing attention that they do and what those effects are, perhaps with some *auxiliary* considerations to be documented for things like expressive behaviours and actions in particular cases.

However, arguably we don't necessarily have to make this concession, since one might just respond by arguing that at least in cases where the relevant expressive behaviours or action are clearly dependent on the relevant modulations of (ongoing) attention, those expressive behaviours and actions in fact *do* serve to realize the emotion's functional role.[47] Indeed, in the anger-example, striking 'the offender where it hurts!' looks to be one way of securing some form of *reparation against the presumed offence or insult* (the proffered functional role of anger). Indeed, this pattern of explanation seems highly plausible for a range of *object-related* expressive behaviours and actions connected to

[47] See Scarantino and Nielson 2015 for a not dissimilar claim.

relevant emotions. Of course, there are forms of involuntary emotional expression such as *smiling at a joke* or *wrinkling one's nose at a disgusting smell*, which aren't plausibly part of realising an emotions' functional role, but then they also seem to lack any obvious (direct) connection to the relevant ongoing modulations of attention for the relevant emotions.

3. Emotional Experience and Attentional Phenomenology

Given we find the solution to the puzzle of emotional attention provided in the previous section plausible, a further question is how these attentional profiles (and the effects on attention they are connected to) are more concretely reflected in *emotional experience*. In many of the cases considered, we have already provided relevant phenomenological detail, but in this final section I say something more general about how the attentional profiles of emotion are tied to the character of attentional phenomenology. Note, what follows here is an outline of how attentional profiles are manifest in the attentional phenomenology of emotional experience – I save a full-dress explication for a separate occasion.

First, it is worth noting that it is a continued point of contention about whether attention, in general, is necessarily a conscious phenomenon, or put otherwise whether attention and attentional effects are necessarily manifest at the conscious level or whether there are instances of unconscious attention.[48] I do not take a stand on this issue here. Nonetheless, it seems fair to say, given our focus, that when the 'object' or 'stimuli' of the emotion are registered consciously, and so manifest to the subject in an occurrent emotional experience, then the relevant modifications of attention will be modifications of conscious attention, such that it is legitimate to talk of attentional phenomenology.

The key claim I want to explore in this final section is as follows: *emotional phenomenology is suffused with attentional phenomenology*. More specifically, any given emotion is constituted by an attentional profile specific to it, and that conscious attention is modified in the relevant way that it is, is a central part of *what-it-is-like* to be undergoing that emotional experience. Put otherwise: I want to suggest that it is a central part of emotional experiences that phenomenologically salient modifications of

[48] For discussion, see Prinz 2011 and Watlz 2017: Ch.12.

attention (after initial attention capture) affect or change *what-it-is-like* to be undergoing that emotion. For example, the narrowing of attentional focus and 'object-fixation' in fear changes *what-it-is-like* to feel afraid: prior to the 'object-fixation' fear felt different to how it felt originally.

Note, there is no claim that the relevant attentional phenomenology (both in terms of initial capture and then ongoing modification) exhaust emotional phenomenology; what-it-is-like to be undergoing a particular emotional experience is also determined by a range of further aspects, such as bodily dimensions, action-tendencies, evaluative appraisals etc. Nonetheless, the way in which attentional phenomenology suffuses emotional phenomenology, as I will put it, bears explicating.[49]

When it comes to emotional experiences a growing body of research suggests that it is both theoretically fruitful and phenomenologically accurate to distinguish between the *content* and the *attitude* of the relevant emotion. On the one hand, there is the *content* of the relevant emotional experience, simply *how the object of the emotion seems* or *how the object of the emotion is manifest to one*, and the 'attitude', that is *how I am currently relating to said object*. Indeed, in the case of emotional experience – which involves phenomenologically salient 'feelings' that are not plausibly to be cashed out exclusively in terms of being presented with an object, but involve 'responding' 'reacting' or 'being moved' by the relevant object – there is what we can call an *attendant attitudinal phenomenology* alongside the phenomenal contribution of being presented with a particular object.[50] So we have both the *attitudinal* side of the emotional experience (or the 'subject-side') and the *content* of the experience (or the 'object-side').

Now – and here is a distinctive explication of the claim that emotional phenomenology is suffused with attentional phenomenology – I want to suggest that the fact that an emotion has the specific attentional profile it does (and that in the cases we are considering this is manifest in terms of attentional phenomenology) affects both the *content* and *attitude* components of the relevant ongoing emotional experience. Put otherwise: that there are ongoing attentional modifications, specific to the

[49] For my view of emotional phenomenology see [Redacted].

[50] See Goldie 2000: ch.3; see also Kriegel 2014: 424; Poellner 2016; Müller 2019; see Deonna and Teroni 2015: 308 for this notion of attendant attitudinal phenomenology.

type of emotional experience I am enjoying, affects both *how the object seems* and *how I am currently relating to it*.[51]

Let me now detail, in general terms, how this might be thought to work on the 'content-side'. It seems plausible to claim that part of the attentional phenomenology of emotional experiences involves experiencing the objects of one's emotion as exhibiting what we might call *affordances for attending in a specific way*.[52] Here is a phenomenological description that reflects this idea. In emotional experience the relevant object appears as making a certain attention-specific 'demand': the disgusting object seems to say 'look away' or 'do not look at me'; the fearful object seems to say 'keep track of me' or 'do not lose track of me'; the object of happiness seems to say 'value is here but also elsewhere'; the object of boredom seems to say 'interest lies elsewhere, or 'nothing to see here'; the object of admiration seems to say 'explore me' and 'contemplate me'. These descriptions of 'what the object demands' are phenomenological reflections of the fact that when we are experiencing the emotion we are there is an emotion-specific attentional profile in play. Put otherwise, the object of one's emotion is experienced as in some sense 'demanding' the relevant modulation of ongoing conscious attention specific to the relevant emotion.[53] It is a significant further undertaking to determine the best way to theorise these kinds of affording-attention contents. Perhaps we do best to construe them in imperatival terms, <fixate on me!> in the case of fear, or <turn-away from me!> in the case of disgust; alternatively one might prefer to talk in terms of soliciting contents, such that the relevant content would be of the form <X is to-be-fixated-on> in the case of fear, or <X is to-be-turned-away-from> in the case of disgust.[54] Whichever way we go, however, it should be clear that there appear to be emotion-specific attentional effects on the contents of our emotional experiences, along

[51] The idea that attention, and specific types of attention, have effects on both the content and the attitude or 'mode' of experiential episodes is a recurrent theme in both phenomenological studies of attention (Husserl 1982 1: 222) and contemporary work (See Wu 2011 and Watlz 2017).

[52] See McClelland 2020: 401-27, for the broader idea of there being *affordances for attending*.

[53] The broader idea that objects of experiences make 'demands' is reflected both in the Gestalt psychology notion of 'demand character' (see Koffka 1937:7) and in contemporary discussions of affordance-content in philosophy of perception (see Siegel 2014).

[54] For the *soliciting contents* view, in the philosophy of perception concerning affordances, see Siegel 2014 (cf. Kauppinen *forthcoming* for an imperatival view).

the lines of affordance-attention contents, given that an emotion is the specific emotion it is and that therefore there is the relevant modulation of ongoing attention that there is.[55]

A further point of note concerning the way attentional profiles leave their mark on attentional phenomenology *via* the content of the emotional experience concerns more specific effects that certain ongoing modulation of conscious attention might have of the 'magnitude' or 'intensity' of the relevant appearance properties the objects of the emotions are experienced as having. For example, the kind of object-fixation we get in the case of fear-responses has been shown to lead to 'magnitude-boosts' in the relevant appearance properties of the object. As one fixates' on the approaching Alsatian, it will typically appear to be approaching *faster and barking more loudly than it in fact is*. Connected to this, fear-responses have also been shown to improve visual acuity, which is unsurprising given that object-fixation often involves overt attention and, in many cases, foveal stimulation.[56] While more theoretical and empirical work needs to be done to determine whether we get similar effects on the appearance properties the objects of emotions are experienced as having beyond the fear case, it seems fair to speculate that in the case of happiness – as one's attention 'broadens' and is 'open to positive value' – that positive value-congruent aspects or properties of relevant objects in one's environment are likely to be 'boosted'.

Moving on to consider the 'attitudinal side', we can say the following.[57] There is a sense in which the attitudinal phenomenology of the ongoing experience is modified as we practically respond to

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[55] NB: If these 'affording-attention' contents are proprietary emotion-specific contents, and so contents not provided by the so-called cognitive base of the emotion, but generated by the emotional episode being the particular emotion that it is (and therefore modulating ongoing attention in the specific way it does) then this arguably goes against the idea that emotions get whatever content they do *solely* from their cognitive base (see Deonna and Teroni 2015: 299).

[56] See Shang et al. for empirical studies reflecting this. These attentional effects on the relevant magnitude or intensity of appearance properties have been noted more generally in research on perceptual attention (see Carrasco *et al.* 2004: 308-13). In these studies, it was found that attention affects apparent contrast, by providing a 'boost' in the appearance of contrast.

[57] Sebastian Watzl (2017: 212, my emphases) gestures at a similar idea of conscious attention modifying the relevant 'mode' or 'attitude' in sense-perceptual experience: 'When attention guidance is conscious, then the subject's visual experience is the *looking and not the seeing*, and her auditory experience is the *listening and not the hearing*'.

the kinds of attentional affordances described above. In the ongoing emotional experience, and in response to the 'demand of the object' to be attended to in a specific way, one can now be said to be *fearfully-fixated, turned-away-in-disgust, exploring-in-admiration* – as a particular kind of practical response in which the ongoing emotional response or feelings in some sense *infuse* the relevant practical responses of attending in the particular way we are. In this sense, what we get by having the relevant attentional profile in play at the level of emotional experience, is not merely a modification in *how the object seems* (which we have partially detailed above) but an ongoing modulation of our attitudinal relation to the object (how we relate to the object, so presented); one is no longer just responding in the 'fearful' way to the object, but responding or relating to the object by way of a state of 'fearful-fixation' or 'fixating fearfully', and so with a modified *attention-specific attitude* to the object which is infused or coloured with emotion. To take another case, one is no longer just responding in the 'disgusted' way to the object, but responding or relating to the object by way of a 'disgusted-disengagement', and so with a modified 'disgust-infused' attention-specific attitude to the object. If these descriptions are along the right lines, then it seems fair to say that we would miss something essential to the way in which emotional phenomenology is suffused with attentional phenomenology if we did not see it as involving this modification of our ongoing relation to the object in the way descripted.[58]

Finally, let me say something about how this modification of the 'attitudinal side' of the emotion *via* the relevant attentional profile ties into a broader idea about the nature of conscious attention. Drawing on recent accounts in the philosophical literature on attention, it is often emphasised that for at least a significant subset of cases (if not across the board), attending in the specific way that I am is in some important sense something *I am doing*, as an 'activity of the subject', as opposed to a merely passive receptivity or 'taking in' of the object, and so in some sense has the character of an 'action'.[59] Insofar as we understand these attentive modifications of our attitudinal relation to the emotional object as 'active' in this sense, then we are provided with one plausible theoretical gloss on

[58] See Mulligan 2017: 232f. for more on 'emotional colouring'; see also the 'adverbial' account of emotion developed by Berninger 2015.

[59] Different versions of this idea are developed by Wu 2011, Watzl 2017, and, historically, by Husserl (1973: section 17).

the idea that emotions seem Janus-faced with respect to being, on the one hand, *passive* phenomena (as captured by their being labelled as 'passions' or affects), and on the other hand as 'something we do'.[60] In our context, we might say that the 'passive' aspect of emotional experience (at least in part) turns on that initial capture of attention which is common to paradigmatic emotional experience. But this is followed by a modulation of ongoing attention specific to the given emotion, which, if what we have said above is along the right lines, involves an attentional phenomenology characterised by an ongoing 'active' response to the object.

This final section has been fairly broad, sketching out how the idea that distinct emotions have distinct attentional profiles is reflected at the level of emotional experiences and their phenomenology. While more needs to be said on these themes, it should be clear that there are sufficient grounds for accepting the central claim of this final section, namely that emotional phenomenology is suffused with attentional phenomenology. I have here outlined several ways in which one might seek to develop this idea by appeal to the modifications of the content-side and attitude-side of emotional experiences.

Conclusion

Let me surmise what has been achieved in this paper. We began by outlining the puzzle of emotional attention. I then argued that a plausible solution to that puzzle appeals to emotions' functional roles as tied to specific evaluative themes, which has implications for what attentional modulations would best serve those functional roles. Several concrete cases were considered, and the account was shown to be a promising way of understanding why distinct emotions have the attentional profiles they do and what those attentional profiles amount to. In the final section, I sketched how such attentional profiles 'leave their mark' on and connect with emotional phenomenology. What we have therefore been provided with is a richer account of the relation between emotion and attention than has so far

[60] For classic statements of the idea of emotions as 'active' see Solomon 1993 and Sartre 2004. More recently, see Naar *forthcoming*; Müller 2021. Note, these accounts do *not* seek to explain the active character of emotion by reference to attentional profiles.

been offered in the philosophical literature, which will be of use to those seeking to better understand the connections between emotion and attention.

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